

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 İbişağa 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



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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

environment

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

Environmental Hazards

Chronic hazards to the aquatic 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.



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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	Concentrati	CAS-No.	EC No.	KKDIK-	REACH	M-Factor:	Notes
name	on			Registration	Registration		
				No.	No.		
2,4,7,9-	50 - <100%	17913-76-7	451-160-7	01-	01-	No data	
Tetramethy				000047930	000001905	available.	
I-4,7-				7-78	0-84		
Decanediol							

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

Classification

Chemical name	Classification	Notes
2,4,7,9-Tetramethyl-4,7- Decanediol	Classification: Eye Irrit.: 2: H319; Aquatic Chronic: 3: H412;	None.
Becarious	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	

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.

[#] This substance has workplace exposure limit(s).

^{##} This substance is listed as SVHC.



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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:

subsoil/soil.

6.3 Methods and material for containment and cleaning

Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with the regulations.

Do not allow to enter drains or waterways Prevent product from getting into

up:

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



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General population	Inhalation	Systemic, long-term; 0,43 mg/m3	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/m3	Repeated dose toxicity
General population	Oral	Systemic, short-term; 0,75 mg/kg	Repeated dose toxicity
Workers	Inhalation	Systemic, long-term; 1,76 mg/m3	Repeated dose toxicity
General population	Oral	Systemic, long-term; 2,5	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



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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 mm2/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/cm3 (25 °C)

Method: EC Method A.3

0,904 g/cm3 (21,1 °C)

Relative vapor density: not measured



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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 None with proper storage and handling.

Products:

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- LD 50, Rat, Female, Male, > 2.000 mg/kg, OECD 423

Decanediol

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

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Decanediol

Inhalation

Product: No data available.

Components:

2,4,7,9-Tetramethyl-4,7- Not toxic after single exposure, Vapour, No data available.

Decanediol 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- No data available.

Decanediol

Skin Corrosion/Irritation

Product: Not irritating, OECD 404, (Rabbit, 4 h), Not irritating

Components:

2,4,7,9-Tetramethyl-4,7- Not irritating, OECD 404, Rabbit, 4 h

Decanediol

Serious Eye Damage/Eye Irritation

Product: Irritating., OECD 405, Rabbit, Irritating.

Components:

2,4,7,9-Tetramethyl-4,7- Irritating., OECD 405, Rabbit

Decanediol

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- Local Lymph Node Assay (LLNA), OECD 429, Mouse, Not a skin

Decanediol sensitizer.

Carcinogenicity

Product: No data available.

Components:

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

Decanediol

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- Chromosomal aberration, OECD 473: , negative

Decanediol Ames test, OECD 471: , negative

gene mutation test, OECD 476: , (analogy)

In vivo

Product: No data available.

Components:



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2,4,7,9-Tetramethyl-4,7-

No data available.

Decanediol

Reproductive toxicity

Product: No data available. Oral

Components:

2,4,7,9-Tetramethyl-4,7-Oral

Decanediol

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

Components:

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

Decanediol

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Components:

2.4,7,9-Tetramethyl-4,7-

No data available.

Decanediol

Aspiration Hazard

Product: Not classified

Components:

2,4,7,9-Tetramethyl-4,7-

Not classified

Decanediol

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-

LC 50, Oncorhynchus mykiss, 96 h, Approximate, 53,2 mg/l OECD 203

Decanediol

Aquatic Invertebrates

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

Components:

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

Decanediol

Toxicity to Aquatic Plants

Product: ErC50 (Algae (Pseudokirchneriella subcapitata), 72 h): 127 mg/l (OECD

201)

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Components:

2,4,7,9-Tetramethyl-4,7- EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): Approximate 127

Decanediol mg/I (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- EC 50, activated sludge, 3 h, > 1.000 mg/l, OECD 209

Decanediol

Toxicity to soil dwelling organisms

Product: No data available.

Components:

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

Decanediol

Toxicity to terrestrial organisms

Product: No data available.

Components:

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

Decanediol

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Components:

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

Decanediol

Aquatic Invertebrates

Product: No data available.

Components:

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

Decanediol

Toxicity to Aquatic Plants

Product: No data available.

Components:

2,4,7,9-Tetramethyl-4,7- NOEC (Algae (Pseudokirchneriella subcapitata), 72 h): 6,25 mg/l (OECD

Decanediol 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- EC 50, activated sludge, 3 h, > 1.000 mg/l, OECD 209

Decanediol

Toxicity to soil dwelling organisms

Product: No data available.

Components:

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

Decanediol

Toxicity to terrestrial organisms

Product: No data available.

Components:

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

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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- 44 %, 28 d, OECD 301 F, The product is not biodegradable., aerobic

Decanediol

12.3 Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Components:

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

Decanediol

Partition Coefficient n-octanol / water (log Kow)
Product: 3.8, 25 °C, OECD 117

Components:

2,4,7,9-Tetramethyl-4,7- 3,8, 25 °C, OECD 117

Decanediol

12.4 Mobility in soil:

Product No data available.

Components:

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

Decanediol

12.5 Results of PBT and vPvB assessment:

Product No data available.

Components:

2,4,7,9-Tetramethyl-4,7Decanediol
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-

No data available.

Decanediol

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.



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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)



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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) Subtances 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



Supersedes Date: -

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; TECI - 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: Aysequil Yarqıc / Evonik Ticaret Ltd. Sti.

Certificate Number: TÜV/11.252.01

Certificate Date / Valid Until: 05.08.2024 - 05.08.2029

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Revision Information

Changes since the last version are highlighted in the margin. This version

replaces all previous versions.

Disclaimer:

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Annex to the extended Safety Data Sheet (eSDS)

Content

Exposure Scenario I. Formulation [mixing] of preparations and/or re-packaging, Industrial

Exposure Scenario II.

Exposure Scenario III.

Exposure Scenario IV.

Exposure Scenario IV.

Exposure Scenario VI.

Coatings and paints, thinners, paint removers, Professional Coatings and paints, thinners, paint removers, Professional Coatings and paints, thinners, paint removers, Consumers Coatings and paints, thinners, paint removers, Consumers Coatings and paints, thinners, paint removers, Consumers

Exposure Scenario VII. Ink and toners, Consumers
Exposure Scenario IX. Ink and toners, Consumers
Ink and toners, Consumers
Ink and toners, Consumers
Adhesives, sealants, Professional
Metal working fluids, Industrial



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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	Formulation [mixing] of preparations and/or re-packaging: ERC2: Formulation into mixture
	Ţ
List of names of contributing worker scenarios and corresponding PROCs	Formulation [mixing] of preparations and/or re-packaging: PROC1: Use in closed process, no likelihood of exposure
	Formulation [mixing] of preparations and/or re-packaging: PROC2: Use in closed, continuous process with occasional controlled exposure
	Formulation [mixing] of preparations and/or re-packaging: PROC3: Use in closed batch process (synthesis or formulation)
	Formulation [mixing] of preparations and/or re-packaging: PROC5: Mixing or blending in batch processes
	Formulation [mixing] of preparations and/or re-packaging: PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
	Formulation [mixing] of preparations and/or re-packaging: PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
	Formulation [mixing] of preparations and/or re-packaging: PROC9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
	Formulation [mixing] of preparations and/or re-packaging: PROC18: Greasing at high energy conditions



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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 mm2/s (40 °C)		
Dynamic viscosity:	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)		
Amounts used			
Daile, amount non aite	4.4		
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 m3/d		
Local freshwater dilution factor	10		
Local marine water dilution factor	100		
Other given operational conditions affecting	g environmental exposure		

type	Emission days	Emission factors			Remarks
type	Ellission days	Air	Soil	Water	Remarks
		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).



