

**Product name: SURFYNOL® 104 Z**

# SAFETY DATA SHEET

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Product name:**  
SURFYNOL® 104 Z**Chemical name:**  
Organic surface active agent**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 Operations GmbH  
Rellinghauser Str. 1-11  
45128 Essen  
Germany

Telephone : +49 201 173 01

Fax : +49 201 173 3000

E-mail : productsafety-cs@evonik.com

**1.4 Emergency telephone number:**

24-Hour Health : +49 2365 49 2232  
Emergency : +49 2365 49 4423 (Fax)

National Poison Information Service (NPIS)  
England, Scotland and Wales: NHS: 111

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

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

**Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567**

**Health Hazards**

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

**Environmental Hazards**

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

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## 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.

### Supplemental label information

EUH208: Contains (2,4,7,9-Tetramethyldec-5-yne-4,7-diol). May produce an allergic reaction.

## 2.3 Other hazards

None known.

## SECTION 3: Composition/information on ingredients

**Chemical name:**

Organic surface active agent

## 3.2 Mixtures

Chemical name	Concentration	CAS-No.	EC No.	UK-REACH Registration No.	REACH Registration No.	M-Factor:	Notes
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	25 - <50%	126-86-3	204-809-1	UK-01-9825406370-8	01-2119954390-39	No data available.	
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-	5 - <10%	9014-85-1			-	No data available.	

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4,7-diol							
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\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

# This substance has workplace exposure limit(s).

## This substance is listed as SVHC.

**Classification**

Chemical name	Classification	Notes
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	Classification: Eye Dam.: 1: H318; Skin Sens.: 1B: H317; Aquatic Chronic: 3: H412;  Supplemental label information: None known.	None.
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	Classification: Eye Dam.: 1: H318; Aquatic Chronic: 3: H412;  Supplemental label information: None known.	None.

The full text for all H-statements is displayed in section 16.

**SECTION 4: First aid measures**
**4.1 Description of first aid measures**

<b>General information:</b>	Remove soiled or soaked clothing immediately
<b>Inhalation:</b>	fresh air supply, consult a doctor if feeling unwell.
<b>Skin Contact:</b>	In case of contact with skin wash off with soap and water. In case of discomfort: Supply with medical care.
<b>Eye contact:</b>	In case of contact with eyes rinse thoroughly with plenty of water. If symptoms persist, seek medical advice.
<b>Ingestion:</b>	Thoroughly clean the mouth with water In case of discomfort: Supply with medical care.
<b>Personal Protection for First-aid Responders:</b>	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.

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- 5.2 Special hazards arising from the substance or mixture:** In the event of fire the following can be released: - carbon dioxide, carbon monoxide Aldehydes. Under certain conditions of combustion traces of other toxic substances cannot be excluded
- 5.3 Advice for firefighters**
- Special fire fighting procedures:** No specific precautions.
- Special protective equipment for fire-fighters:** Do not inhale explosion and/or combustion gases. Use self-contained breathing apparatus and wear protective suit

#### **SECTION 6: Accidental release measures**

- 6.1 Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment.
- 6.1.1 For non-emergency personnel:** No data available.
- 6.1.2 For emergency responders:** No data available.
- 6.2 Environmental Precautions:** Do not allow to enter drains or waterways Prevent product from getting into subsoil/soil.
- 6.3 Methods and material for containment and cleaning up:** Take up with absorbent material (eg sand, kieselguhr, universal binder) Dispose of absorbed material in accordance with the regulations.
- 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).Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes.
- 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 with acids or alkalis 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**

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### Occupational Exposure Limits

None of the components have assigned exposure limits.

### Biological Limit Values

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

### DNEL-Values

Remarks: DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	Workers	Dermal	Systemic, short-term; 1.5 mg/kg	Repeated dose toxicity
	General population	Dermal	Systemic, short-term; 0.75 mg/kg	Repeated dose toxicity
	General population	Inhalation	Systemic, long-term; 0.43 mg/m <sup>3</sup>	Repeated dose toxicity
	Workers	Dermal	Systemic, long-term; 0.5 mg/kg	Repeated dose toxicity
	General population	Oral	Systemic, short-term; 0.75 mg/kg	Repeated dose toxicity
	General population	Inhalation	Systemic, short-term; 1.29 mg/m <sup>3</sup>	Repeated dose toxicity
	Workers	Inhalation	Systemic, short-term; 5.28 mg/m <sup>3</sup>	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 0.25 mg/kg	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 1.76 mg/m <sup>3</sup>	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 0.25 mg/kg	Repeated dose toxicity
	General population	Eyes	Local effect;	Medium hazard (no threshold derived)
	Workers	Eyes	Local effect;	Medium hazard (no threshold derived)

### PNEC-Values

Remarks: PNEC-Values

Critical component	Environmental compartment	PNEC-Values	Remarks
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	Aquatic (marine water)	0.004 mg/l	
	Soil	0.028 mg/kg	
	Sewage treatment plant	7 mg/l	
	Sediment (freshwater)	0.32 mg/kg	
	Aquatic (freshwater)	0.04 mg/l	
	Sediment (marine water)	0.032 mg/kg	

## 8.2 Exposure controls

**Appropriate Engineering Controls:** No data available.

### Individual protection measures, such as personal protective equipment

**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 immediately after handling the product. When using do not eat, drink or smoke. Remove soiled or soaked clothing immediately.

