

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Product name:**
SURFYNOL® AD-01**Chemical name:**
Alkane diol**Additional identification****Chemical name:** 2,4,7,9-Tetramethyl-4,7-Decanediol
Chemical formula: C₁₄H₃₀O₂
INDEX No. -
CAS-No. 17913-76-7
EC No. 451-160-7
KKDIK-Registration No. 01-0000479307-78
REACH Registration No. 01-0000019050-84**1.2 Relevant identified uses of the substance or mixture and uses advised against****Identified uses:** Industrial use**Uses advised against:** None known.**1.3 Details of the supplier of the safety data sheet****Company Name** : Evonik Ticaret Ltd. Şti.
İstasyon Mahallesi
İbişğa Caddesi No:14
34940 Tuzla İstanbul/Turkey**Telephone** : +90 216 395 99 61**E-mail** : sds-tr@evonik.com**1.4 Emergency telephone number:****Emergency First Aid Center** : 112 (24 hour)**National Poison Center (UZEM)** : 114 (24 hour)**Company Emergency Telephone** : +90 216 395 99 61 (Turkey 09:00-17:00)
+49 2365 49 2232**SECTION 2: Hazards identification**

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

**Classification according to Regulation (EC) No 1272/2008 as amended.
Regulation of Classification, Labelling and Packaging of Substances and Mixtures (Date: 11.12.2013,
Official Gazette No. 28848, Repeated)**

Health Hazards

Serious eye irritation Category 2 H319: Causes serious eye irritation.

Environmental Hazards

Chronic hazards to the aquatic environment Category 3 H412: Harmful to aquatic life with long lasting effects.

2.2 Label Elements

Signal Words: Warning

Hazard Statement(s): H319: Causes serious eye irritation.
H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements**Prevention:**

P264: Wash face, hands and any exposed skin thoroughly after handling.
P273: Avoid release to the environment.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.

Disposal:

P501: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

2.3 Other hazards

None known.

Endocrine disrupting properties-Toxicity

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Endocrine disrupting properties-Ecotoxicity

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

SECTION 3: Composition/information on ingredients
Chemical name:

Alkane diol

3.1 Substances
Chemical name 2,4,7,9-Tetramethyl-4,7-Decanediol

INDEX No.:
CAS-No.: 17913-76-7

EC No.: 451-160-7

KKDIK-Registration No. 01-0000479307-78

REACH Registration No.: 01-0000019050-84

Chemical name	Concentration	CAS-No.	EC No.	KKDIK-Registration No.	REACH Registration No.	M-Factor:	Notes
2,4,7,9-Tetramethyl-4,7-Decanediol	50 - <100%	17913-76-7	451-160-7	01-0000479307-78	01-0000019050-84	No data available.	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This substance has workplace exposure limit(s).

This substance is listed as SVHC.

Classification

Chemical name	Classification	Notes
2,4,7,9-Tetramethyl-4,7-Decanediol	Classification: Eye Irrit.: 2: H319; Aquatic Chronic: 3: H412; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: > 2.000 mg/kg Acute toxicity, inhalation: None known. Acute toxicity, dermal: LD 50: > 2.000 mg/kg	None.

CLP: Regulation No. 1272/2008.

SECTION 4: First aid measures
4.1 Description of first aid measures
General information:

Immediately remove contaminated clothing.

Inhalation:

fresh air supply, consult a doctor if feeling unwell.

Skin Contact:

In case of contact with skin wash off with soap and water. In case of discomfort: Supply with medical care.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Eye contact:	In case of contact with eyes rinse thoroughly with plenty of water. If symptoms persist, seek medical advice.
Ingestion:	Thoroughly clean the mouth with water In case of discomfort: Supply with medical care.
Personal Protection for First-aid Responders:	No data available.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms:	Serious eye irritation
Hazards:	No data available.

4.3 Indication of immediate medical attention and special treatment needed

Treatment:	Treat symptomatically.
-------------------	------------------------

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media:	foam, carbon dioxide, dry powder, water spray.
Unsuitable extinguishing media:	High volume water jet.

5.2 Special hazards arising from the substance or mixture:

In the event of fire the following can be released: - carbon dioxide, carbon monoxide Under certain conditions of combustion traces of other toxic substances cannot be excluded

5.3 Advice for firefighters

Special fire fighting procedures:	No specific precautions.
Special protective equipment for fire-fighters:	Do not inhale explosion and/or combustion gases. Use self-contained breathing apparatus and wear protective suit

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment.
6.1.1 For non-emergency personnel:	No data available.
6.1.2 For emergency responders:	No data available.
6.2 Environmental Precautions:	Do not allow to enter drains or waterways Prevent product from getting into subsoil/soil.
6.3 Methods and material for containment and cleaning up:	Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with the regulations.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

6.4 Reference to other sections: For further information on exposure monitoring and disposal see sections 8 and 13.

SECTION 7: Handling and storage
7.1 Precautions for safe handling

Technical measures:	No data available.
Local/Total ventilation:	No data available.
Safe handling advice:	Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid contact with skin and eyes. Do not inhale gases/vapours/aerosols.
Contact avoidance measures:	No data available.

7.2 Conditions for safe storage, including any incompatibilities

Safe storage conditions:	Keep container tightly closed in a cool, well-ventilated place. Do not store together with oxidizing agents.
Safe packaging materials:	No data available.

7.3 Specific end use(s): No further recommendations.

SECTION 8: Exposure controls/personal protection
8.1 Control Parameters
Occupational Exposure Limits

None of the components have assigned exposure limits.
 Observe national threshold limit values.

Biological Limit Values

No biological exposure limits noted for the ingredient(s).

DNEL-Values

Remarks: DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
2,4,7,9-Tetramethyl-4,7-Decanediol	General population	Dermal	Systemic, short-term; 0,75 mg/kg	Repeated dose toxicity
	Workers	Dermal	Systemic, short-term; 1,5 mg/kg	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 0,25 mg/kg	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 0,25 mg/kg	Repeated dose toxicity
	General population	Inhalation	Systemic, long-term; 4,35 mg/m3	Effect on fertility
	General population	Dermal	Systemic, long-term; 2,5 mg/kg	Effect on fertility
	General population	Inhalation	Systemic, short-term; 1,29 mg/m3	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 24,7 mg/m3	Effect on fertility
	Workers	Dermal	Systemic, long-term; 0,5 mg/kg	Repeated dose toxicity

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

	General population	Inhalation	Systemic, long-term; 0,43 mg/m ³	Repeated dose toxicity
	Workers	Eyes	Local effect;	Low hazard (no threshold derived)
	Workers	Eyes	Local effect;	Medium hazard (no threshold derived)
	General population	Eyes	Local effect;	Medium hazard (no threshold derived)
	General population	Eyes	Local effect;	Low hazard (no threshold derived)
	Workers	Dermal	Systemic, long-term; 7 mg/kg	Effect on fertility
	Workers	Inhalation	Systemic, short-term; 5,28 mg/m ³	Repeated dose toxicity
	General population	Oral	Systemic, short-term; 0,75 mg/kg	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 1,76 mg/m ³	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 2,5 mg/kg	Effect on fertility

PNEC-Values

Remarks: PNEC-Values

Critical component	Environmental compartment	PNEC-Values	Remarks
2,4,7,9-Tetramethyl-4,7-Decanediol	Sediment (marine water)	0,46 mg/kg	
	Aquatic (marine water)	0,005 mg/l	
	Sewage treatment plant	10 mg/l	
		7 mg/l	
	Aquatic (marine water)	0,001 mg/l	
	Aquatic (freshwater)	0,006 mg/l	
	Soil	0,53 mg/kg	Soil
	Sediment (freshwater)	4,6 mg/kg	
	Aquatic (freshwater)	0,053 mg/l	

8.2 Exposure controls
Appropriate Engineering Controls: No data available.

Individual protection measures, such as personal protective equipment (PPE)
Eye/face protection: Safety glasses

Hand Protection: Additional Information: gloves made of chloroprene (CR, e.g. Neoprene), gloves made of nitril (NBR)

Skin and Body Protection: protective clothing

Respiratory Protection: in case of formation of vapours/aerosols: Short term: filter apparatus, combination filter A-P2

Hygiene measures: Wash hands before breaks and at the end of workday. When using do not eat, drink or smoke. Remove soiled or soaked clothing immediately.

Environmental Controls: The environmental regulations on the control and monitoring of environmental exposures are to be observed.

SECTION 9: Physical and chemical properties
9.1 Information on basic physical and chemical properties
Appearance
Physical state: liquid

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Form:	Viscous Liquid
Color:	White
Odor:	of methanol
Odor Threshold:	not measured
Freezing point:	-37 °C Method: EC Method A.1
Boiling Point:	278 °C Method: OECD 103
Flammability:	not measured
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	not measured
Explosive limit - lower:	not measured
Flash Point:	> 110 °C Method: EC Method A.9
	137 °C
Auto-ignition temperature:	385 °C Method: EC Method A.15
Decomposition Temperature:	280 °C
pH:	7 (25 °C) Concentration: 10 g/l Concentration: 1 % in Water
Viscosity	
Dynamic viscosity:	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)
Kinematic viscosity:	165 mm ² /s (40 °C)
Solubility(ies)	
Solubility in Water:	Approximate 1,57 g/l (19,8 °C) Method: OECD 105
Solubility (other):	not measured
Partition coefficient (n-octanol/water):	3,8 (25 °C) Method: OECD 117
Vapor pressure:	Approximate 0,00019 hPa (20 °C) Method: OECD 104
	15,3 mbar (150 °C)
Relative density:	not measured
Density:	0,9 g/cm ³ (25 °C) Method: EC Method A.3
	0,904 g/cm ³ (21,1 °C)
Relative vapor density:	not measured

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

9.2 Other information

Explosive properties:	not measured
Oxidizing properties:	not oxidizing
Pyrophoric properties:	385 °C 1.013 hPa Method: EC Method A.15
Metal Corrosion:	Not corrosive to metals
Evaporation Rate:	not measured
Surface tension:	33,4 mN/m 1,4 mg/l (20 °C)

SECTION 10: Stability and reactivity

10.1 Reactivity:	see section "Possibility of hazardous reactions".
10.2 Chemical Stability:	The product is stable under normal conditions.
10.3 Possibility of hazardous reactions:	No hazardous reactions with proper storage and handling
10.4 Conditions to avoid:	None with proper storage and handling.
10.5 Incompatible Materials:	Oxidizing agents.
10.6 Hazardous Decomposition Products:	None with proper storage and handling.