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Issue Date: 26.08.2024 Last revised date: 26.08.2024

Supersedes Date: -

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 m3/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	Covers percentage substance in the product up to 100 %.
mixture:	

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			
Amounts useu			
Frequency and du	ration of use		
	Use	Frequency of use:	Remarks
		ition:	Remarks
Application duration			Indoor use
Human factors not	influenced by ri	sk management	
This information	n is not available.		
This information	i is not available.		
Other given operate	tional conditions	affecting workers exposure	
Other relevant ope	erational condition	not relevant	
Risk management	measures (RMM	1	
Trion management	mododroo (ramin	,	
Technical condition	ns and measure	s at process level (source) to prev	ent release
See chapter 7 c	of the safety data s	sheet	
Tochnical condition	ne and moasuro	s to control dispersion from source	o towards the worker
Technical condition	ilis aliu illeasure	s to control dispersion from sourc	e towards the worker
This information	n is not available.		
Organisational me	asures to prever	nt/limit releases, dispersion and ex	posure
	1 =	1=	Ι
Application	Route of Exposure	Protective Measures	Remarks
Industrial:	Dermal, Oral,	Assumes that activities are	
industrial.	Inhalation	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 ma	acuras raistad t	o norconal protection business	d health avaluation
Conditions and Me	easures related t	o personal protection, hygiene and	a nealth evaluation
See chapter 8 c	of the safety data s	sheet (Personal protection equipmen	t)
		/	i
·			
Additional good pr	actice advice be	yond the REACH CSA	
	ractice advice be	yond the REACH CSA	



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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	Covers percentage substance in the product up to 100 %.
mixture:	

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

Δ	m	^	un	ıts	116	20	A
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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	Effectivene ss	Remarks
Industrial:	Dermal, Oral, Inhalation	Provide a good standard of general or controlled ventilation (3 to 5 air changes per hour)		



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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	Effectivene ss	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	Covers percentage substance in the product up to 100 %.
mixture:	

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 du	uration of use				
	Use dura	tion:	Frequency of use	: Rema	rks
Application durati	ion 240 r	nin		Indoor	use
Human factors no	ot influenced by ris	sk manag	jement		
This informatio	n is not available.				
Other given opera	ational conditions	affecting	workers exposure		
Other relevant op	erational conditio	ns:	not relevant		
Risk managemen	t measures (RMM)				
Technical condition	ons and measures	at proce	ess level (source) to	prevent rele	ase
See chapter 7	of the safety data s	heet			
Technical condition	ons and measures	s to contr	ol dispersion from	source towar	ds the worker
Application	Route of Exposure	Prote	ctive Measures	Effectivene ss	Remarks
Industrial:	Dermal, Oral, Inhalation	of ger ventila	le a good standard leral or controlled ation (3 to 5 air les per hour)		



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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	Effectivene ss	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.

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

Product characteristics

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

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

Amounts used



Product name: SURFYNOL® AD-01

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No: 30105) and Reg	gulation (EC) No. 1907/200	6 (REACH) Art	icle 31, Annex II as am	ended		
Frequency and	duration of use					
1 7						
	Use dura		requency of use	: Remark	(S	
Application dur	ration 60 m	in		Indoor u	ıse	
Human factors	not influenced by ris	sk manager	ment			
This informa	tion is not available.					
Other given ope	erational conditions	affecting w	orkers exposure			
Othernalesses						
Other relevant operational conditions: not relevant						
Risk manageme	ent measures (RMM)					
Technical cond	itions and measures	at process	s level (source) to	prevent relea	se	
See chapter	7 of the safety data s	heet				
Technical cond	itions and measures	to control	dispersion from	source toward	s the worker	
Application	Route of Exposure	Protecti	ve Measures	Effectivene ss	Remarks	
Industrial:	Dermal, Oral, Inhalation		a good standard al or controlled			

Application	Route of Exposure	Protective Measures	Effectivene ss	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%)		



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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	Effectivene ss	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	Covers percentage substance in the product up to 100 %.
mixture:	

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 durat	ion:	Frequency of use:	Remar	ks		
Application dura	tion 60 mi	n		Indoor	use		
Human factors n	ot influenced by ris	k manag	gement				
This informati	on is not available.						
Other given ope	rational conditions	affecting	workers exposure				
Other relevant o	perational condition	ns:	not relevant				
Risk manageme	Risk management measures (RMM)						
Technical condit	ions and measures	at proce	ess level (source) to	prevent relea	ISE		
See chapter 7	of the safety data s	heet					
Technical condit	Technical conditions and measures to control dispersion from source towards the worker						
Application	Route of Exposure	Prote	ctive Measures	Effectivene ss	Remarks		
Industrial:	Dermal, Oral, Inhalation	of ger ventila	de a good standard neral or controlled ation (3 to 5 air ges per hour)				



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Product name: SURFYNOL® AD-01

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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	Effectivene ss	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	Covers percentage substance in the product up to 100 %.
mixture:	

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 duratio	on:	Frequency of use	: Remari	ks	
Application duration	on 120 mir	n		Indoor (use	
Human factors not	influenced by risk	manag	ement			
This information	is not available.					
Other given operat	Other given operational conditions affecting workers exposure					
Other relevant ope	rational conditions	s:	not relevant			
Risk management	measures (RMM)					
Technical conditio	ns and measures a	t proce	ss level (source) to	prevent relea	se	
See chapter 7 o	f the safety data she		ol dispersion from	source toward	s the worker	
Application	Route of Exposure	Protec	ctive Measures	Effectivene ss	Remarks	
Industrial:	Dermal, Oral, Inhalation	of gen ventila	e a good standard eral or controlled tion (5 to 10 air es per hour)			



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Product name: SURFYNOL® AD-01

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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	Effectivene ss	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

Amounto ucod

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

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

Amounts used



Supersedes Date: -

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 Reg	ulation (EC) No. 1907/2006	6 (REACH) A	Article 31, Annex II as am	ended	(
Frequency and	duration of use					
	Use durat	ion:	Frequency of use	: Remark	(S	
Application dura				Indoor u	use	
Human factors		J. mana	- m - m t			
Human factors i	not influenced by ris	sk manage	ement			
This informat	ion is not available.					
Other given ope	rational conditions	affecting	workers exposure			
Other relevant of	perational condition	ıs:	not relevant			
Othor rolovanic o	Other relevant operational conditions: not relevant					
Risk management measures (RMM)						
Technical condi	tions and measures	at proces	se lovel (source) to	provent release	60	
Technical condi	tions and measures	at proces	ss level (source) to	prevent relea	3C	
See chapter	7 of the safety data sh	neet				
Technical conditions and measures to control dispersion from source towards the worker						
Application	Application Route of Protective Measures Effectivene Remarks					
Application	Exposure	11000	tive measures	SS	itellial k3	
Industrial:	Dermal, Oral, Inhalation	of gene	e a good standard eral or controlled			

ventilation (3 to 5 air changes per hour), Local exhaust ventilation 90%

(LEV 90%)



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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	Effectivene ss	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

Product characteristics

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

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

Frequency and d	uration of use				
•					
	Use durat	Frequency o	fuse: Rem	arks	
Application durat	tion 120 m	in	Indo	or use	
Human factors no	ot influenced by ris	k management			
This information	on is not available.				
Other given oper	ational conditions	affecting workers expo	sure		
Other relevant operational conditions: not relevant					
Risk managemen	t measures (RMM)				
Technical conditi	ons and measures	at process level (sour	ce) to prevent rel	ease	
100mmour comun.	one and modeline	at process forer (cour	oo, to provent for	<u> </u>	
See chapter 7	of the safety data sh	neet			
·	·				
Technical conditi	ons and measures	to control dispersion	rom source towa	rds the worker	_
Application	Route of Exposure	Protective Measure	s Effectiver ss	e Remarks	
Industrial:	Dermal Oral	Provide a good stand	ard		

Application	Route of Exposure	Protective Measures	Effectivene ss	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%)		



Supersedes Date: -

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	Effectivene ss	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	Predicte d environ mental concentr ation (PEC)	Risk characteri sation 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	0,000050 5 mg/l	0,01	EUSES v2.1.2	none
Marine sediments	0,039 mg/kg	0,084	EUSES v2.1.2	none



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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/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,096 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,336 mg/m³	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



Supersedes Date: -

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 character isation 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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,048 mg/m³	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



Supersedes Date: -

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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,96 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,432 mg/m³	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



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Product name: SURFYNOL® AD-01

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

PROC9:

Route of Exposure	Specific condition	Exposure level	Risk character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,144 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,192 mg/m³	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	



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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	Coatings and paints, thinners, paint removers: ERC5: Industrial use resulting in inclusion into or onto a matrix
List of names of contributing worker scenarios and corresponding PROCs	Coatings and paints, thinners, paint removers: PROC7: Industrial spraying Coatings and paints, thinners, paint removers: PROC10: Roller application or brushing
	Coatings and paints, thinners, paint removers: PROC13: Treatment of articles by dipping and pouring

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

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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 mm2/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



Supersedes Date: -

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

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

Other relevant operational conditions	not relevant
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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.