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**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**

<b>Physical state:</b>	liquid
<b>Form:</b>	liquid
<b>Color:</b>	Pale yellow
<b>Odor:</b>	like menthol
<b>Odor Threshold:</b>	not measured
<b>Freezing point:</b>	0 - 5 °C
<b>Boiling Point:</b>	95 - 105 °C
<b>Flammability:</b>	not measured
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Explosive limit - upper:</b>	not measured
<b>Explosive limit - lower:</b>	not measured
<b>Flash Point:</b>	> 100 °C
<b>Auto-ignition temperature:</b>	not measured
<b>Decomposition Temperature:</b>	not measured
<b>pH:</b>	5 at 21 °C Concentration: 2 g/l Concentration: 0.2 % in Water

**Viscosity**

<b>Dynamic viscosity:</b>	200 mPa.s at 21 °C
<b>Kinematic viscosity:</b>	204 mm <sup>2</sup> /s at 21 °C , Method: calculated

**Solubility(ies)**

<b>Solubility in Water:</b>	2 g/l at 21 °C
<b>Solubility (other):</b>	not measured
<b>Partition coefficient (n-octanol/water):</b>	not measured
<b>Vapor pressure:</b>	not measured
<b>Relative density:</b>	not measured
<b>Density:</b>	0.98 g/cm <sup>3</sup> at 21 °C
<b>Relative vapor density:</b>	not measured

**9.2 Other information**

<b>Explosive properties:</b>	not measured
<b>Oxidizing properties:</b>	not oxidizing
<b>Self-ignition:</b>	not measured
<b>Metal Corrosion:</b>	Not corrosive to metals

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Evaporation Rate: not measured

**SECTION 10: Stability and reactivity**

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

**SECTION 11: Toxicological information**
**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
**Information on likely routes of exposure**

<b>Inhalation:</b>	Information on effects are given below.
<b>Skin Contact:</b>	Information on effects are given below.
<b>Eye contact:</b>	Information on effects are given below.
<b>Ingestion:</b>	Information on effects are given below.

**Acute toxicity (list all possible routes of exposure)**
**Oral**

<b>Product:</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	LD 50, Rat, Female, Male, > 5,000 mg/kg
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	LD 50, Rat, 6,300 mg/kg

**Dermal**

<b>Product:</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	LD 50, Rabbit, > 5,000 mg/kg, OECD 402
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	Not toxic after single exposure, No data available.

**Inhalation**

<b>Product:</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	LC 50, Rat, 4 h, > 5 mg/l, Dust and mist Vapour, Not toxic after single exposure, No data available.
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-	LC 50, Rat, 1 h, > 20 mg/l, Dust and mist
diol	LC 50, Rat, 4 h, > 5 mg/l, Dust and mist

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diol Not toxic after single exposure, Vapour, No data available.

**Repeated dose toxicity**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol NOAEL - No Observable Adverse Effect Level, Rat, Oral, daily, 500 mg/kg  
 Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol NOAEL - No Observable Adverse Effect Level, Rat, Oral, daily, 6000 ppm  
 NOAEL - No Observable Adverse Effect Level, Rat, Oral, daily, 1000 mg/kg

**Skin Corrosion/Irritation**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol Not irritating, OECD 404, Rabbit, 4 h  
 Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol Not irritating, 16 CFR 1500.41, Rabbit, 24 h

**Serious Eye Damage/Eye Irritation**

**Product:** Irritating., OECD 437, Bovine cornea, Irritating., Non-corrosive in an in vitro test.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol Risk of serious damage to eyes., US-EPA-method, Rabbit  
 Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol Risk of serious damage to eyes., 16 CFR 1500.42, Rabbit

**Respiratory or Skin Sensitization**

**Product:** Maximization Test, OECD 406, Guinea Pig, Not a skin sensitizer., Own study

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol Local Lymph Node Assay (LLNA), OECD 429, Mouse, Skin sensitizer  
 Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol No data available.

**Carcinogenicity**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.  
 Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol No data available.

**Germ Cell Mutagenicity**

No data available.