SECTION 11: Toxicological information
11.1 Information on toxicological effects
Information on likely routes of exposure

Inhalation:	Information on effects are given below.
Skin Contact:	Information on effects are given below.
Eye contact:	Information on effects are given below.
Ingestion:	Information on effects are given below.

Acute toxicity (list all possible routes of exposure)
Oral

Product:	LD 50, Rat, Female, Male, > 2.000 mg/kg, OECD 423
Components:	
2,4,7,9-Tetramethyl-4,7-Decanediol	LD 50, Rat, Female, Male, > 2.000 mg/kg, OECD 423

Dermal

Product:	LD 50, Rat, Female, Male, > 2.000 mg/kg, OECD 402
Components:	
2,4,7,9-Tetramethyl-4,7-	LD 50, Rat, Female, Male, > 2.000 mg/kg, OECD 402

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Decanediol

Inhalation

Product:	No data available.
Components:	
2,4,7,9-Tetramethyl-4,7-Decanediol	Not toxic after single exposure, Vapour, No data available. Not toxic after single exposure, Dust and mist, No data available.

Repeated dose toxicity

Product:	No data available.
Components:	
2,4,7,9-Tetramethyl-4,7-Decanediol	No data available.

Skin Corrosion/Irritation

Product:	Not irritating, OECD 404, (Rabbit, 4 h), Not irritating
Components:	
2,4,7,9-Tetramethyl-4,7-Decanediol	Not irritating, OECD 404, Rabbit, 4 h

Serious Eye Damage/Eye Irritation

Product:	Irritating., OECD 405, Rabbit, Irritating.
Components:	
2,4,7,9-Tetramethyl-4,7-Decanediol	Irritating., OECD 405, Rabbit

Respiratory or Skin Sensitization

Product:	Local Lymph Node Assay (LLNA), OECD 429, Mouse, Not a skin sensitizer.
Components:	
2,4,7,9-Tetramethyl-4,7-Decanediol	Local Lymph Node Assay (LLNA), OECD 429, Mouse, Not a skin sensitizer.

Carcinogenicity

Product:	No data available.
Components:	
2,4,7,9-Tetramethyl-4,7-Decanediol	No data available.

Germ Cell Mutagenicity

No data available.

In vitro

Product:	Chromosomal aberration, OECD 473: , negative Bacterial reverse mutation assay, OECD 471: , negative gene mutation test, OECD 476: , negative, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Components:	
2,4,7,9-Tetramethyl-4,7-Decanediol	Chromosomal aberration, OECD 473: , negative Ames test, OECD 471: , negative gene mutation test, OECD 476: , (analogy)

In vivo

Product:	No data available.
Components:	

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2,4,7,9-Tetramethyl-4,7-Decanediol No data available.

Reproductive toxicity
Product: No data available. Oral

Components:
 2,4,7,9-Tetramethyl-4,7-Decanediol Oral

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Components:
 2,4,7,9-Tetramethyl-4,7-Decanediol No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Components:
 2,4,7,9-Tetramethyl-4,7-Decanediol No data available.

Aspiration Hazard
Product: Not classified

Components:
 2,4,7,9-Tetramethyl-4,7-Decanediol Not classified

11.2 Information on other hazards
Other information
Product: The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See section 2 "Hazards Identification".;

SECTION 12: Ecological information
12.1 Toxicity:
Acute hazards to the aquatic environment:
Fish
Product: LC 50, Oncorhynchus mykiss, 96 h, Approximate, 53,2 mg/l OECD 203

Components:
 2,4,7,9-Tetramethyl-4,7-Decanediol LC 50, Oncorhynchus mykiss, 96 h, Approximate, 53,2 mg/l OECD 203

Aquatic Invertebrates
Product: EC 50, Daphnia magna, 48 h, Approximate, 127 mg/l OECD 202

Components:
 2,4,7,9-Tetramethyl-4,7-Decanediol EC 50, Daphnia magna, 48 h, Approximate, 127 mg/l OECD 202

Toxicity to Aquatic Plants
Product: ErC50 (Algae (Pseudokirchneriella subcapitata), 72 h): 127 mg/l (OECD 201)

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Components:2,4,7,9-Tetramethyl-4,7-Decanediol EC 50 (Algae (*Pseudokirchneriella subcapitata*), 72 h): Approximate 127 mg/l (OECD 201)**Toxicity to microorganisms****Product:** EC 50, activated sludge, 3 h, > 1.000 mg/l, OECD 209**Components:**

2,4,7,9-Tetramethyl-4,7-Decanediol EC 50, activated sludge, 3 h, > 1.000 mg/l, OECD 209

Toxicity to soil dwelling organisms**Product:** No data available.**Components:**

2,4,7,9-Tetramethyl-4,7-Decanediol No data available.

Toxicity to terrestrial organisms**Product:** No data available.**Components:**

2,4,7,9-Tetramethyl-4,7-Decanediol No data available.

Chronic hazards to the aquatic environment:**Fish****Product:** No data available.**Components:**

2,4,7,9-Tetramethyl-4,7-Decanediol No data available.

Aquatic Invertebrates**Product:** No data available.**Components:**

2,4,7,9-Tetramethyl-4,7-Decanediol No data available.

Toxicity to Aquatic Plants**Product:** No data available.**Components:**2,4,7,9-Tetramethyl-4,7-Decanediol NOEC (Algae (*Pseudokirchneriella subcapitata*), 72 h): 6,25 mg/l (OECD 201)**Toxicity to microorganisms****Product:** EC 50, activated sludge, 3 h, > 1.000 mg/l, OECD 209**Components:**

2,4,7,9-Tetramethyl-4,7-Decanediol EC 50, activated sludge, 3 h, > 1.000 mg/l, OECD 209

Toxicity to soil dwelling organisms**Product:** No data available.**Components:**

2,4,7,9-Tetramethyl-4,7-Decanediol No data available.

Toxicity to terrestrial organisms**Product:** No data available.**Components:**

2,4,7,9-Tetramethyl-4,7-Decanediol No data available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Decanediol

12.2 Persistence and Degradability**Biodegradation**

Product: 44 %, 28 d, OECD 301 F, The product is not biodegradable.
Components:
2,4,7,9-Tetramethyl-4,7- Decanediol 44 %, 28 d, OECD 301 F, The product is not biodegradable., aerobic

12.3 Bioaccumulative potential**Bioconcentration Factor (BCF)**

Product: No data available.
Components:
2,4,7,9-Tetramethyl-4,7- Decanediol No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: 3,8, 25 °C, OECD 117
Components:
2,4,7,9-Tetramethyl-4,7- Decanediol 3,8, 25 °C, OECD 117

12.4 Mobility in soil:

Product No data available.
Components:
2,4,7,9-Tetramethyl-4,7- Decanediol No data available.

12.5 Results of PBT and vPvB assessment:

Product No data available.
Components:
2,4,7,9-Tetramethyl-4,7- Decanediol Non-classified vPvB substance
Non-classified PBT substance

12.6 Endocrine disrupting properties:

Product: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Components:
2,4,7,9-Tetramethyl-4,7- Decanediol No data available.

12.7 Other adverse effects:**Other hazards**

Product: The product is classified as slightly hazardous to waters (according to the German Regulation on the Classification of Substances Hazardous to Waters (WwSV). Do not allow to enter soil, waterways or waste water canal.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information:	No data available.
Disposal methods:	In accordance with local authority regulations, take to special waste incineration plant
Contaminated Packaging:	If empty contaminated containers are recycled or disposed of, the receiver must be informed about possible hazards.

SECTION 14: Transport information

14.1 UN/ID No.

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

National Regulations

Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (Date: 23.06.2017 Official Gazette No. 30105)

Regulation of Classification, Labelling and Packaging of Substances and Mixtures (Date: 11.12.2013, Official Gazette No. 28848, Repeated)

Regulation on Amending the Classification, Labelling and Packaging of Substances and Mixtures (Dated: 10.12.2020, Official Gazette No: 31330)

Regulation on the Test Methods to be Applied in the Determination of the Physico-Chemical, Toxicological and Ecotoxicological Properties of Substances and Mixtures (Dated: 11.12.2013, Official Gazette No: 28848)

Regulation on Health and Safety Measures Of Working with Chemicals Substances (Date: 12.08.13, Official Gazette No. 28733)

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Regulation on Transport of Dangerous Goods by Road (Dated: 18.06.2022, Official Gazette No: 31870)

Law on Occupational Health and Safety No. 6331

Regulation on Personal Protective Equipment (Dated: 01.05.2019, Official Gazette No: 30761)

Regulation on the Use of Personal Protective Equipment at Workplaces (Date: 02.07.2013 Official Gazette No. 28695)

Regulation on Health and Safety Precautions Working with carcinogenic and mutagenic substances (Dated: 06.08.2013 Official Gazette No: 28730)

Candidate List of Substances of Very High Concern for Authorization (KKDIK Regulation, Ek-17)
Substances Subject to Authorization (KKDIK Regulation, Ek-14)

15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out for this substance.

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

SECTION 16: Other information

Abbreviations and acronyms:

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EIGA - European Industrial Gases Association; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Key literature references and sources for data: No data available.

Training information: Comply with national laws regulating employee instruction.