Supersedes Date: -

Additional good practice advice beyond the REACH CSA						
This information is not available.						
This information is not available.						
2.2. Contributing expos	ure scenario	controlling worker	exposure for: Coatings and			
paints, thinners, paint rem			•			
Process Categories:		PROC7: Industrial spra	lying			
Product characteristics						
Concentration of the substantiature:	nce in a	Covers percentage sub	ostance in the product up to 1 %.			
Physical form of the product		liquid				
Vapour pressure:	•	liquid not relevant				
Process temperature:		40 °C				
Remarks		not relevant				
Kemarks		not relevant				
Amounts used						
Frequency and duration of u	SA					
requestoy and daration of a	50					
	Use duration:	Frequency of use:	Remarks			
Application duration	480 min		Indoor use			
	11					
Human factors not influence	d by risk mana	igement				
This information is not ava	ilable.					
Other given operational cond	ditions affectin	g workers exposure				
Other relevant engrational conditions and relevant						
Other relevant operational conditions: not relevant						
Risk management measures	Risk management measures (RMM)					
Technical conditions and me	Technical conditions and measures at process level (source) to prevent release					
See chapter 7 of the safety data sheet						



Supersedes Date: -

Product name: SURFYNOL® AD-01

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

Application	Route of Exposure	Protective Measures	Effectivene ss	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	Effectivene ss	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).		

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	Covers percentage substance in the product up to 1 %.
mixture:	

	Physical form of the product:	liquid
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Supersedes Date: -

Vapour pressure:			not relevant		
Process temperature: 40 °C					
Remarks	·				
Amounts used					
Amounts used					
Francisco and don	estion of				
Frequency and dur	ation of use				
	Use durati	on:	Frequency of use:	Remark	(S
Application duration	on 480 m	in		Indoor u	ise
Human factors not influenced by risk management					
	,				
This information	is not available.				
Other given operat	ional conditions	effecting	workers exposure		
Other given operat	ional conditions t	arrooting	Workers exposure		
Other relevant operational conditions: not relevant					
Risk management	measures (RMM)				
Trion management					
Technical condition	ns and measures	at proce	ess level (source) to	prevent releas	se
See chanter 7 o	f the safety data sh	neet			
Occ onapter 7 o	i ine saicty data si	1001			
Technical condition	ns and measures	to conti	rol dispersion from s	ource toward	s the worker
Application	Route of Exposure	Prote	ctive Measures	Effectivene ss	Remarks

Application	Route of Exposure	Protective Measures	Effectivene ss	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%)		



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Product name: SURFYNOL® AD-01

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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	Effectivene ss	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	Covers percentage substance in the product up to 1 %.
mixture:	

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



			T.						
Remarks		not relevant							
Amounts used									
Frequency and duration of use									
Frequency and dui	ration of use								
	Use		Frequency of use:	Rema	rks				
	duration	on:	,						
Application duration	on 480 mi	n		Indoo	use				
	•			<u>.</u>					
Human factors not	influenced by risk	manag	gement						
Г									
This information	is not available.								
Other given operat	tional conditions a	ffecting	workers exposure						
Other relevant ope	rational conditions		not relevant						
Other relevant ope	rational conditions	.	Hot relevant						
Risk management	measures (RMM)								
gomena	mouconec (runnin)								
Technical conditio	ns and measures a	at proce	ess level (source) to	prevent rele	ase				
See chapter 7 o	of the safety data she	eet							
Technical conditio	ns and measures t	o contr	ol dispersion from s	source towar	ds the worker				
	1	1		T					
Application	Route of	Prote	ctive Measures	Effectivene	e Remarks				
	Exposure			SS					
Industrial:	Dermal, Oral,		de a good standard						
	Inhalation		neral or controlled						
			ation (5 to 10 air						
			ges per hour), Local						
		exnau (LEV	ust ventilation 90%						
		(LEV	30 /0)						



Supersedes Date: -

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	Effectivene ss	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

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- i nis	imiorma	anon	is not	avallable.



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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	Predicte d environ mental concentr ation (PEC)	Risk characteri sation 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	0,000037 4 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	0,000030 6 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,144 mg/m³	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



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Product name: SURFYNOL® AD-01

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Coatings and paints, thinners, paint removers, Industrial:

PROC10:

Route of Exposure	Specific condition	Exposure level	Risk character isation 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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,048 mg/m³	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	



Version: 1.0

Issue Date: 26.08.2024 Last revised date: 26.08.2024 Supersedes Date: -

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 contribution and incompantal	Costings and points thinners point removes.
Name of contributing environmental scenario and corresponding ERC	Coatings and paints, thinners, paint removers: ERC8c: Widespread use leading to inclusion into/onto article (indoor)
List of names of contributing worker scenarios and corresponding PROCs	Coatings and paints, thinners, paint removers: PROC11: Non industrial spraying
	Coatings and paints, thinners, paint removers: PROC10: Roller application or brushing
	controlling environmental exposure for: Coatings
and paints, thinners, paint removers, Pr	ofessional
Environmental Release Category (ERC)	ERC8c: Widespread use leading to inclusion into/onto article
	(indoor)
Product characteristics	
Troudet characteriotics	
Concentration of the substance in a mixture:	Covers percentage substance in the product up to 100 %.
Physical state	
Viscosity:	
Kinematic viscosity:	165 mm2/s (40 °C)
Dynamic viscosity:	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)
Amounts used	
Frequency and duration of use	
Patch process:	not relevant
Batch process:	not relevant
Continuous process:	not relevant
Environment factors not influenced by risk r	management
Flow rate of receiving surface water (m³/d):	18.000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100
Local marme water unution factor	



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Product name: SURFYNOL® AD-01

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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 characteri	istics					
Concentration of the mixture:	he substand	ce in a	Covers percentage substance in the product up to 1 %.			
Physical form of th	ne product:		liquid			
Vapour pressure:			not relevant			
Process temperatu	ıre:		25 °C			
Remarks			not relevant			
			•			
Amounts used						
Frequency and du	ration of use	е				
	T	Use	Transport of upon	Remark	70	
		duration:	Frequency of use:	Remark	AS .	
Application duration	on	240 min		Indoor u	ise	
Harris Cartain and	· ' (l					
Human factors not	influencea	by risk manag	gement			
This information	n is not availa	able.				
Other given operat	tional condi	tions affecting	workers exposure			
Other relevant ope	rational cor	nditions:	not relevant			
Other relevant ope	national coi	iditions.	not relevant			
Risk management	measures (RMM)				
Tachnical canditio			/	nunciant value		
i ecnnicai conditio	ns and mea	sures at proce	ess level (source) to	prevent releas	se	
See chapter 7 c	of the safety	data sheet				
,						
Technical conditio	ns and mea	sures to conti	rol dispersion from s	source toward	s the worker	
Application	Route of	Proto	ctive Measures	Effectivene	Remarks	
Application	Exposure	Frote	ctive weasures	SS	Remarks	
Professional:	Dermal, Or Inhalation		exhaust ventilation (LEV 90%)			
Organiactional	acuras to m	rovent/limit ==	laagaa digmaraian s	nd ovnesure		
Organisational me	asures to pl	revent/ilmit rei	leases, dispersion a	na exposure		
This information	n is not availa	able.				



Supersedes Date: -

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	Effectivene ss	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
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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	Covers percentage substance in the product up to 1 %.
mixture:	

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

Amounts used



Frequency and o	duration of use				
	Use durat	ion:	Frequency of use	: Remark	KS .
Application dura	ation 240 n	nin		Indoor (ise
Human factors r	not influenced by ris	sk mana	gement		
Traman ractors in	iot iiiiiaoiiooa by iii	on mana	90		
This informat	ion is not available.				
	41 1 1141				
Other given ope	rational conditions	affecting	g workers exposure		
Other relevant o	perational condition	ns:	not relevant		
Dial					
RISK manageme	nt measures (RMM)				
Technical condi	tions and measures	at proc	ess level (source) to	prevent relea	se
0	7 . () ()	L t			
See chapter i	7 of the safety data s	neet			
Technical condi	tions and measures	to cont	rol dispersion from	source toward	s the worker
			•		
				1	
Application	Route of Exposure	Prote	ective Measures	Effectivene ss	Remarks
Application Professional:		Local	ective Measures I exhaust ventilation (LEV 90%)		Remarks
Professional:	Exposure Dermal, Oral, Inhalation	Local 90%	l exhaust ventilation (LEV 90%)	SS	Remarks
Professional: Organisational n	Exposure Dermal, Oral, Inhalation	Local 90%	l exhaust ventilation	SS	Remarks



Supersedes Date: -

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	Effectivene ss	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	Predicte d environ mental concentr ation (PEC)	Risk characteri sation 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



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Humans via the environment	0,000000 2 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		1,152 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,288 mg/m³	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.