**In vitro**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol Ames test, OECD 471: , negative, Own study  
 Chromosomal aberration, OECD 473: , negative, Own study  
 gene mutation test, OECD 476: , negative, Own study

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Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol No data available.

**In vivo**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol No data available.

**Reproductive toxicity**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol Oral

Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol No data available.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol No data available.

**Aspiration Hazard**

**Product:** Not classified

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol Not applicable

Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol Not classified

**11.2 Information on other hazards**

**Other information**

**Product:** No data available.

**SECTION 12: Ecological information**

**12.1 Toxicity:**

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**Acute hazards to the aquatic environment:**
**Fish**

<b>Product:</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	LC 50, Pimephales promelas, 96 h, 36 mg/l OECD 203 LC 50, Cyprinus carpio, 96 h, 42 mg/l OECD 203 NOEC, Cyprinus carpio, 96 h, 10 mg/l OECD 203
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	LC 50, Scophtalmus maximus (turbot), 96 h, 52 mg/l OECD 203, salt water Own study

**Aquatic Invertebrates**

<b>Product:</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	EC 50, Daphnia magna, 48 h, 88 mg/l OECD 202 EC 50, Daphnia magna, 48 h, 91 mg/l OECD 202 NOEC, Daphnia magna, 48 h, 43 mg/l OECD 202
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	LC 50, Acartia tonsa, 48 h, 166 mg/l, salt water

**Toxicity to Aquatic Plants**

<b>Product:</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): 15 mg/l (OECD 201) EC 10 (Algae (Pseudokirchneriella subcapitata), 72 h): 1.8 mg/l (OECD 201) ErC50 (Algae (Pseudokirchneriella subcapitata), 72 h): 82 mg/l (OECD 201)
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	EC 50 (Skeletonema costatum (marine diatom), 72 h): 105 mg/l

**Toxicity to microorganisms**

<b>Product:</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	EC 50, activated sludge, 3 h, Approximate, 630 mg/l, OECD 209
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	No data available.

**Toxicity to soil dwelling organisms**

<b>Product:</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	No data available.

**Toxicity to terrestrial organisms**

<b>Product:</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.
Ethoxylated 2,4,7,9-	No data available.

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tetramethyl 5 decyn-4,7-  
diol

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol LC 50, Corophium volutator, 10 d, 533 mg/l

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol No data available.

**Toxicity to microorganisms**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol EC 50, activated sludge, 3 h, Approximate, 630 mg/l, OECD 209

Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol No data available.

**Toxicity to soil dwelling organisms**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol No data available.

**Toxicity to terrestrial organisms**

**Product:** No data available.

**Components:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol No data available.

**12.2 Persistence and Degradability**

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### Biodegradation

<b>Product:</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	5 %, 28 d, OECD 301 B, The product is not biodegradable., aerobic 8 - 12 %, 60 d, OECD 301 B, The product is not biodegradable., aerobic 25.4 %, 57 d, OECD 302 A, The product is not biodegradable., aerobic
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	1 %, 28 d, OECD 301 D, The product is not biodegradable.

### 12.3 Bioaccumulative potential

#### Bioconcentration Factor (BCF)

<b>Product:</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	No data available.

#### Partition Coefficient n-octanol / water (log Kow)

<b>Product:</b>	not measured
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	2.8, 22 °C, OECD 117, Yes
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	No data available.

### 12.4 Mobility in soil:

<b>Product</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	No data available.

### 12.5 Results of PBT and vPvB assessment:

<b>Product</b>	No data available.
<b>Components:</b>	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol	No data available.

### 12.6 Other adverse effects:

#### Other hazards

<b>Product:</b>	Do not allow to enter soil, waterways or waste water canal.
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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

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<b>General information:</b>	No data available.
<b>Disposal methods:</b>	In accordance with local authority regulations, take to special waste incineration plant
<b>Contaminated Packaging:</b>	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:**

**EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I:** Not applicable

**15.2 Chemical safety assessment:** No chemical safety assessment was carried out for this product.

##### **International regulations**

###### **Montreal protocol**

Not applicable

###### **Stockholm convention**

Not applicable

###### **Rotterdam convention**

Not applicable

###### **Kyoto protocol**

Not applicable

#### **SECTION 16: Other information**

**Product name: SURFYNOL® 104 Z**
**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 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.

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]**

Classification according to Regulation (EC) No 1272/2008 as amended.	Classification procedure
Serious eye irritation, Category 2	On basis of test data
Chronic hazards to the aquatic environment, Category 3	On basis of test data

**Wording of the statements in section 2 and 3**

H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains (2,4,7,9-Tetramethyldec-5-yne-4,7-diol). May produce an allergic reaction.

**Training information:** Comply with national laws regulating employee instruction.

**Product name: SURFYNOL® 104 Z**

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**Revision Information**

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

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