Safety Data Sheet Preparer**Information:**

Name-Surname : Ayşegül Yargıç / Evonik Ticaret Ltd. Şti.
Certificate Number : TÜV/11.252.01
Certificate Date / Valid Until : 05.08.2024 - 05.08.2029
Contact Information : +90 216 395 99 61 / sds-tr@evonik.com

Revision Information Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Disclaimer: This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

Annex to the extended Safety Data Sheet (eSDS)

Content

Exposure Scenario I.	Formulation [mixing] of preparations and/or re-packaging, Industrial
Exposure Scenario II.	Coatings and paints, thinners, paint removers, Industrial
Exposure Scenario III.	Coatings and paints, thinners, paint removers, Professional
Exposure Scenario IV.	Coatings and paints, thinners, paint removers, Professional
Exposure Scenario V.	Coatings and paints, thinners, paint removers, Consumers
Exposure Scenario VI.	Coatings and paints, thinners, paint removers, Consumers
Exposure Scenario VII.	Ink and toners, Consumers
Exposure Scenario VIII.	Ink and toners, Consumers
Exposure Scenario IX.	Adhesives, sealants, Professional
Exposure Scenario X.	Metal working fluids, Industrial

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Exposure Scenario XI. Coatings and paints, thinners, paint removers, Professional

Exposure Scenario I.

Exposure scenario worker

1. Formulation [mixing] of preparations and/or re-packaging, Industrial

List of use descriptors	
Life Cycle Stage	
Sector(s) of use	SU3: Industrial uses: Uses of substances as such or in preparations at industrial sites SU10: Formulation [mixing] of preparations and/or re-packaging
Product categories [PC]:	
Name of contributing environmental scenario and corresponding ERC	<u>Formulation [mixing] of preparations and/or re-packaging:</u> ERC2: Formulation into mixture
List of names of contributing worker scenarios and corresponding PROCs	<u>Formulation [mixing] of preparations and/or re-packaging:</u> PROC1: Use in closed process, no likelihood of exposure <u>Formulation [mixing] of preparations and/or re-packaging:</u> PROC2: Use in closed, continuous process with occasional controlled exposure <u>Formulation [mixing] of preparations and/or re-packaging:</u> PROC3: Use in closed batch process (synthesis or formulation) <u>Formulation [mixing] of preparations and/or re-packaging:</u> PROC5: Mixing or blending in batch processes <u>Formulation [mixing] of preparations and/or re-packaging:</u> PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <u>Formulation [mixing] of preparations and/or re-packaging:</u> PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities <u>Formulation [mixing] of preparations and/or re-packaging:</u> PROC9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) <u>Formulation [mixing] of preparations and/or re-packaging:</u> PROC18: Greasing at high energy conditions

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2.1. Contributing exposure scenario controlling environmental exposure for: Formulation [mixing] of preparations and/or re-packaging

Environmental Release Category (ERC)	ERC2: Formulation into mixture
---	--------------------------------

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
---	---

Physical state	liquid
-----------------------	--------

Viscosity:

Kinematic viscosity:	165 mm ² /s (40 °C)
-----------------------------	--------------------------------

Dynamic viscosity:	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)
---------------------------	---

Amounts used

Daily amount per site	1 t
------------------------------	-----

Annual amount per site	255 t
-------------------------------	-------

Frequency and duration of use

Batch process:	not relevant
-----------------------	--------------

Continuous process:	not relevant
----------------------------	--------------

Environment factors not influenced by risk management

Flow rate of receiving surface water (m³/d):	18.000 m ³ /d
--	--------------------------

Local freshwater dilution factor	10
---	----

Local marine water dilution factor	100
---	-----

Other given operational conditions affecting environmental exposure

type	Emission days	Emission factors			Remarks
		Air	Soil	Water	
		0,000097 %	0 %	0,0005 %	

Other relevant operational conditions	not relevant
--	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 8 of the safety data sheet (Environmental exposure controls).

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil

Air	not relevant
Soil	not relevant
Water	not relevant
Sediment:	not relevant
Remarks:	not relevant

Organisational measures to prevent/limit release from site:

none

Conditions and measures related to sewage treatment plant
Size of municipal sewage system/treatment plant (m³/d):

type:	not relevant
Discharge rate:	2.000 m ³ /d
Treatment effectiveness:	not relevant
Sludge treatment technique:	No application of sewage sludge to soil
Measures to limit air emissions:	not relevant
Remarks:	Waste water should be treated in a waste water treatment plant.

Conditions and measures related to external treatment of waste for disposal

This information is not available.

Conditions and measures related to external recovery of waste

This information is not available.

Additional good practice advice beyond the REACH CSA

This information is not available.

2.2. Contributing exposure scenario controlling worker exposure for: Formulation [mixing] of preparations and/or re-packaging

Process Categories:	PROC1: Use in closed process, no likelihood of exposure
----------------------------	---

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	40 °C
Remarks	not relevant

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Amounts used

--

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
--	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet
--

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

See chapter 8 of the safety data sheet (Personal protection equipment)
--

Additional good practice advice beyond the REACH CSA

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2.3. Contributing exposure scenario controlling worker exposure for: Formulation [mixing] of preparations and/or re-packaging

Process Categories:	PROC2: Use in closed, continuous process with occasional controlled exposure
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
---	---

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	40 °C
Remarks	not relevant

Amounts used
Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Provide a good standard of general or controlled ventilation (3 to 5 air changes per hour)		

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF >= 20).		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.4. Contributing exposure scenario controlling worker exposure for: Formulation [mixing] of preparations and/or re-packaging
Process Categories: PROC3: Use in closed batch process (synthesis or formulation)

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	40 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	240 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Provide a good standard of general or controlled ventilation (3 to 5 air changes per hour)		

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF \geq 20).		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.5. Contributing exposure scenario controlling worker exposure for: Formulation [mixing] of preparations and/or re-packaging
Process Categories: PROC5: Mixing or blending in batch processes

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	40 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	60 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Provide a good standard of general or controlled ventilation (3 to 5 air changes per hour), Local exhaust ventilation 90% (LEV 90%)		

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF >= 20).		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.6. Contributing exposure scenario controlling worker exposure for: Formulation [mixing] of preparations and/or re-packaging

Process Categories:	PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	40 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	60 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Provide a good standard of general or controlled ventilation (3 to 5 air changes per hour)		

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF >= 20).		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.7. Contributing exposure scenario controlling worker exposure for: Formulation [mixing] of preparations and/or re-packaging

Process Categories:	PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	40 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	120 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)		

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF >= 20).		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.8. Contributing exposure scenario controlling worker exposure for: Formulation [mixing] of preparations and/or re-packaging

Process Categories:	PROC9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	40 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	120 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Provide a good standard of general or controlled ventilation (3 to 5 air changes per hour), Local exhaust ventilation 90% (LEV 90%)		

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF >= 20).		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.9. Contributing exposure scenario controlling worker exposure for: Formulation [mixing] of preparations and/or re-packaging
Process Categories: PROC18: Greasing at high energy conditions

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	40 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	120 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Provide a good standard of general or controlled ventilation (3 to 5 air changes per hour), Local exhaust ventilation 90% (LEV 90%)		

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF >= 20).		

Additional good practice advice beyond the REACH CSA

This information is not available.

3. Exposure estimation

Environment:

Formulation [mixing] of preparations and/or re-packaging:

ERC2:

Compartment	Predicted environmental concentration (PEC)	Risk characterization ratio (RCR)	Method	Remarks
Fresh water	0,000505 mg/l	0,01	EUSES v2.1.2	none
freshwater sediment	0,385 mg/kg	0,084	EUSES v2.1.2	none
marine water	0,0000505 mg/l	0,01	EUSES v2.1.2	none
Marine sediments	0,039 mg/kg	0,084	EUSES v2.1.2	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Sewage treatment plant	0,00133 mg/l	0,01	EUSES v2.1.2	none
Soil	0,019 mg/kg	0,036	EUSES v2.1.2	none
Humans via the environment	0,000000 3 mg/m ³	0,01	EUSES v2.1.2	none
Humans via the environment	0,000124 mg/kg	0,01	EUSES v2.1.2	none

Health:
Formulation [mixing] of preparations and/or re-packaging:
PROC1:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,096 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,034 mg/kg	0,01	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,01	ECETOC TRA worker v3	none

Formulation [mixing] of preparations and/or re-packaging:
PROC2:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,336 mg/m ³	0,014	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,137 mg/kg	0,02	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,033	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Formulation [mixing] of preparations and/or re-packaging:
PROC3:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,605 mg/m ³	0,024	ECETOC TRA worker v3	none
Worker - dermal, long-term - local		0,034 mg/kg	0,01	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,029	ECETOC TRA worker v3	none

Formulation [mixing] of preparations and/or re-packaging:
PROC5:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,048 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,686 mg/kg	0,098	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,1	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Formulation [mixing] of preparations and/or re-packaging:
PROC8a:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,96 mg/m ³	0,039	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,686 mg/kg	0,098	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,137	ECETOC TRA worker v3	none

Formulation [mixing] of preparations and/or re-packaging:
PROC8b:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,432 mg/m ³	0,017	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,686 mg/kg	0,098	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,115	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Formulation [mixing] of preparations and/or re-packaging:
PROC9:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,144 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,343 mg/kg	0,049	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,055	ECETOC TRA worker v3	none

Formulation [mixing] of preparations and/or re-packaging:
PROC18:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,192 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,686 mg/kg	0,098	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,106	ECETOC TRA worker v3	none

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure Scenario

II.