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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	Coatings and paints, thinners, paint removers: 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	Coatings and paints, thinners, paint removers: PROC3: Use in closed batch process (synthesis or formulation)
	Coatings and paints, thinners, paint removers: PROC5: Mixing or blending in batch processes Coatings and paints, thinners, paint removers: PROC11: Non industrial spraying
	Coatings and paints, thinners, paint removers: PROC10: Roller application or brushing
	Coatings and paints, thinners, paint removers: PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non- dedicated facilities
	Coatings and paints, thinners, paint removers: PROC19: Hand-mixing with intimate contact and only PPE available
	Coatings and paints, thinners, paint removers: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises
	Coatings and paints, thinners, paint removers: PROC2: Use in closed, continuous process with occasional controlled exposure



Product name: SURFYNOL® AD-01

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

	T
Environmental Release Category (ERC)	ERC8a: Widespread use of non-reactive processing aid (no
	inclusion into or onto article, indoor)
Due direct chemosteristics	
Product characteristics	
Concentration of the substance in a	Covers percentage substance in the product up to 100 %.
mixture:	because hereen and a second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of
Physical state	
Viscosity:	
Kinematic viscosity:	165 mm2/s (40 °C)
Dynamic viscosity:	1.131 mPa.s (25 °C) 150 mPa.s (40 °C)
Amazanta	
Amounts used	
Frequency and duration of use	
respective and delication of dec	
Batch process:	not relevant
Continuous process:	not relevant
·	
Environment factors not influenced by risk I	management
	T
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 expectional conditions offerting	and the manufal arm and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the sam
Other given operational conditions affecting	g environmental exposure
Other relevant operational conditions	not relevant
Risk management measures (RMM)	
Technical conditions and measures at proce	and level (actives) to provent release
rechnical conditions and measures at proce	ess level (source) to prevent release
See chapter 8 of the safety data sheet (Env	vironmental exposure controls).
230 onapio. 3 on and dately data offoot (Eff	
	o reduce or limit discharges, air emissions and releases to
soil	
Air	not relevant
Soil	not relevant
Water	not relevant
Sediment:	
Seumlent.	not relevant

not relevant

Remarks:



Organisational measures to prevent/limit rel	ease 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 externa	treatment of waste for disposal
Conditions and measures related to externa	Theatment of waste for disposal
This information is not available.	
Conditions and massures related to systemas	I was a view of waste
Conditions and measures related to externa	recovery of waste
This information is not available.	
Additional good practice advice beyond the	REACH CSA
This information is not available.	
	controlling worker exposure for: Coatings and
paints, thinners, paint removers, Profes	sional
Process Categories:	PROC3: Use in closed batch process (synthesis or formulation)
1 100033 Outogories.	1 11000. Ode in diodea baton process (synthesis of formalation)
	, , ,
Product characteristics	
Product characteristics Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Concentration of the substance in a	
Concentration of the substance in a	
Concentration of the substance in a mixture:	Covers percentage substance in the product up to 1 %.
Concentration of the substance in a mixture: Physical form of the product: Vapour pressure: Process temperature:	Covers percentage substance in the product up to 1 %.
Concentration of the substance in a mixture: Physical form of the product: Vapour pressure:	Covers percentage substance in the product up to 1 %. liquid not relevant
Concentration of the substance in a mixture: Physical form of the product: Vapour pressure: Process temperature:	Covers percentage substance in the product up to 1 %. liquid not relevant 25 °C



Supersedes Date: -

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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	Effectivene ss	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.



Supersedes Date: -

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2.3. Contributing exposi paints, thinners, paint rem			xposure for: Coatings and
Process Categories:		PROC5: Mixing or blend	ing in batch processes
Design to the second state of			
Product characteristics			
Concentration of the substar mixture:	nce in a	Covers percentage subs	tance 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			
Fraguency and duration of w	•		
Frequency and duration of us	se		
	Use duration:	Frequency of use:	Remarks
Application duration	60 min		Indoor use
		,	
Human factors not influence	d by risk mana	gement	
This information is not avai	lable.		
Other given operational cond	litiana affaatin	a warkers avnasure	
Other given operational cond	antions anecting	g workers exposure	
Other relevant operational co	onditions:	not relevant	
		·	
Risk management measures	(RMM)		
Technical conditions and me	asures at proc	ess level (source) to prev	ent release
	acaree at pres	occition (country) to pro-	J. 10.0000
See chapter 7 of the safety	data sheet		
Technical conditions and me	asures to conf	rol dispersion from source	e towards the worker
		and percent in our court	
This information is not avai	lable.		
Organisational measures to	prevent/limit re	leases, dispersion and ex	posure

This information is not available.



Supersedes Date: -

Product name: SURFYNOL® AD-01

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

Application	Route of Exposure	Protective Measures	Effectivene ss	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 of	good practice	advice bev	vond the I	REACH CSA
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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	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

mixture:



			1	1	
	Use		Frequency of use	: Remarl	(S
Application dure	dura			la de eu .	
Application dura	ation 240 r	nin		Indoor (use
Human factors r	not influenced by ri	sk mana	agement		
This informat	ion is not available.				
Other given ope	rational conditions	affectin	ng workers exposure		
Other relevant e	novotional conditio		not volovont		
Other relevant o	perational conditio	ns:	not relevant		
Risk manageme	nt measures (RMM)			
	•				
Technical condi	tions and measures	s at pro	cess level (source) to	prevent relea	se
			cess level (source) to	prevent relea	se
	tions and measures 7 of the safety data s		cess level (source) to	prevent relea	se
See chapter	7 of the safety data s	sheet		•	
See chapter	7 of the safety data s	sheet	cess level (source) to	•	
See chapter	7 of the safety data s	sheet s to con		•	
See chapter	7 of the safety data s	sheet s to con	trol dispersion from	source toward	s the worker
See chapter 7 Technical condi	7 of the safety data s tions and measures Route of	s to con	trol dispersion from	source toward	s the worker
See chapter 7	7 of the safety data s tions and measures Route of Exposure	sto con Prot	trol dispersion from ective Measures	source toward	s the worker
See chapter 7 Technical condite Application Professional:	7 of the safety data s tions and measures Route of Exposure Dermal, Oral, Inhalation	Prot	trol dispersion from tective Measures al exhaust ventilation (LEV 90%)	source toward Effectivene ss	s the worker
See chapter 7 Technical condite Application Professional:	7 of the safety data s tions and measures Route of Exposure Dermal, Oral, Inhalation	Prot	trol dispersion from tective Measures	source toward Effectivene ss	s the worker
See chapter Technical condition Application Professional: Organisational r	7 of the safety data s tions and measures Route of Exposure Dermal, Oral, Inhalation	Prot	trol dispersion from tective Measures al exhaust ventilation (LEV 90%)	source toward Effectivene ss	s the worker



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Product name: SURFYNOL® AD-01

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

Application	Route of Exposure	Protective Measures	Effectivene ss	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 of	good practice	advice bev	vond the I	REACH CSA
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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	Covers percentage substance in the product up to 1.0/

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			



	uration of use				
	Use durat	ion:	Frequency of use:	Remark	(S
Application durat	ion 240 m	nin		Indoor u	ise
Human factors no	ot influenced by ris	sk manag	gement		
This information	n is not available.				
Other given opera	ational conditions	affecting	workers exposure		
Other relevant op	erational conditior	ns:	not relevant		
Risk managemen	t measures (RMM)				
Technical conditi	ons and measures	at proce	ess level (source) to	prevent relea	se
See chapter 7	of the safety data sl	heet			
Technical condition	ons and measures	to conti	ol dispersion from	source toward	s the worker
Teominear contain	Jiio and measures	to oone	or dispersion from a	source toward	5 the Worker
Application	Route of Exposure	Prote	ctive Measures	Effectivene ss	Remarks
Application		T	exhaust ventilation		
Professional:	Dermal, Oral, Inhalation		(LEV 90%)		
Professional:	Inhalation	90% ((LEV 90%)	nd exposure	
Professional:	Inhalation	90% (nd exposure	



Supersedes Date: -

Product name: SURFYNOL® AD-01

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

Application	Route of Exposure	Protective Measures	Effectivene ss	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
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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 %.
mixture.	

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	Effectivene ss	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.