Exposure scenario worker

1.Coatings and paints, thinners, paint removers, Industrial
List of use descriptors
Life Cycle Stage

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Sector(s) of use	SU3: Industrial uses: Uses of substances as such or in preparations at industrial sites SU17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
Product categories [PC]:	PC9a: Coatings and paints, thinners, paint removers

Name of contributing environmental scenario and corresponding ERC	<u>Coatings and paints, thinners, paint removers:</u> ERC5: Industrial use resulting in inclusion into or onto a matrix
--	--

List of names of contributing worker scenarios and corresponding PROCs	<u>Coatings and paints, thinners, paint removers:</u> PROC7: Industrial spraying <u>Coatings and paints, thinners, paint removers:</u> PROC10: Roller application or brushing <u>Coatings and paints, thinners, paint removers:</u> PROC13: Treatment of articles by dipping and pouring
---	---

2.1. Contributing exposure scenario controlling environmental exposure for: Coatings and paints, thinners, paint removers, Industrial

Environmental Release Category (ERC)	ERC5: Industrial use resulting in inclusion into or onto a matrix
---	---

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
---	---

Physical state	
-----------------------	--

Viscosity:

Kinematic viscosity:	165 mm ² /s (40 °C)
Dynamic viscosity:	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)

Amounts used

Daily amount per site	0,02 t
Annual amount per site	4 t

Frequency and duration of use

Batch process:	not relevant
Continuous process:	not relevant

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Environment factors not influenced by risk management

Flow rate of receiving surface water (m³/d):	18.000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Other given operational conditions affecting environmental exposure

type	Emission days	Emission factors			Remarks
		Air	Soil	Water	
		1 %	0 %	0 %	

Other relevant operational conditions	not relevant
--	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 8 of the safety data sheet (Environmental exposure controls).

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil

Air	not relevant
Soil	not relevant
Water	not relevant
Sediment:	not relevant
Remarks:	not relevant

Organisational measures to prevent/limit release from site:

none

Conditions and measures related to sewage treatment plant

Size of municipal sewage system/treatment plant (m³/d):	
type:	not relevant
Discharge rate:	2.000 m3/d
Treatment effectiveness:	not relevant
Sludge treatment technique:	not relevant
Measures to limit air emissions:	not relevant
Remarks:	Waste water should be treated in a waste water treatment plant.

Conditions and measures related to external treatment of waste for disposal

This information is not available.

Conditions and measures related to external recovery of waste

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Additional good practice advice beyond the REACH CSA

This information is not available.

2.2. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Industrial

Process Categories:	PROC7: Industrial spraying
----------------------------	----------------------------

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
---	---

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	40 °C
Remarks	not relevant

Amounts used
Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour), Local exhaust ventilation 95% (LEV 95%)		

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF \geq 10).		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.3. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Industrial
Process Categories: PROC10: Roller application or brushing

Product characteristics
Concentration of the substance in a mixture: Covers percentage substance in the product up to 1 %.

Physical form of the product: liquid

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Vapour pressure:	not relevant
Process temperature:	40 °C
Remarks	not relevant

Amounts used

--

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet
--

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour), Local exhaust ventilation 90% (LEV 90%)		

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF >= 20)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.4. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Industrial
Process Categories: PROC13: Treatment of articles by dipping and pouring

Product characteristics
Concentration of the substance in a mixture: Covers percentage substance in the product up to 1 %.

Physical form of the product: liquid

Vapour pressure: not relevant

Process temperature: 40 °C

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Remarks	not relevant
----------------	--------------

Amounts used

--

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet
--

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour), Local exhaust ventilation 90% (LEV 90%)		

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF \geq 20)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

3. Exposure estimation

Environment:
Coatings and paints, thinners, paint removers, Industrial:
ERC5:

Compartment	Predicted environmental concentration (PEC)	Risk characterisation ratio (RCR)	Method	Remarks
Fresh water	0,000373 mg/l	0,01	EUSES v2.1.2	none
freshwater sediment	0,285 mg/kg	0,062	EUSES v2.1.2	none
marine water	0,0000374 mg/l	0,01	EUSES v2.1.2	none
Marine sediments	0,029 mg/kg	0,062	EUSES v2.1.2	none
Sewage treatment plant	0 mg/l	0,01	EUSES v2.1.2	none
Soil	0,02 mg/kg	0,037	EUSES v2.1.2	none
Humans via the environment	0,0000306 mg/m ³	0,01	EUSES v2.1.2	none
Humans via the environment	0,00422 mg/kg	0,01	EUSES v2.1.2	none

Health:
Coatings and paints, thinners, paint removers, Industrial:
PROC7:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,144 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,857 mg/kg	0,122	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,128	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Coatings and paints, thinners, paint removers, Industrial:
PROC10:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,048 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,137 mg/kg	0,02	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,022	ECETOC TRA worker v3	none

Coatings and paints, thinners, paint removers, Industrial:
PROC13:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,048 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,069 mg/kg	0,01	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,012	ECETOC TRA worker v3	none

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure Scenario
III.
Exposure scenario worker
1.Coatings and paints, thinners, paint removers, Professional
List of use descriptors
Life Cycle Stage

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Sector(s) of use	SU22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen) SU17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
Product categories [PC]:	PC9a: Coatings and paints, thinners, paint removers

Name of contributing environmental scenario and corresponding ERC	<u>Coatings and paints, thinners, paint removers:</u> ERC8c: Widespread use leading to inclusion into/onto article (indoor)
--	--

List of names of contributing worker scenarios and corresponding PROCs	<u>Coatings and paints, thinners, paint removers:</u> PROC11: Non industrial spraying <u>Coatings and paints, thinners, paint removers:</u> PROC10: Roller application or brushing
---	---

2.1. Contributing exposure scenario controlling environmental exposure for: Coatings and paints, thinners, paint removers, Professional

Environmental Release Category (ERC)	ERC8c: Widespread use leading to inclusion into/onto article (indoor)
---	---

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
---	---

Physical state	
-----------------------	--

Viscosity:	
Kinematic viscosity:	165 mm ² /s (40 °C)
Dynamic viscosity:	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)

Amounts used
Frequency and duration of use

Batch process:	not relevant
Continuous process:	not relevant

Environment factors not influenced by risk management

Flow rate of receiving surface water (m³/d):	18.000 m ³ /d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Other given operational conditions affecting environmental exposure

Other relevant operational conditions	not relevant
--	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 8 of the safety data sheet (Environmental exposure controls).

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil

Air	not relevant
Soil	not relevant
Water	not relevant
Sediment:	not relevant
Remarks:	not relevant

Organisational measures to prevent/limit release from site:

none

Conditions and measures related to sewage treatment plant
Size of municipal sewage system/treatment plant (m³/d):

type:	not relevant
Discharge rate:	not relevant
Treatment effectiveness:	not relevant
Sludge treatment technique:	not relevant
Measures to limit air emissions:	not relevant
Remarks:	Waste water should be treated in a waste water treatment plant.

Conditions and measures related to external treatment of waste for disposal

This information is not available.

Conditions and measures related to external recovery of waste

This information is not available.

Additional good practice advice beyond the REACH CSA

This information is not available.

2.2. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional

Process Categories:	PROC11: Non industrial spraying
----------------------------	---------------------------------

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used

--

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	240 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet
--

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., Use suitable eye protection., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.3. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional
Process Categories: PROC10: Roller application or brushing

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	240 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., Use suitable eye protection., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

3. Exposure estimation
Environment:
Coatings and paints, thinners, paint removers, Professional:
ERC8c:

Compartment	Predicted environmental concentration (PEC)	Risk characterization ratio (RCR)	Method	Remarks
Fresh water	0,00124 mg/l	0,023	EUSES v2.1.2	none
freshwater sediment	0,946 mg/kg	0,206	EUSES v2.1.2	none
marine water	0,00124 mg/l	0,023	EUSES v2.1.2	none
Marine sediments	0,095 mg/kg	0,206	EUSES v2.1.2	none
Sewage treatment plant	0,00878 mg/l	0,01	EUSES v2.1.2	none
Soil	0,244 mg/kg	0,46	EUSES v2.1.2	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Humans via the environment	0,000000 2 mg/m ³	0,01	EUSES v2.1.2	none
Humans via the environment	0,000704 mg/kg	0,01	EUSES v2.1.2	none

Health:
Coatings and paints, thinners, paint removers, Professional:
PROC11:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		1,152 mg/m ³	0,047	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		2,143 mg/kg	0,306	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,353	ECETOC TRA worker v3	none

Coatings and paints, thinners, paint removers, Professional:
PROC10:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,288 mg/m ³	0,012	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,549 mg/kg	0,078	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,09	ECETOC TRA worker v3	none

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure Scenario
IV.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Exposure scenario worker

1.Coatings and paints, thinners, paint removers, Professional

List of use descriptors	
Life Cycle Stage	
Sector(s) of use	SU22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen) SU19: Building and construction work
Product categories [PC]:	PC9a: Coatings and paints, thinners, paint removers
Name of contributing environmental scenario and corresponding ERC	<u>Coatings and paints, thinners, paint removers:</u> ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
List of names of contributing worker scenarios and corresponding PROCs	<u>Coatings and paints, thinners, paint removers:</u> PROC3: Use in closed batch process (synthesis or formulation) <u>Coatings and paints, thinners, paint removers:</u> PROC5: Mixing or blending in batch processes <u>Coatings and paints, thinners, paint removers:</u> PROC11: Non industrial spraying <u>Coatings and paints, thinners, paint removers:</u> PROC10: Roller application or brushing <u>Coatings and paints, thinners, paint removers:</u> PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <u>Coatings and paints, thinners, paint removers:</u> PROC19: Hand-mixing with intimate contact and only PPE available <u>Coatings and paints, thinners, paint removers:</u> PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises <u>Coatings and paints, thinners, paint removers:</u> PROC2: Use in closed, continuous process with occasional controlled exposure

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2.1. Contributing exposure scenario controlling environmental exposure for: Coatings and paints, thinners, paint removers, Professional

Environmental Release Category (ERC)	ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
---	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
---	---

Physical state	
-----------------------	--

Viscosity:	
Kinematic viscosity:	165 mm ² /s (40 °C)
Dynamic viscosity:	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)

Amounts used
Frequency and duration of use

Batch process:	not relevant
Continuous process:	not relevant

Environment factors not influenced by risk management

Flow rate of receiving surface water (m³/d):	18.000 m ³ /d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Other given operational conditions affecting environmental exposure

Other relevant operational conditions	not relevant
--	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 8 of the safety data sheet (Environmental exposure controls).

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil

Air	not relevant
Soil	not relevant
Water	not relevant
Sediment:	not relevant
Remarks:	not relevant

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Organisational measures to prevent/limit release from site:

none

Conditions and measures related to sewage treatment plant
Size of municipal sewage system/treatment plant (m³/d):

type:	not relevant
Discharge rate:	not relevant
Treatment effectiveness:	not relevant
Sludge treatment technique:	not relevant
Measures to limit air emissions:	not relevant
Remarks:	Waste water should be treated in a waste water treatment plant.

Conditions and measures related to external treatment of waste for disposal

This information is not available.

Conditions and measures related to external recovery of waste

This information is not available.

Additional good practice advice beyond the REACH CSA

This information is not available.

2.2. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional

Process Categories:	PROC3: Use in closed batch process (synthesis or formulation)
----------------------------	---

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF \geq 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2.3. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional

Process Categories:	PROC5: Mixing or blending in batch processes
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
---	---

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used
Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	60 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.4. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional
Process Categories: PROC11: Non industrial spraying

Product characteristics
Concentration of the substance in a mixture: Covers percentage substance in the product up to 1 %.

Physical form of the product: liquid

Vapour pressure: not relevant

Process temperature: 25 °C

Remarks not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	240 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.5. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional
Process Categories: PROC10: Roller application or brushing

Product characteristics
Concentration of the substance in a mixture: Covers percentage substance in the product up to 1 %.

Physical form of the product: liquid

Vapour pressure: not relevant

Process temperature: 25 °C

Remarks not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	240 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.6. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional

Process Categories:	PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	60 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2.7. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional

Process Categories:	PROC19: Hand-mixing with intimate contact and only PPE available
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
---	---

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used
Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	60 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.8. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional

Process Categories:	PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises
----------------------------	---

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.9. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional
Process Categories:

PROC2: Use in closed, continuous process with occasional controlled exposure

Product characteristics
Concentration of the substance in a mixture:

Covers percentage substance in the product up to 1 %.

Physical form of the product:

liquid

Vapour pressure:

not relevant

Process temperature:

25 °C

Remarks

not relevant

Amounts used

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Professional:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

3. Exposure estimation
Environment:
Coatings and paints, thinners, paint removers, Professional:
ERC8a:

Compartment	Predicted environmental concentration (PEC)	Risk characterisation ratio (RCR)	Method	Remarks
Fresh water	0,000481 mg/l	0,01	EUSES v2.1.2	none
freshwater sediment	0,367 mg/kg	0,08	EUSES v2.1.2	none
marine water	0,0000482 mg/l	0,01	EUSES v2.1.2	none
Marine sediments	0,037 mg/kg	0,08	EUSES v2.1.2	none
Sewage treatment plant	0,00109 mg/l	0,01	EUSES v2.1.2	none
Soil	0,047 mg/kg	0,089	EUSES v2.1.2	none
Humans via the environment	0,0000002 mg/m ³	0,01	EUSES v2.1.2	none
Humans via the environment	0,00017 mg/kg	0,01	EUSES v2.1.2	none

Health:
Coatings and paints, thinners, paint removers, Professional:
PROC3:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,288 mg/m ³	0,012	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,014 mg/kg	0,01	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,014	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Coatings and paints, thinners, paint removers, Professional:
PROC5:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,192 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,039 mg/kg	0,039	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,047	ECETOC TRA worker v3	none

Coatings and paints, thinners, paint removers, Professional:
PROC11:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		1,152 mg/m ³	0,047	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		2,143 mg/kg	0,306	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,353	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Coatings and paints, thinners, paint removers, Professional:
PROC10:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,288 mg/m ³	0,012	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,549 mg/kg	0,078	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,09	ECETOC TRA worker v3	none

Coatings and paints, thinners, paint removers, Professional:
PROC8a:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,48 mg/m ³	0,019	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,274 mg/kg	0,039	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,059	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Coatings and paints, thinners, paint removers, Professional:
PROC19:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,48 mg/m ³	0,019	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		1,414 mg/kg	0,202	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,221	ECETOC TRA worker v3	none

Coatings and paints, thinners, paint removers, Professional:
PROC4:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,192 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,137 mg/kg	0,02	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,027	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Coatings and paints, thinners, paint removers, Professional:
PROC2:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,48 mg/m ³	0,019	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,027 mg/kg	0,01	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,023	ECETOC TRA worker v3	none

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure Scenario

V.

Exposure scenario consumer

1.Coatings and paints, thinners, paint removers, Consumers:

List of use descriptors	
Life Cycle Stage	
Sector(s) of use	SU21: Consumer uses: Private households (= general public = consumers)
Product Categories:	PC9a: Coatings and paints, thinners, paint removers
Name of contributing environmental scenario and corresponding ERC	<u>Coatings and paints, thinners, paint removers:</u> ERC8a: Wide dispersive indoor use of processing aids in open systems
List of names of contributing worker scenarios and corresponding PROCs	<u>Coatings and paints, thinners, paint removers:</u> :

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2.1. Contributing exposure scenario controlling environmental exposure for: Coatings and paints, thinners, paint removers, Consumers

Environmental Release Category (ERC)	ERC8a: Wide dispersive indoor use of processing aids in open systems
---	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
---	---

Physical state	
-----------------------	--

Viscosity

Kinematic viscosity	165 mm ² /s (40 °C)
Dynamic viscosity	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)

Amounts used

This information is not available.

Frequency and duration of use

Batch process	not relevant
Continuous process	not relevant

Environment factors not influenced by risk management

Flow rate of receiving surface water (m³/d):	18.000 m ³ /d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Other given operational conditions affecting environmental exposure

Other relevant operational conditions	not relevant
--	--------------

Risk management measures (RMM)
Conditions and measures related to municipal sewage treatment plant

Size of municipal sewage system/treatment plant (m³/d):	
type:	not relevant
Discharge rate:	not relevant
Treatment effectiveness:	not relevant
Sludge treatment technique:	not relevant
Measures to limit air emissions:	not relevant
Remarks	Waste water should be treated in a waste water treatment plant.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to external treatment of waste for disposal

none

Conditions and measures related to external recovery of waste

none

Additional good practice advice beyond the REACH CSA

This information is not available.

2.2. Contributing exposure scenario controlling consumer exposure for: Coatings and paints, thinners, paint removers, Consumers

Product Categories:	PC9a: Coatings and paints, thinners, paint removers
----------------------------	---

Product characteristics

Concentration of the substance in a mixture:	0,5 %
---	-------

Physical form of the product:	liquid
--------------------------------------	--------

Vapour pressure:	not relevant
-------------------------	--------------

Process temperature:	not relevant
-----------------------------	--------------

Remarks	not relevant
----------------	--------------

Application:	not relevant
---------------------	--------------

Amounts used

This information is not available.

Frequency and duration of use

	Use duration (h/d):	Frequency of use:	Remarks
Application interval	60 min	1 uses per day	

Human factors not influenced by risk management

Assumes that potential dermal contact is limited to hands.

Other given operational conditions affecting consumers exposure

Other relevant operational conditions	not relevant
--	--------------

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Risk management measures (RMM)
Conditions and measures related to information and behavioural advice to consumers

Consumers	Dermal, Inhalation Do not swallow product.
-----------	--

Conditions and measures related to personal protection, hygiene and health evaluation

See chapter 8 of the safety data sheet (Personal protection equipment)

Additional good practice advice beyond the REACH CSA

not relevant

3. Exposure estimation and reference to its source
Environment:
Coatings and paints, thinners, paint removers, Consumers:
ERC8a:

Compartment	Predicted environmental concentration (PEC)	Risk characterization ratio (RCR)	Method	Remarks
Fresh water	0,000518 mg/l	0,01	EUSES v2.1.2	none
freshwater sediment	0,395 mg/kg	0,086	EUSES v2.1.2	none
marine water	0,0000519 mg/l	0,01	EUSES v2.1.2	none
Marine sediments	0,04 mg/kg	0,086	EUSES v2.1.2	none
Sewage treatment plant	0,00146 mg/l	0,01	EUSES v2.1.2	none
Soil	0,057 mg/kg	0,107	EUSES v2.1.2	none
Humans via the environment	0,0000002 mg/m ³	0,01	EUSES v2.1.2	none
Humans via the environment	0,000196 mg/kg	0,01	EUSES v2.1.2	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Health:
Coatings and paints, thinners, paint removers, Consumers:
PC9a:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Consumer - inhalative, long-term - systemic		0,016 mg/m ³	0,01	ECETOC TRA consumer v3	none
Consumer - dermal, long-term - systemic		0,357 mg/kg	0,143	ECETOC TRA consumer v3	none
Consumer - oral, long-term - systemic		0 mg/kg	0,01	ECETOC TRA consumer v3	none
Consumer - combined, long-term - systemic			0,147	ECETOC TRA consumer v3	none

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure Scenario

VI.