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Product name: SURFYNOL® AD-01

-					
2.7. Contributing exposu paints, thinners, paint rem			kposure for: Coatings and		
Process Categories:		PROC19: Hand-mixing with intimate contact and only PPE available			
Dreduct characteristics					
Product characteristics					
Concentration of the substance in a mixture:		Covers percentage substance in the product up to 1 %.			
Physical form of the product	<u> </u>	liquid			
Vapour pressure:		not relevant			
Process temperature:		25 °C			
Remarks		not relevant			
		1			
Amounts used					
Frequency and duration of us	se				
	T	T	T = -		
	Use duration:	Frequency of use:	Remarks		
Application duration	60 min		Indoor use		
- фризинен	1 00 11111				
Human factors not influence	d by risk manag	gement			
This information is not avai	lable.				
Other given operational cond	litions affecting	y workers exposure			
	1141				
Other relevant operational co	inditions:	not relevant			
Risk management measures	(RMM)				
Nisk management measures	(IXIVIII)				
Technical conditions and me	asures at proce	ess level (source) to prev	ent release		
	-				
See chapter 7 of the safety	data sheet				
Technical conditions and me	asures to conti	rol dispersion from sourc	e towards the worker		
This information is not available.					
Overniostional massures to	arayan4/1:m:14.ms	lagged dispersion and su	VN COLUM		
Organisational measures to p	orevent/ilmit rei	leases, dispersion and ex	posure		
This information is not avai	lable.				
ccallon lo not avai					



Supersedes Date: -

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	Effectivene ss	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	Covers percentage substance in the product up to 1 %.
mixture:	

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

Amounts used		



			_	_	
	Use dura	tion:	Frequency of use	: Remark	(S
Application dura	ation 480 r	nin		Indoor (ıse
1 6	6 ! (
Human factors r	not influenced by ris	sk mana	gement		
This informat	ion is not available.				
Other given ope	rational conditions	affectin	g workers exposure		
Oth an malayarit :	manational and Pric				
Other relevant o	perational conditio	ns:	not relevant		
Risk manageme	nt measures (RMM)				
Technical condi	tions and measures	at proc	ess level (source) to	prevent relea	se
Coo abantar:	7 of the cofety date o	h o o t			
See chapter	7 of the safety data s	heet			
•	•		rol dispersion from	source toward	s the worker
·	•		rol dispersion from	source toward	s the worker
·	•	s to cont	rol dispersion from	source toward	s the worker
Technical condi	tions and measures	s to cont	•	1	T
Technical condi	Route of Exposure Dermal, Oral,	Prote	ective Measures I exhaust ventilation	Effectivene	T
Technical condi	Route of Exposure	Prote	ective Measures	Effectivene	T
Technical condi	Route of Exposure Dermal, Oral, Inhalation	Prote Loca 90%	ective Measures I exhaust ventilation (LEV 90%)	Effectivene ss	T
Technical condi	Route of Exposure Dermal, Oral, Inhalation	Prote Loca 90%	ective Measures I exhaust ventilation	Effectivene ss	T
Technical condi	Route of Exposure Dermal, Oral, Inhalation	Prote Loca 90%	ective Measures I exhaust ventilation (LEV 90%)	Effectivene ss	T



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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	Effectivene ss	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
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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	Covers percentage substance in the product up to 1 %.			
mixture:				

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	Effectivene ss	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.



Supersedes Date: -

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	Predicte d environ mental concentr ation (PEC)	Risk characteri sation 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	0,000048 2 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	0,000000 2 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,288 mg/m³	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



Supersedes Date: -

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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,192 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		1,152 mg/m³	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



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Coatings and paints, thinners, paint removers, Professional:

PROC10:

Route of Exposure	Specific condition	Exposure level	Risk character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,288 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,48 mg/m³	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



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Coatings and paints, thinners, paint removers, Professional:

PROC19:

Route of Exposure	Specific condition	Exposure level	Risk character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,48 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,192 mg/m³	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



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Coatings and paints, thinners, paint removers, Professional:

PROC2:

Route of Exposure	Specific condition	Exposure level	Risk character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,48 mg/m³	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

٧.

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	Coatings and paints, thinners, paint removers: ERC8a: Wide dispersive indoor use of processing aids in open systems
List of names of contributing worker scenarios and corresponding PROCs	Coatings and paints, thinners, paint removers: :



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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	Covers percentage substance in the product up to 100 %.
mixture:	

Physical state

Viscosity	
Kinematic viscosity	165 mm2/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 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)

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 rel	Conditions and measures related to external recovery of waste			
none				
Additional good practice adv	ice beyond the	REACH CSA		
This information is not avail	lable.			
2.2. Contributing exposure paints, thinners, paint rem			r exposure for: Coatings and	
Product Categories:		PC9a: Coatings and pain	ts, thinners, paint removers	
Product characteristics				
Concentration of the substan mixture:	ce in a	0,5 %		
Dhysical forms of the product		liaid		
Physical form of the product:	<u> </u>	liquid not relevant		
Vapour pressure: Process temperature:		not relevant		
Remarks		not relevant		
Application:		not relevant		
Amounts used				
This information is not avai	lable.			
Frequency and duration of us	se			
Troquency and daragement of de				
	Use duration (h/d):	Frequency of use:	Remarks	
Application interval	60 min	1uses per day		
Human fastans not influence				
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				



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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	Predicte d environ mental concentr ation (PEC)	Risk characteri sation 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	0,000051 9 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	0,000000 2 mg/m³	0,01	EUSES v2.1.2	none
Humans via the environment	0,000196 mg/kg	0,01	EUSES v2.1.2	none



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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 character isation ratio (RCR)	Method	Remarks
Consumer - inhalative, long-term - systemic		0,016 mg/m³	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

scenario and corresponding ERC	Coatings and paints, thinners, paint removers: ERC8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix
--------------------------------	-------------------------------------------------------------------------------------------------------------------------------

List of names of contributing worker scenarios and corresponding PROCs	Coatings and paints, thinners, paint removers:



2.1.Contributing exposure scenario	controlling environmental exposure for: Coatings	
and paints, thinners, paint removers, Co	onsumers	
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 mm2/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 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	



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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	0,5 %
mixture:	

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	1uses per day			
Human factors not influence	ed by risk manag	gement			
Assumes that potential de	rmal contact is lin	nited to hands.			
Other given operational con	ditions affecting	consumers exposure			
Other relevant operational of	Other relevant operational conditions not relevant				
Risk management measures	s (RMM)				
Conditions and measures related to information and behavioural advice to consumers					
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	not relevant				



Supersedes Date: -

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	Predicte d environ mental concentr ation (PEC)	Risk characteri sation 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	0,000041 7 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	0,000000 2 mg/m³	0,01	EUSES v2.1.2	none
Humans via the environment	0,000126 mg/kg	0,01	EUSES v2.1.2	none



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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 character isation ratio (RCR)	Method	Remarks
Consumer - inhalative, long-term - systemic		0,016 mg/m³	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

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	Ink and toners: ERC8d: Wide dispersive outdoor use of processing aids in open systems

List of names of contributing worker scenarios and corresponding PROCs	Ink and toners:

1.Ink and toners, Consumers:



2.1.Contributing exposure scenario	controlling environmental exposure for: Ink and			
toners, Consumers	3 · · · · · p · · · · · · · · · · · · · · · · · · ·			
,				
Environmental Release Category (ERC)	ERC8d: Wide dispersive outdoor use of processing aids in open			
	systems			
Product characteristics				
1 Toddot offdraotoffolios				
Concentration of the substance in a	Covers percentage substance in the product up to 100 %.			
mixture:				
Physical state				
Physical state				
Viscosity				
Kinematic viscosity	165 mm2/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 i	managomont			
Environment factors not innuenced by risk i	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			
Canal Contain operational containers	THE TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TO			



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 Catedories:	LPC18: Ink and toners

Product characteristics

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

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						
	T.,		1= .			
	Use duration (h/d):	Frequency of use:	Remarks			
Application interval	60 min	1uses per day				
Haman factors and bull	11					
Human factors not influenced	d by risk manag	ement				
This information is not avai	This information is not available.					
Other given operational conditions affecting consumers exposure						
Other relevant operational conditions not relevant						
Diek menagement messures (DMM)						
Risk management measures (RMM)						
This information is not available.						
Additional good practice advice beyond the REACH CSA						
not relevant						



Supersedes Date: -

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	Predicte d environ mental concentr ation (PEC)	Risk characteri sation 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	0,000051 9 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	0,000000 2 mg/m³	0,01	EUSES v2.1.2	none
Humans via the environment	0,000196 mg/kg	0,01	EUSES v2.1.2	none



Version: 1.0

Issue Date: 26.08.2024 Last revised date: 26.08.2024

Supersedes Date: -

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 character isation ratio (RCR)	Method	Remarks
Consumer - inhalative, long-term - systemic		1,429 mg/m³	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

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

: Wide dispersive outdoor use resulting in inclusion into or matrix

List of names of contributing worker scenarios and corresponding PROCs	Ink and toners:

1.Ink and toners, Consumers:



2.1 Contributing exposure scenario	controlling environmental exposure for: Ink and			
toners, Consumers	controlling environmental exposure for mix and			
toriore, corroannere				
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 %.			
illixture.				
Physical state				
,,	1			
Viscosity				
Kinematic viscosity	165 mm2/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				
Trequency and duration of use				
Batch process	not relevant			
Continuous process	not relevant			
·				
Environment factors not influenced by risk r	nanagement			
Γ	T			
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			
re-re-re-re-re-re-re-re-re-re-re-re-re-r				



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 Categories:	LPC18: Ink and toners

Product characteristics

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

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	1uses 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						



Supersedes Date: -

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	Predicte d environ mental concentr ation (PEC)	Risk characteri sation 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	0,000038 1 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	0,000073 1 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	0,000000 2 mg/m³	0,01	EUSES v2.1.2	none
Humans via the environment	0,000101 mg/kg	0,01	EUSES v2.1.2	none



Version: 1.0 Issue Date: 2

Issue Date: 26.08.2024 Last revised date: 26.08.2024

Supersedes Date: -

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 character isation ratio (RCR)	Method	Remarks
Consumer - inhalative, long-term - systemic		1,429 mg/m³	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	Adhesives, sealants: ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

List of names of contributing worker	Adhesives, sealants:
scenarios and corresponding PROCs	PROC3: Use in closed batch process (synthesis or formulation)



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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:

PROC5: Mixing or blending in batch processes

Adhesives, sealants:

PROC11: Non industrial spraying

Adhesives, sealants:

PROC10: Roller application or brushing

Adhesives, sealants:

PROC8a: Transfer of substance or preparation

(charging/discharging) from/to vessels/large containers at non-

dedicated facilities

Adhesives, sealants:

PROC19: Hand-mixing with intimate contact and only PPE

available

Adhesives, sealants:

PROC4: Use in batch and other process (synthesis) where

opportunity for exposure arises

Adhesives, sealants:

PROC2: Use in closed, continuous process with occasional

controlled exposure

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	Covers percentage substance in the product up to 100 %.
mixture:	

Physical state

Viscosity:	
Kinematic viscosity:	165 mm2/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



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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

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.



Additional good practice advice beyond the REACH CSA					
This information is not avai	iable.				
2.2. Contributing exposu	ire scenario	controlling worker ex	nosure for: Adhesives		
sealants, Professional		oona oming worker of	Apodaro Iori / tarrocivoc,		
Process Categories:		PROC3: Use in closed ba	atch process (synthesis or formulation)		
Product characteristics					
Concentration of the substan	re in a	Covers percentage subst	ance in the product up to 1 %.		
mixture:	.00 III u	Covere percentage ease.	is the product up to 1 70.		
		I			
Physical form of the product:		liquid			
Vapour pressure:		not relevant			
Process temperature:		25 °C			
Remarks		not relevant			
Amounts used					
Frequency and duration of us	se				
	Use duration:	Frequency of use:	Remarks		
Application duration	480 min		Indoor use		
Human factors not influenced	h by rick manag				
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					
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					
occ chapter 7 of the safety data sheet					
Technical conditions and measures to control dispersion from source towards the worker					
			This information is not available.		
This information is not avai	lable.				
		eases dispersion and ex	nosura		
This information is not avai		eases, dispersion and ex	posure		



Supersedes Date: -

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	Effectivene ss	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 of	good practice	advice bev	vond the I	REACH CSA
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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	Covers percentage substance in the product up to 1 %.
mixture:	

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	Effectivene ss	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.



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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. Contributin sealants, Profess	•	ire sce	nario (controlling work	er ex	posure	e for: Adhesives,
Process Categories:				PROC11: Non indu	etrial e	nraving	
Frocess categories.				1 NOC11. Noll lilidu	Striai S	praying	
Product characteri	stics						
Concentration of the substance in a mixture:			Covers percentage	substa	ance in th	ne product up to 1 %.	
Physical form of the product:			liquid				
Vapour pressure:				not relevant			
Process temperatu	ıre:			25 °C			
Remarks				not relevant			
Amounts used							
Frequency and dur	ration of us	ie					
		Use duratio	n:	Frequency of use:		Remark	S
Application duration	n	240 mir	า	Indoor use			ISE
Harman factors not	: fl	l lass minda					
Human factors not	influenced	i by risk	manag	ement			
This information	is not avail	able.					
Other given operat	ional cond	itions af	fecting	workers exposure			
Other relevant ope	rational co	nditions	·=	not relevant			
			<u>- </u>				
Risk management	measures	(RMM)					
Technical condition	ns and me	asures a	t proce	ss level (source) to	preve	nt relea:	se
		<u></u>	р. ссс	00 10101 (000100) 10	р.ото		
See chapter 7 o	f the safety	data she	et				
Technical condition	ns and me	asures to	o contr	ol dispersion from s	source	toward	s the worker
Application	Route of Exposure	<u> </u>	Protec	ctive Measures	Effec	ctivene	Remarks
Industrial:	Dermal, C		Local	exhaust ventilation	33		

Organisational	measures to	prevent/limit releases,	dispersion an	d avnosura
Organisational	ilicasules to	Dievenunin leieases.	uiopei ololi all	u exposure

90% (LEV 90%)

This information is not available.

Inhalation



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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	Effectivene ss	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 go	od practice	advice bev	vond the	REACH	CSA
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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	Covers percentage substance in the product up to 1 %.			
mixture:				

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

Amounts used		



	Us du	e ration:	Frequency of use	: Remark	(S
Application dur	ation 24) min		Indoor (ıse
Human factors	not influenced by	risk man	agement		
		TOR Man			
This informa	tion is not available				
Other given on	prational condition	se affactiv	ng workers exposure		
other given ope	erational condition	is allectii	ig workers exposure		
Other relevant of	perational condit	ions:	not relevant		
Risk manageme	ent measures (RM	M)			
tion managom	one mousures (rem	,			
Technical cond	itions and measur	es at pro	cess level (source) to	prevent relea	se
See chapter	7 of the safety data	sheet			
See chapter	7 of the safety data	a sheet			
•	•		trol dispersion from	source toward	s the worker
Technical cond	itions and measur	es to con	tective Measures	Effectivene	s the worker
Technical cond	Route of Exposure	Pro	tective Measures	1	1
Fechnical cond	itions and measur	Pro	-	Effectivene	1
Technical cond	Route of Exposure Dermal, Oral,	Pro	tective Measures al exhaust ventilation	Effectivene	T
Application	Route of Exposure Dermal, Oral, Inhalation	Pro	tective Measures al exhaust ventilation	Effectivene ss	1
Technical cond Application Industrial: Organisational	Route of Exposure Dermal, Oral, Inhalation	Pro Loca 90%	tective Measures al exhaust ventilation b (LEV 90%)	Effectivene ss	T



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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	Effectivene ss	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
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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	Covers percentage substance in the product up to 1 %.
mixture:	, , ,

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	Effectivene ss	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.



Supersedes Date: -

2.7. Contributing exposu sealants, Professional	ire scenario	controlling worker ex	xposure for: Adhesives,	
Process Categories:		PROC19: Hand-mixing with intimate contact and only PPE available		
Due heat all and started as				
Product characteristics				
Concentration of the substance in a mixture:		Covers percentage subst	tance in the product up to 1 %.	
Physical form of the product:	<u> </u>	liquid		
Vapour pressure:		not relevant		
Process temperature:		25 °C		
Remarks		not relevant		
Amounts used				
Frequency and duration of us	se			
	T	\ F	I Barranda	
	Use duration:	Frequency of use:	Remarks	
Application duration	60 min		Indoor use	
Human factors not influenced	d by risk manag	gement		
This information is not avai	lable			
The incident is not available.	145151			
Other given operational cond	litions affecting	y workers exposure		
Other relevant energicand en	m dition o	I not volovont		
Other relevant operational co	naitions:	not relevant		
Risk management measures	(RMM)			
Technical conditions and me	asures at proce	ess level (source) to prev	ent release	
See chapter 7 of the safety	data sheet			
Coo chapter i et alle callety				
Technical conditions and me	asures to conti	rol dispersion from sourc	e towards the worker	
This information is not avai	lable.			
Organisational measures to p	prevent/limit re	leases, dispersion and ex	posure	
e.gamoanemarmoadares to		.oucoo, aloporolon and ca	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
This information is not avai	This information is not available.			



Supersedes Date: -

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	Effectivene ss	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	Covers percentage substance in the product up to 1 %.		
mixture:			

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

Amounts used		



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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	Effectivene ss	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.