Exposure scenario consumer

1.Coatings and paints, thinners, paint removers, Consumers:

List of use descriptors	
Life Cycle Stage	
Sector(s) of use	SU21: Consumer uses: Private households (= general public = consumers)
Product Categories:	PC9a: Coatings and paints, thinners, paint removers
Name of contributing environmental scenario and corresponding ERC	<u>Coatings and paints, thinners, paint removers:</u> ERC8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix
List of names of contributing worker scenarios and corresponding PROCs	<u>Coatings and paints, thinners, paint removers:</u> :

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

--	--

2.1. Contributing exposure scenario controlling environmental exposure for: Coatings and paints, thinners, paint removers, Consumers

Environmental Release Category (ERC)	ERC8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix
---	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
---	---

Physical state	
-----------------------	--

Viscosity

Kinematic viscosity	165 mm ² /s (40 °C)
Dynamic viscosity	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)

Amounts used

This information is not available.	
------------------------------------	--

Frequency and duration of use

Batch process	not relevant
Continuous process	not relevant

Environment factors not influenced by risk management

Flow rate of receiving surface water (m³/d):	18.000 m ³ /d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Other given operational conditions affecting environmental exposure

Other relevant operational conditions	not relevant
--	--------------

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Risk management measures (RMM)
Conditions and measures related to municipal sewage treatment plant
Size of municipal sewage system/treatment plant (m³/d):

type:	not relevant
Discharge rate:	not relevant
Treatment effectiveness:	not relevant
Sludge treatment technique:	not relevant
Measures to limit air emissions:	not relevant
Remarks	Waste water should be treated in a waste water treatment plant.

Conditions and measures related to external treatment of waste for disposal

none

Conditions and measures related to external recovery of waste

none

Additional good practice advice beyond the REACH CSA

This information is not available.

2.2. Contributing exposure scenario controlling consumer exposure for: Coatings and paints, thinners, paint removers, Consumers

Product Categories:	PC9a: Coatings and paints, thinners, paint removers
----------------------------	---

Product characteristics

Concentration of the substance in a mixture:	0,5 %
---	-------

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	not relevant
Remarks	not relevant
Application:	not relevant

Amounts used

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration (h/d):	Frequency of use:	Remarks
Application interval	60 min	1 uses per day	

Human factors not influenced by risk management

Assumes that potential dermal contact is limited to hands.

Other given operational conditions affecting consumers exposure

Other relevant operational conditions	not relevant
---------------------------------------	--------------

Risk management measures (RMM)
Conditions and measures related to information and behavioural advice to consumers

Consumers	Dermal, Inhalation Do not swallow product.
-----------	--

Conditions and measures related to personal protection, hygiene and health evaluation

See chapter 8 of the safety data sheet (Personal protection equipment)

Additional good practice advice beyond the REACH CSA

not relevant

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

3. Exposure estimation and reference to its source
Environment:
Coatings and paints, thinners, paint removers, Consumers:
ERC8c:

Compartment	Predicted environmental concentration (PEC)	Risk characterization ratio (RCR)	Method	Remarks
Fresh water	0,000417 mg/l	0,01	EUSES v2.1.2	none
freshwater sediment	0,318 mg/kg	0,069	EUSES v2.1.2	none
marine water	0,0000417 mg/l	0,01	EUSES v2.1.2	none
Marine sediments	0,032 mg/kg	0,069	EUSES v2.1.2	none
Sewage treatment plant	0,000439 mg/l	0,01	EUSES v2.1.2	none
Soil	0,03 mg/kg	0,057	EUSES v2.1.2	none
Humans via the environment	0,0000002 mg/m ³	0,01	EUSES v2.1.2	none
Humans via the environment	0,000126 mg/kg	0,01	EUSES v2.1.2	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Health:
Coatings and paints, thinners, paint removers, Consumers:
PC9a:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Consumer - inhalative, long-term - systemic		0,016 mg/m ³	0,01	ECETOC TRA consumer v3	none
Consumer - dermal, long-term - systemic		0,357 mg/kg	0,143	ECETOC TRA consumer v3	none
Consumer - oral, long-term - systemic		0 mg/kg	0,01	ECETOC TRA consumer v3	none
Consumer - combined, long-term - systemic			0,147	ECETOC TRA consumer v3	none

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure Scenario
VII.
Exposure scenario consumer
1. Ink and toners, Consumers:

List of use descriptors	
Life Cycle Stage	
Sector(s) of use	SU21: Consumer uses: Private households (= general public = consumers)
Product Categories:	PC18: Ink and toners
Name of contributing environmental scenario and corresponding ERC	<u>Ink and toners:</u> ERC8d: Wide dispersive outdoor use of processing aids in open systems
List of names of contributing worker scenarios and corresponding PROCs	<u>Ink and toners:</u> :

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

--	--

2.1. Contributing exposure scenario controlling environmental exposure for: Ink and toners, Consumers

Environmental Release Category (ERC)	ERC8d: Wide dispersive outdoor use of processing aids in open systems
---	---

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
---	---

Physical state	
-----------------------	--

Viscosity

Kinematic viscosity	165 mm ² /s (40 °C)
Dynamic viscosity	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)

Amounts used

This information is not available.	
------------------------------------	--

Frequency and duration of use

Batch process	not relevant
Continuous process	not relevant

Environment factors not influenced by risk management

Flow rate of receiving surface water (m³/d):	18.000 m ³ /d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Other given operational conditions affecting environmental exposure

Other relevant operational conditions	not relevant
--	--------------

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Risk management measures (RMM)
Conditions and measures related to municipal sewage treatment plant
Size of municipal sewage system/treatment plant (m³/d):

type:	not relevant
Discharge rate:	not relevant
Treatment effectiveness:	not relevant
Sludge treatment technique:	not relevant
Measures to limit air emissions:	not relevant
Remarks	Waste water should be treated in a waste water treatment plant.

Conditions and measures related to external treatment of waste for disposal

none

Conditions and measures related to external recovery of waste

none

Additional good practice advice beyond the REACH CSA

This information is not available.

2.2. Contributing exposure scenario controlling consumer exposure for: Ink and toners, Consumers

Product Categories:	PC18: Ink and toners
----------------------------	----------------------

Product characteristics

Concentration of the substance in a mixture:	0,5 %
---	-------

Physical form of the product:	liquid
--------------------------------------	--------

Vapour pressure:	not relevant
-------------------------	--------------

Process temperature:	not relevant
-----------------------------	--------------

Remarks	not relevant
----------------	--------------

Application:	not relevant
---------------------	--------------

Amounts used

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration (h/d):	Frequency of use:	Remarks
Application interval	60 min	1 uses per day	

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting consumers exposure
Other relevant operational conditions

not relevant

Risk management measures (RMM)

This information is not available.

Additional good practice advice beyond the REACH CSA

not relevant

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

3. Exposure estimation and reference to its source
Environment:
Ink and toners, Consumers:
ERC8d:

Compartment	Predicted environmental concentration (PEC)	Risk characterization ratio (RCR)	Method	Remarks
Fresh water	0,000518 mg/l	0,01	EUSES v2.1.2	none
freshwater sediment	0,395 mg/kg	0,086	EUSES v2.1.2	none
marine water	0,0000519 mg/l	0,01	EUSES v2.1.2	none
Marine sediments	0,04 mg/kg	0,086	EUSES v2.1.2	none
Sewage treatment plant	0,00146 mg/l	0,01	EUSES v2.1.2	none
Soil	0,057 mg/kg	0,107	EUSES v2.1.2	none
Humans via the environment	0,0000002 mg/m ³	0,01	EUSES v2.1.2	none
Humans via the environment	0,000196 mg/kg	0,01	EUSES v2.1.2	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Health:
Ink and toners, Consumers:
PC18:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Consumer - inhalative, long-term - systemic		1,429 mg/m ³	0,328	ECETOC TRA consumer v3	none
Consumer - dermal, long-term - systemic		0 mg/kg	0,01	ECETOC TRA consumer v3	none
Consumer - oral, long-term - systemic		0 mg/kg	0,01	ECETOC TRA consumer v3	none
Consumer - combined, long-term - systemic			0,328	ECETOC TRA consumer v3	none

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure Scenario
VIII.
Exposure scenario consumer
1.Ink and toners, Consumers:

List of use descriptors	
Life Cycle Stage	
Sector(s) of use	SU21: Consumer uses: Private households (= general public = consumers)
Product Categories:	PC18: Ink and toners
Name of contributing environmental scenario and corresponding ERC	<u>Ink and toners:</u> ERC8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix
List of names of contributing worker scenarios and corresponding PROCs	<u>Ink and toners:</u> :

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

--	--

2.1. Contributing exposure scenario controlling environmental exposure for: Ink and toners, Consumers

Environmental Release Category (ERC)	ERC8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix
---	---

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
---	---

Physical state	
-----------------------	--

Viscosity

Kinematic viscosity	165 mm ² /s (40 °C)
Dynamic viscosity	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)

Amounts used

This information is not available.	
------------------------------------	--

Frequency and duration of use

Batch process	not relevant
Continuous process	not relevant

Environment factors not influenced by risk management

Flow rate of receiving surface water (m³/d):	18.000 m ³ /d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Other given operational conditions affecting environmental exposure

Other relevant operational conditions	not relevant
--	--------------

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Risk management measures (RMM)
Conditions and measures related to municipal sewage treatment plant
Size of municipal sewage system/treatment plant (m³/d):

type:	not relevant
Discharge rate:	not relevant
Treatment effectiveness:	not relevant
Sludge treatment technique:	not relevant
Measures to limit air emissions:	not relevant
Remarks	Waste water should be treated in a waste water treatment plant.

Conditions and measures related to external treatment of waste for disposal

none

Conditions and measures related to external recovery of waste

none

Additional good practice advice beyond the REACH CSA

This information is not available.

2.2. Contributing exposure scenario controlling consumer exposure for: Ink and toners, Consumers

Product Categories:	PC18: Ink and toners
----------------------------	----------------------

Product characteristics

Concentration of the substance in a mixture:	0,5 %
---	-------

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	not relevant
Remarks	not relevant
Application:	not relevant

Amounts used

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration (h/d):	Frequency of use:	Remarks
Application interval	60 min	1 uses per day	

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting consumers exposure
Other relevant operational conditions

not relevant

Risk management measures (RMM)

This information is not available.