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2.9. Contributing expositions sealants, Professional	ire scenario	controlling worker ex	xposure for: Adhesives,	
Process Categories:		PROC2: Use in closed, continuous process with occasional controlled exposure		
Product characteristics				
Floudet characteristics				
Concentration of the substance in a mixture:		Covers percentage substance in the product up to 1 %.		
Physical form of the product	<u> </u>	liquid		
Vapour pressure:		not relevant		
Process temperature:		25 °C		
Remarks		not relevant		
Amounts used				
Frequency and duration of us	se			
	1		I Barranda	
	Use duration:	Frequency of use:	Remarks	
Application duration	480 min		Indoor use	
Human factors not influence	d by risk manag	gement		
This information is not avai	lable			
Other given operational cond	litions affecting	y workers exposure		
Other relevant energicand age		I not volovent		
Other relevant operational co	onaitions:	not relevant		
Risk management measures	(RMM)			
Technical conditions and me	asures at proc	ess level (source) to prev	ent release	
See chapter 7 of the safety	data sheet			
or one provide the second				
Technical conditions and me	asures to cont	rol dispersion from sourc	e towards the worker	
This information is not avai	iable.			
Organisational measures to	orevent/limit re	leases, dispersion and ex	posure	
This information is not avai	This information is not available.			



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

Application	Route of Exposure	Protective Measures	Effectivene ss	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.

3. Exposure estimation

Environment:

Adhesives, sealants, Professional:

ERC8a:

Compartment	Predicte d environ mental concentr ation (PEC)	Risk characteri sation 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	0,000048 2 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



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Humans via the environment	0,000000 2 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,288 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,192 mg/m³	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



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Adhesives, sealants, Professional:

PROC11:

Route of Exposure	Specific condition	Exposure level	Risk character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		1,152 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,288 mg/m³	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



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Adhesives, sealants, Professional:

PROC8a:

Route of Exposure	Specific condition	Exposure level	Risk character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		1,44 mg/m³	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 character isation 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



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Adhesives, sealants, Professional:

PROC4:

Route of Exposure	Specific condition	Exposure level	Risk character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,96 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,48 mg/m³	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

Χ.

Exposure scenario worker

1.Metal working fluids, Industrial

List of use descriptors	
Life Cycle Stage	



Sector(s) of use

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SU3: Industrial uses: Uses of substances as such or in

Sector(s) of use	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	Continue and points thinners point removers
Name of contributing environmental scenario and corresponding ERC	Coatings and paints, thinners, paint removers: 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	Coatings and paints, thinners, paint removers: PROC13: Treatment of articles by dipping and pouring
sociatios and corresponding i Nocs	Theore. Treatment of articles by dipping and pouring
	Coatings and paints, thinners, paint removers: PROC18: Greasing at high energy conditions
	PROC18: Greasing at high energy conditions
2.1 Contributing expenses	centrelling environmental expecting for Costings
and paints, thinners, paint removers, In	controlling environmental exposure for: Coatings
and paints, triminers, paint removers, in	ladatilai
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	
1 Hysical state	
Viscosity:	
Kinematic viscosity:	165 mm2/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
•	



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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

tuno	Emission days	Emission factors			Domorko
type		Air	Soil	Water	Remarks
		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.



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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 PROC13: Treatment of articles by dipping and pouring **Process Categories: Product characteristics** Concentration of the substance in a Covers percentage substance in the product up to 1 %. mixture: Physical form of the product: liquid Vapour pressure: not relevant 25 °C **Process temperature:** Remarks not relevant **Amounts used** Frequency and duration of use Use Frequency of use: Remarks duration: **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

Protective Measures

Local exhaust ventilation

90% (LEV 90%)

Effectivene

Remarks

Application

Industrial:

Route of

Exposure

Inhalation

Dermal, Oral,



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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	Effectivene ss	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, Industrial

Process Categories:	PROC18: Greasing at high energy conditions
	_

Product characteristics

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

Physical form of the product:	liquid
Vapour pressure:	not relevant
Process temperature:	75 °C



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Remarks			not relevant		
Amounts used					
Amounts used					
Francisco	ation of war				
Frequency and dur	ration of use				
	Use duration	on:	Frequency of use:	Remark	(S
Application duration	on 480 mi	n		Indoor u	ıse
Human factors not	influenced by risk	c manaç	gement		
This information	is not available.				
Other given operat	ional conditions a	ffecting	workers exposure		
Other relevant ope	rational conditions	s:	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	Prote	ctive Measures	Effectivene ss	Remarks
Industrial:	Dermal, Oral, Inhalation		exhaust ventilation LEV 90%)		



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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	Effectivene ss	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
11115	ппоппапоп	15 1101	avallable.



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3. Exposure estimation

Environment:

Coatings and paints, thinners, paint removers, Industrial:

ERC4:

Compartment	Predicte d environ mental concentr ation (PEC)	Risk characteri sation 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	0,000063 7 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	0,000000 2 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,096 mg/m³	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



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Coatings and paints, thinners, paint removers, Industrial:

PROC18:

Route of Exposure	Specific condition	Exposure level	Risk character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,576 mg/m³	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	Coatings and paints, thinners, paint removers: 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	Coatings and paints, thinners, paint removers: PROC3: Use in closed batch process (synthesis or formulation)
	Coatings and paints, thinners, paint removers: PROC5: Mixing or blending in batch processes

Coatings and paints, thinners, paint removers:



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> PROC11: Non industrial spraying Coatings and paints, thinners, paint removers: PROC10: Roller application or brushing Coatings and paints, thinners, paint removers: PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at nondedicated facilities Coatings and paints, thinners, paint removers: PROC19: Hand-mixing with intimate contact and only PPE available Coatings and paints, thinners, paint removers: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises Coatings and paints, thinners, paint removers: PROC2: Use in closed, continuous process with occasional controlled exposure

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	Covers percentage substance in the product up to 100 %.
mixture:	

Physical state

Viscosity:				
Kinematic viscosity:	165 mm2/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 m3/d
Local freshwater dilution factor	10



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140. 30103) and Regulation (EG) No. 1307/2000 (REACH)	Tutolo 01, Tutolo II do differidad				
Local marine water dilution factor	100				
Other given operational conditions affecting	n environmental exposure				
Other given operational conditions arecoming	Girvii Giillicittai expedicio				
	1				
Other relevant operational conditions	not relevant				
Risk management measures (RMM)					
Technical conditions and measures at proce	ess level (source) to prevent release				
See chapter 8 of the safety data sheet (Env	vironmental exposure controls).				
Technical onsite conditions and measures t soil	o reduce or limit discharges, air emissions and releases to				
Air	not relevant				
Soil	not relevant				
Water	not relevant				
Sediment:	not relevant				
Remarks:	not relevant				
Organisational measures to prevent/limit rel	lease from site:				
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 externa	I treatment of waste for disposal				
This information is not available.					
Conditions and measures related to externa	I recovery of waste				
This information is not available.	This information is not available.				
Additional good practice advice beyond the	REACH CSA				
This information is not available.					



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2.2. Contributing exposu paints, thinners, paint rem			(posure for: Coatings and			
Process Categories:		PROC3: Use in closed ba	atch process (synthesis or formulation)			
Product characteristics						
Concentration of the substan mixture:	ce in a	Covers percentage subst	ance in the product up to 1 %.			
Physical form of the product:	<u> </u>	liquid				
Vapour pressure:		not relevant				
Process temperature:		25 °C				
Remarks		not relevant				
		•				
Amounts used						
Frequency and duration of us	se					
	T	Τ=	T = -			
	Use duration:	Frequency of use:	Remarks			
Application duration	240 min		Indoor use			
Human factors not influenced	d by risk manag	gement				
This information is not avail	lable.					
Other given operational cond	litions affecting	y workers exposure				
Other relevant operational co	nditiona	not relevant				
Other relevant operational co	manions.	not relevant				
Risk management measures	(RMM)					
Technical conditions and me	asures at proce	ess level (source) to prev	ent release			
See chapter 7 of the safety	data choot					
See chapter 7 of the salety	uata sneet					
Technical conditions and me	asures to contr	rol dispersion from sourc	e towards the worker			
This information is not available						

This information is not available.

Organisational measures to prevent/limit releases, dispersion and exposure



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

Application	Route of Exposure	Protective Measures	Effectivene ss	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 pract	ice advice	bevond t	the REACH	CSA
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This information is not available.

Process Categories:

Remarks

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

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

PROC5: Mixing or blending in batch processes

Amounts used			

not relevant



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	1		T = -	1 = -	
	Use	4!	Frequency of use	: Remark	(S
Application des	dura ation 120 r			ln de e a	100
Application dura	ation 120 f	HILL		Indoor (use
Human factors	not influenced by ri	sk mana	agement		
This informat	tion is not available.				
Other given ope	erational conditions	affectin	ng workers exposure		_
Oth an nalayes of a	manational and Pti-		1 () (
Otner relevant o	perational conditio	ns:	not relevant		
Risk manageme	ent measures (RMM)			
gome	77				
Technical condi	itions and measures	s at prod	cess level (source) to	prevent relea	se
			cess level (source) to	prevent relea	se
	itions and measures 7 of the safety data s		cess level (source) to	prevent relea	se
See chapter	7 of the safety data s	heet		•	
See chapter	7 of the safety data s	heet	cess level (source) to	•	
See chapter Technical condi	7 of the safety data s	sheet s to con	trol dispersion from	source toward	s the worker
See chapter	7 of the safety data s	sheet s to con		•	
See chapter Technical condi	7 of the safety data sitions and measures Route of Exposure	s to con	trol dispersion from ective Measures	source toward	s the worker
See chapter Technical condi	7 of the safety data sitions and measures	sto con Prot	trol dispersion from	source toward	s the worker
See chapter	7 of the safety data sitions and measures Route of Exposure Dermal, Oral,	sto con Prot	trol dispersion from ective Measures	source toward	s the worker
See chapter Technical condi Application Industrial:	7 of the safety data sitions and measures Route of Exposure Dermal, Oral, Inhalation	Prot	trol dispersion from ective Measures	source toward Effectivene ss	s the worker
See chapter Technical condi Application Industrial:	7 of the safety data sitions and measures Route of Exposure Dermal, Oral, Inhalation	Prot	trol dispersion from ective Measures al exhaust ventilation (LEV 90%)	source toward Effectivene ss	s the worker



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

Application	Route of Exposure	Protective Measures	Effectivene ss	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 h	evand 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



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	Use durat	tion:	Frequency of use	: Remark	(S
Application dura	ation 60 m	in		Indoor u	ıse
Human factors r	not influenced by ris	sk mana	gement		
		on mana	Jonion		
This informat	ion is not available.				
Other given ene	rational conditions	offootin	a workers eves		
omer given ope	rational conditions	anecun	g workers exposure		
Other relevant o	perational condition	ns:	not relevant		
D:-L	nt massures (PMM)				
Kisk manageme	nt measures (RMM)				
•	,		ess level (source) to	prevent relea	se
Technical condi	tions and measures	s at proc	ess level (source) to	prevent relea	se
Technical condi	,	s at proc	ess level (source) to	prevent relea	se
Technical condi	tions and measures 7 of the safety data s	at proc	ess level (source) to		
Technical condi	tions and measures 7 of the safety data s tions and measures	heet	rol dispersion from	source toward	s the worker
Technical condi	tions and measures 7 of the safety data s	heet	, ,		
Technical condi	tions and measures 7 of the safety data s tions and measures Route of	heet to cont	rol dispersion from	source toward	s the worker



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

Application	Route of Exposure	Protective Measures	Effectivene ss	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
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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
Due heat about a training	
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		
		·



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	Use dura	tion:	Frequency of use	: Remarl	KS
Application dura	ation 240	min		Indoor	use
Human factors r	not influenced by ri	sk mana	gement		
			.90		
This informat	ion is not available.				
Other given ene	rational conditions	offootin	a workers expecting		
omer given ope	rational conditions	anectin	g workers exposure		
Other relevant o	perational conditio	ns:	not relevant		
Diek manageme	nt measures (RMM	1			
Kisk manageme	in measures (mini	,			
Technical condi	tions and measure	s at proc	ess level (source) to	prevent relea	se
		-	cess level (source) to	prevent relea	se
	tions and measures 7 of the safety data s	-	cess level (source) to	prevent relea	se
See chapter	7 of the safety data s	sheet	trol dispersion from		
See chapter	7 of the safety data s	sheet s to cont	trol dispersion from	source toward	s the worker
See chapter	7 of the safety data s	sheet s to cont			
See chapter	7 of the safety data stions and measures	s to conf	trol dispersion from	source toward	s the worker



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

Application	Route of Exposure	Protective Measures	Effectivene ss	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.

2.6. 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	Covers percentage substance in the product up to 1 %.
mixture:	

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

Amounts used



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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	Effectivene ss	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.



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2.7. Contributing exposu paints, thinners, paint rem			kposure for: Coatings and		
Process Categories:		PROC19: Hand-mixing with intimate contact and only PPE available			
Dreduct characteristics					
Product characteristics					
Concentration of the substance in a mixture:		Covers percentage subst	tance in the product up to 1 %.		
Physical form of the product	<u> </u>	liquid			
Vapour pressure:		not relevant			
Process temperature:		25 °C			
Remarks		not relevant			
		1			
Amounts used					
Frequency and duration of us	se				
	T	T	T = -		
	Use duration:	Frequency of use:	Remarks		
Application duration	60 min		Indoor use		
- фризинен	1 00 11111				
Human factors not influence	d by risk manag	gement			
This information is not avai	lable.				
Other given operational cond	litions affecting	y workers exposure			
	1141				
Other relevant operational co	inditions:	not relevant			
Risk management measures	(RMM)				
Nisk management measures	(IXIVIII)				
Technical conditions and me	asures at proce	ess level (source) to prev	ent release		
	-				
See chapter 7 of the safety	See chapter 7 of the safety data sheet				
Technical conditions and me	asures to conti	rol dispersion from sourc	e towards the worker		
This information is not available	This information is not available.				
Overniostional massures to	arayan4/1:m:14.ms	lagged dispersion and su	vneouve		
Organisational measures to p	orevent/ilmit rei	leases, dispersion and ex	posure		
This information is not avai	lable.				
i nis information is not available.					



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

Application	Route of Exposure	Protective Measures	Effectivene ss	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	hoon	nractice	advice	hevond	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	Covers percentage substance in the product up to 1 %.
mixture:	

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

Amounts used			



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	Use dura	tion:	Frequency of use	Remark	(S	
Application dur	ation 480	min		Indoor (ıse	
Human factors	not influenced by ri	sk mana	gement			
						
This informa	tion is not available.					
Other given en	rational conditions	offooting	workere evee			
omer given ope	rational conditions	anecung	g workers exposure			
			T			
Other relevant of	operational condition	ns:	not relevant			
	•		not relevant			
	operational condition		not relevant			
Risk manageme	ent measures (RMM)	ess level (source) to	prevent relea	se	
Risk manageme	ent measures (RMM) s at proc		prevent relea	se	
Risk manageme	ent measures (RMM) s at proc		prevent relea	se	
Risk manageme Technical cond See chapter	ent measures (RMM itions and measure 7 of the safety data s	s at proce				
Risk manageme Technical cond See chapter Technical cond	ent measures (RMM itions and measure 7 of the safety data s itions and measure	s at processheet	ess level (source) to	source toward	s the worker	
Risk manageme Technical cond See chapter	ent measures (RMM itions and measure 7 of the safety data s itions and measure Route of	s at processheet	ess level (source) to			
Risk manageme Fechnical cond See chapter Fechnical cond Application	ent measures (RMM itions and measure 7 of the safety data s itions and measure	s at processheet s to conti	ess level (source) to	source toward	s the worker	
Risk manageme Technical cond See chapter Technical cond	ent measures (RMM itions and measure 7 of the safety data s itions and measure Route of Exposure	s at processheet s to conti	ess level (source) to rol dispersion from ective Measures	source toward	s the worker	



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

Application	Route of Exposure	Protective Measures	Effectivene ss	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
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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	Covers percentage substance in the product up to 1 %.
mixture:	

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

Amounts used		



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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	Effectivene ss	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.



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3. Exposure estimation

Environment:

Coatings and paints, thinners, paint removers, Professional:

ERC8a:

Compartment	Predicte d environ mental concentr ation (PEC)	Risk characteri sation 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/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,173 mg/m³	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



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Coatings and paints, thinners, paint removers, Professional:

PROC5:

Route of Exposure	Specific condition	Exposure level	Risk character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,058 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,192 mg/m³	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



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Coatings and paints, thinners, paint removers, Professional:

PROC10:

Route of Exposure	Specific condition	Exposure level	Risk character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,144 mg/m³	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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,72 mg/m³	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



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Coatings and paints, thinners, paint removers, Professional:

PROC19:

Route of Exposure	Specific condition	Exposure level	Risk character isation 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 character isation ratio (RCR)	Method	Remarks
Worker - inhalative, long-term - systemic		0,096 mg/m³	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



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Coatings and paints, thinners, paint removers, Professional:

PROC2:

Route of Exposure	Specific condition	Exposure level	Risk character isation 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.