Additional good practice advice beyond the REACH CSA

not relevant

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

3. Exposure estimation and reference to its source
Environment:
Ink and toners, Consumers:
ERC8f:

Compartment	Predicted environmental concentration (PEC)	Risk characterization ratio (RCR)	Method	Remarks
Fresh water	0,000318 mg/l	0,01	EUSES v2.1.2	none
freshwater sediment	0,29 mg/kg	0,063	EUSES v2.1.2	none
marine water	0,0000381 mg/l	0,01	EUSES v2.1.2	none
Marine sediments	0,029 mg/kg	0,063	EUSES v2.1.2	none
Sewage treatment plant	0,0000731 mg/l	0,01	EUSES v2.1.2	none
Soil	0,021 mg/kg	0,039	EUSES v2.1.2	none
Humans via the environment	0,0000002 mg/m ³	0,01	EUSES v2.1.2	none
Humans via the environment	0,000101 mg/kg	0,01	EUSES v2.1.2	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Health:
Ink and toners, Consumers:
PC18:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Consumer - inhalative, long-term - systemic		1,429 mg/m ³	0,328	ECETOC TRA consumer v3	none
Consumer - dermal, long-term - systemic		0 mg/kg	0,01	ECETOC TRA consumer v3	none
Consumer - oral, long-term - systemic		0 mg/kg	0,01	ECETOC TRA consumer v3	none
Consumer - combined, long-term - systemic			0,328	ECETOC TRA consumer v3	none

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure Scenario
IX.
Exposure scenario worker
1. Adhesives, sealants, Professional

List of use descriptors	
Life Cycle Stage	
Sector(s) of use	SU22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen) SU19: Building and construction work
Product categories [PC]:	PC1: Adhesives, sealants
Name of contributing environmental scenario and corresponding ERC	<u>Adhesives, sealants:</u> ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
List of names of contributing worker scenarios and corresponding PROCs	<u>Adhesives, sealants:</u> PROC3: Use in closed batch process (synthesis or formulation)

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

	<p><u>Adhesives, sealants:</u> PROC5: Mixing or blending in batch processes</p> <p><u>Adhesives, sealants:</u> PROC11: Non industrial spraying</p> <p><u>Adhesives, sealants:</u> PROC10: Roller application or brushing</p> <p><u>Adhesives, sealants:</u> PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p><u>Adhesives, sealants:</u> PROC19: Hand-mixing with intimate contact and only PPE available</p> <p><u>Adhesives, sealants:</u> PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p><u>Adhesives, sealants:</u> PROC2: Use in closed, continuous process with occasional controlled exposure</p>
--	---

2.1. Contributing exposure scenario controlling environmental exposure for: Adhesives, sealants, Professional

Environmental Release Category (ERC)	ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
---	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
---	---

Physical state	
-----------------------	--

Viscosity:

Kinematic viscosity:	165 mm ² /s (40 °C)
Dynamic viscosity:	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)

Amounts used
Frequency and duration of use

Batch process:	not relevant
Continuous process:	not relevant

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Environment factors not influenced by risk management

Flow rate of receiving surface water (m³/d):	18.000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Other given operational conditions affecting environmental exposure

Other relevant operational conditions	not relevant
--	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 8 of the safety data sheet (Environmental exposure controls).

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil

Air	not relevant
Soil	not relevant
Water	not relevant
Sediment:	not relevant
Remarks:	not relevant

Organisational measures to prevent/limit release from site:

none

Conditions and measures related to sewage treatment plant

Size of municipal sewage system/treatment plant (m³/d):	
type:	not relevant
Discharge rate:	not relevant
Treatment effectiveness:	not relevant
Sludge treatment technique:	not relevant
Measures to limit air emissions:	not relevant
Remarks:	Waste water should be treated in a waste water treatment plant.

Conditions and measures related to external treatment of waste for disposal

This information is not available.

Conditions and measures related to external recovery of waste

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Additional good practice advice beyond the REACH CSA

This information is not available.

2.2. Contributing exposure scenario controlling worker exposure for: Adhesives, sealants, Professional

Process Categories:	PROC3: Use in closed batch process (synthesis or formulation)
----------------------------	---

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
---	---

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used
Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.3. Contributing exposure scenario controlling worker exposure for: Adhesives, sealants, Professional
Process Categories: PROC5: Mixing or blending in batch processes

Product characteristics
Concentration of the substance in a mixture: Covers percentage substance in the product up to 1 %.

Physical form of the product: liquid

Vapour pressure: not relevant

Process temperature: 25 °C

Remarks not relevant

Amounts used

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	60 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2.4. Contributing exposure scenario controlling worker exposure for: Adhesives, sealants, Professional

Process Categories:	PROC11: Non industrial spraying
----------------------------	---------------------------------

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
---	---

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used
Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	240 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.5. Contributing exposure scenario controlling worker exposure for: Adhesives, sealants, Professional
Process Categories: PROC10: Roller application or brushing

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	240 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.6. Contributing exposure scenario controlling worker exposure for: Adhesives, sealants, Professional

Process Categories:	PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	240 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2.7. Contributing exposure scenario controlling worker exposure for: Adhesives, sealants, Professional

Process Categories:	PROC19: Hand-mixing with intimate contact and only PPE available
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
---	---

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used
Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	60 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF >= 20)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.8. Contributing exposure scenario controlling worker exposure for: Adhesives, sealants, Professional

Process Categories:	PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises
----------------------------	---

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
---	---

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2.9. Contributing exposure scenario controlling worker exposure for: Adhesives, sealants, Professional

Process Categories:	PROC2: Use in closed, continuous process with occasional controlled exposure
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
---	---

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used
Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF \geq 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

3. Exposure estimation

Environment:

Adhesives, sealants, Professional:

ERC8a:

Compartment	Predicted environmental concentration (PEC)	Risk characterization ratio (RCR)	Method	Remarks
Fresh water	0,000481 mg/l	0,01	EUSES v2.1.2	none
freshwater sediment	0,367 mg/kg	0,08	EUSES v2.1.2	none
marine water	0,0000482 mg/l	0,01	EUSES v2.1.2	none
Marine sediments	0,037 mg/kg	0,08	EUSES v2.1.2	none
Sewage treatment plant	0,00109 mg/l	0,01	EUSES v2.1.2	none
Soil	0,047 mg/kg	0,089	EUSES v2.1.2	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Humans via the environment	0,000000 2 mg/m ³	0,01	EUSES v2.1.2	none
Humans via the environment	0,00017 mg/kg	0,01	EUSES v2.1.2	none

Health:
Adhesives, sealants, Professional:
PROC3:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,288 mg/m ³	0,012	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,014 mg/kg	0,01	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,014	ECETOC TRA worker v3	none

Adhesives, sealants, Professional:
PROC5:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,192 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,274 mg/kg	0,039	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,047	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Adhesives, sealants, Professional:
PROC11:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		1,152 mg/m ³	0,047	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		2,143 mg/kg	0,306	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,353	ECETOC TRA worker v3	none

Adhesives, sealants, Professional:
PROC10:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,288 mg/m ³	0,012	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,549 mg/kg	0,078	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,09	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Adhesives, sealants, Professional:
PROC8a:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		1,44 mg/m ³	0,058	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,274 mg/kg	0,039	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,097	ECETOC TRA worker v3	none

Adhesives, sealants, Professional:
PROC19:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,048 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		1,414 mg/kg	0,202	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,204	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Adhesives, sealants, Professional:
PROC4:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,96 mg/m ³	0,039	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,137 mg/kg	0,02	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,058	ECETOC TRA worker v3	none

Adhesives, sealants, Professional:
PROC2:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,48 mg/m ³	0,019	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,027 mg/kg	0,01	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,023	ECETOC TRA worker v3	none

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure Scenario
X.
Exposure scenario worker
1.Metal working fluids, Industrial
List of use descriptors
Life Cycle Stage

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Sector(s) of use	SU3: Industrial uses: Uses of substances as such or in preparations at industrial sites SU15: Manufacture of fabricated metal products, except machinery and equipment
Product categories [PC]:	PC25: Metal working fluids

Name of contributing environmental scenario and corresponding ERC	<u>Coatings and paints, thinners, paint removers:</u> ERC4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
--	--

List of names of contributing worker scenarios and corresponding PROCs	<u>Coatings and paints, thinners, paint removers:</u> PROC13: Treatment of articles by dipping and pouring <u>Coatings and paints, thinners, paint removers:</u> PROC18: Greasing at high energy conditions
---	--

2.1. Contributing exposure scenario controlling environmental exposure for: Coatings and paints, thinners, paint removers, Industrial

Environmental Release Category (ERC)	ERC4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
---	---

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
---	---

Physical state	
-----------------------	--

Viscosity:	
Kinematic viscosity:	165 mm ² /s (40 °C)
Dynamic viscosity:	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)

Amounts used

Daily amount per site	0,01 t
Annual amount per site	0,2 t

Frequency and duration of use

Batch process:	not relevant
Continuous process:	not relevant

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Environment factors not influenced by risk management

Flow rate of receiving surface water (m³/d):	18.000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Other given operational conditions affecting environmental exposure

type	Emission days	Emission factors			Remarks
		Air	Soil	Water	
		0,01 %	0,1 %	0,1 %	

Other relevant operational conditions	not relevant
--	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 8 of the safety data sheet (Environmental exposure controls).

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil

Air	not relevant
Soil	not relevant
Water	not relevant
Sediment:	not relevant
Remarks:	not relevant

Organisational measures to prevent/limit release from site:

none

Conditions and measures related to sewage treatment plant

Size of municipal sewage system/treatment plant (m³/d):	
type:	not relevant
Discharge rate:	2.000 m3/d
Treatment effectiveness:	not relevant
Sludge treatment technique:	not relevant
Measures to limit air emissions:	not relevant
Remarks:	Waste water should be treated in a waste water treatment plant.

Conditions and measures related to external treatment of waste for disposal

This information is not available.

Conditions and measures related to external recovery of waste

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Additional good practice advice beyond the REACH CSA

This information is not available.

2.2. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Industrial

Process Categories:	PROC13: Treatment of articles by dipping and pouring
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
---	---

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used
Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF \geq 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.3. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Industrial
Process Categories: PROC18: Greasing at high energy conditions

Product characteristics
Concentration of the substance in a mixture: Covers percentage substance in the product up to 1 %.

Physical form of the product: liquid

Vapour pressure: not relevant

Process temperature: 75 °C

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Remarks	not relevant
----------------	--------------

Amounts used

--

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet
--

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Organisational measures to prevent/limit releases, dispersion and exposure

Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral, Inhalation	Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision., Ensure regular inspection, cleaning and maintenance of equipment and machines., Regular cleaning of work area, Clear spills immediately.	

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF \geq 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

3. Exposure estimation

Environment:
Coatings and paints, thinners, paint removers, Industrial:
ERC4:

Compartment	Predicted environmental concentration (PEC)	Risk characterisation ratio (RCR)	Method	Remarks
Fresh water	0,000636 mg/l	0,012	EUSES v2.1.2	none
freshwater sediment	0,485 mg/kg	0,105	EUSES v2.1.2	none
marine water	0,0000637 mg/l	0,012	EUSES v2.1.2	none
Marine sediments	0,049 mg/kg	0,106	EUSES v2.1.2	none
Sewage treatment plant	0,00266 mg/l	0,01	EUSES v2.1.2	none
Soil	0,087 mg/kg	0,165	EUSES v2.1.2	none
Humans via the environment	0,0000002 mg/m ³	0,01	EUSES v2.1.2	none
Humans via the environment	0,000267 mg/kg	0,01	EUSES v2.1.2	none

Health:
Coatings and paints, thinners, paint removers, Industrial:
PROC13:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,096 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,274 mg/kg	0,039	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,043	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Coatings and paints, thinners, paint removers, Industrial:
PROC18:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,576 mg/m ³	0,023	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,165 mg/kg	0,024	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,047	ECETOC TRA worker v3	none

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure Scenario

XI.

Exposure scenario worker

1.Coatings and paints, thinners, paint removers, Professional

List of use descriptors	
Life Cycle Stage	
Sector(s) of use	SU22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen) SU19: Building and construction work
Product categories [PC]:	PC9a: Coatings and paints, thinners, paint removers
Name of contributing environmental scenario and corresponding ERC	<u>Coatings and paints, thinners, paint removers:</u> ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
List of names of contributing worker scenarios and corresponding PROCs	<u>Coatings and paints, thinners, paint removers:</u> PROC3: Use in closed batch process (synthesis or formulation) <u>Coatings and paints, thinners, paint removers:</u> PROC5: Mixing or blending in batch processes <u>Coatings and paints, thinners, paint removers:</u>

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

	<p>PROC11: Non industrial spraying</p> <p><u>Coatings and paints, thinners, paint removers:</u> PROC10: Roller application or brushing</p> <p><u>Coatings and paints, thinners, paint removers:</u> PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p><u>Coatings and paints, thinners, paint removers:</u> PROC19: Hand-mixing with intimate contact and only PPE available</p> <p><u>Coatings and paints, thinners, paint removers:</u> PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p><u>Coatings and paints, thinners, paint removers:</u> PROC2: Use in closed, continuous process with occasional controlled exposure</p>
--	---

2.1. Contributing exposure scenario controlling environmental exposure for: Coatings and paints, thinners, paint removers, Professional

Environmental Release Category (ERC)	ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
---	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
---	---

Physical state	
-----------------------	--

Viscosity:	
Kinematic viscosity:	165 mm ² /s (40 °C)
Dynamic viscosity:	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)

Amounts used
Frequency and duration of use

Batch process:	not relevant
Continuous process:	not relevant

Environment factors not influenced by risk management

Flow rate of receiving surface water (m³/d):	18.000 m ³ /d
Local freshwater dilution factor	10

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Local marine water dilution factor	100
---	-----

Other given operational conditions affecting environmental exposure

Other relevant operational conditions	not relevant
--	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 8 of the safety data sheet (Environmental exposure controls).

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil

Air	not relevant
Soil	not relevant
Water	not relevant
Sediment:	not relevant
Remarks:	not relevant

Organisational measures to prevent/limit release from site:

none

Conditions and measures related to sewage treatment plant

Size of municipal sewage system/treatment plant (m³/d):	
type:	not relevant
Discharge rate:	not relevant
Treatment effectiveness:	not relevant
Sludge treatment technique:	not relevant
Measures to limit air emissions:	not relevant
Remarks:	Waste water should be treated in a waste water treatment plant.

Conditions and measures related to external treatment of waste for disposal

This information is not available.

Conditions and measures related to external recovery of waste

This information is not available.

Additional good practice advice beyond the REACH CSA

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2.2. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional

Process Categories:	PROC3: Use in closed batch process (synthesis or formulation)
----------------------------	---

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
---	---

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used
Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	240 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear suitable gloves (tested to EN374), coverall and eye protection., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.3. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional
Process Categories: PROC5: Mixing or blending in batch processes

Product characteristics
Concentration of the substance in a mixture: Covers percentage substance in the product up to 1 %.

Physical form of the product: liquid

Vapour pressure: not relevant

Process temperature: 25 °C

Remarks not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	120 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.4. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional
Process Categories: PROC11: Non industrial spraying

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	60 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF >= 20)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.5. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional
Process Categories: PROC10: Roller application or brushing

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	240 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF \geq 20)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.6. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional

Process Categories:	PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	120 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF >= 20)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

2.7. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional

Process Categories:	PROC19: Hand-mixing with intimate contact and only PPE available
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
---	---

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used
Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	60 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions:	not relevant
---	--------------

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF >= 20)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands., Use suitable eye protection.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.8. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional
Process Categories:

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

Product characteristics
Concentration of the substance in a mixture:

Covers percentage substance in the product up to 1 %.

Physical form of the product:

liquid

Vapour pressure:

not relevant

Process temperature:

25 °C

Remarks

not relevant

Amounts used

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Local exhaust ventilation 90% (LEV 90%)		

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training., Wear a respirator which reduces the air impurities by at least a factor of 20 (APF >= 20)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

2.9. Contributing exposure scenario controlling worker exposure for: Coatings and paints, thinners, paint removers, Professional

Process Categories:	PROC2: Use in closed, continuous process with occasional controlled exposure
----------------------------	--

Product characteristics

Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	25 °C
Remarks	not relevant

Amounts used

--

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Frequency and duration of use

	Use duration:	Frequency of use:	Remarks
Application duration	480 min		Indoor use

Human factors not influenced by risk management

This information is not available.

Other given operational conditions affecting workers exposure

Other relevant operational conditions: not relevant

Risk management measures (RMM)
Technical conditions and measures at process level (source) to prevent release

See chapter 7 of the safety data sheet

Technical conditions and measures to control dispersion from source towards the worker

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure

This information is not available.

Conditions and measures related to personal protection, hygiene and health evaluation

Application	Route of Exposure	Protective Measures	Effectiveness	Remarks
Industrial:	Dermal, Oral, Inhalation	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training., Wear a respirator which reduces the air impurities by at least a factor of 10 (APF >= 10)., If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.		

Additional good practice advice beyond the REACH CSA

This information is not available.

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

3. Exposure estimation
Environment:
Coatings and paints, thinners, paint removers, Professional:
ERC8a:

Compartment	Predicted environmental concentration (PEC)	Risk characterisation ratio (RCR)	Method	Remarks
Fresh water	0,000589 mg/l	0,011	EUSES v2.1.2	none
freshwater sediment	0,449 mg/kg	0,098	EUSES v2.1.2	none
marine water	0,000059 mg/l	0,011	EUSES v2.1.2	none
Marine sediments	0,045 mg/kg	0,098	EUSES v2.1.2	none
Sewage treatment plant	0,00218 mg/l	0,01	EUSES v2.1.2	none
Soil	0,075 mg/kg	0,141	EUSES v2.1.2	none
Humans via the environment	0,000000 2 mg/m ³	0,01	EUSES v2.1.2	none
Humans via the environment	0,000245 mg/kg	0,01	EUSES v2.1.2	none

Health:
Coatings and paints, thinners, paint removers, Professional:
PROC3:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,173 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,014 mg/kg	0,01	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,01	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Coatings and paints, thinners, paint removers, Professional:
PROC5:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,058 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,137 mg/kg	0,02	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,022	ECETOC TRA worker v3	none

Coatings and paints, thinners, paint removers, Professional:
PROC11:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,192 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		1,071 mg/kg	0,153	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,161	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Coatings and paints, thinners, paint removers, Professional:
PROC10:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,144 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,274 mg/kg	0,039	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,045	ECETOC TRA worker v3	none

Coatings and paints, thinners, paint removers, Professional:
PROC8a:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,72 mg/m ³	0,029	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,137 mg/kg	0,02	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,049	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Coatings and paints, thinners, paint removers, Professional:
PROC19:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		4,8 mg/m ³	0,194	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		1,414 mg/kg	0,202	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,396	ECETOC TRA worker v3	none

Coatings and paints, thinners, paint removers, Professional:
PROC4:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,096 mg/m ³	0,01	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,069 mg/kg	0,01	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,014	ECETOC TRA worker v3	none

Product name: SURFYNOL® AD-01

According to Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Annex-2 (Dated: 23.06.2017 Official Gazette No: 30105) and Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

Coatings and paints, thinners, paint removers, Professional:
PROC2:

Route of Exposure	Specific condition	Exposure level	Risk characterisation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,48 mg/m ³	0,019	ECETOC TRA worker v3	none
Worker - dermal, long-term - systemic		0,014 mg/kg	0,01	ECETOC TRA worker v3	none
Worker - combined, long-term - systemic			0,021	ECETOC TRA worker v3	none

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.