

SAFETY DATA SHEET

Classified in accordance with 29 CFR 1910.1200

1. Identification

Product identifier: SURFYNOL® 440

Chemical name:

Ethoxylated Acetylenic Diols

Other means of identification

CAS Number: 9014-85-1

Recommended restrictions

Recommended use: Industrial use

Restrictions on use: None known.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Corporation
Nutrition & Care
7801 Whitepine Road
Richmond, VA 23237
USA

Telephone : +1 804 727 0700

Fax : +1 804 727 0845

E-mail : product-regulatory-services@evonik.com

Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)

Emergency 800 681 9531 (CHEMTREC MEXICO)
+1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Serious Eye Damage/Eye Irritation Category 1

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement:

Causes serious eye damage.

Precautionary Statements

Prevention:

Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Disposal:

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

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Chemical name:

Ethoxylated Acetylenic Diols

Substances

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) [*]
Ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol		9014-85-1	50 - <100%

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

Composition information of impurities and stabilizers

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) [*]
2,4,7,9-Tetramethyldec-5-yne-4,7-diol		126-86-3	3 - <5%

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

The exact concentration has been withheld as a trade secret.

4. First-aid measures

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.

Eye contact: In case of contact with eyes rinse thoroughly with plenty of water and 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.

Most important symptoms and effects, both acute and delayed

Symptoms: Risk of serious damage to eyes.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: foam, carbon dioxide, dry powder, water spray.

Unsuitable extinguishing media: High volume water jet.

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

Special protective equipment and precautions 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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment.

Accidental release measures: No data available.

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

Environmental Precautions: Do not allow to enter drains or waterways Prevent product from getting into subsoil/soil.

7. Handling and storage

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.

Storage

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.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Biological Limit Values

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

Appropriate Engineering Controls	No data available.
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Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection:	Tightly fitting safety goggles
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Skin Protection

Hand Protection:	Additional Information: gloves made of chloroprene (CR, e.g. Neoprene), gloves made of nitril (NBR)
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Skin and Body Protection:	protective clothing
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Respiratory Protection:	in case of formation of vapours/aerosols: Short term: filter apparatus, combination filter A-P2
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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.
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9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Amber
Odor:	Mild
Odor Threshold:	not measured
Freezing point:	-4 °F/ -20 °C
Boiling Point:	556 °F/291 °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:	> 230 °F/> 110 °C
Auto-ignition temperature:	> 635 - < 640 °F/> 335 - < 338 °C Method: ASTM E 659
Decomposition Temperature:	482 °F/250 °C
pH:	not measured
Viscosity	
Dynamic viscosity:	81 mPa.s at 95 °F/35 °C
Kinematic viscosity:	82 mm ² /s at 95 °F/35 °C , Method: calculated
Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	2.89 g/l at 77 °F/25 °C Method: EC Method A.6
Solubility (other):	not measured
Partition coefficient (n-octanol/water):	> 1.8 - < 2.5 at 70 °F/21 °C Method: EU Method A.8
Vapor pressure:	0.006 hPa at 68 °F/20 °C Method: OECD 104
	0.33 mbar at 68 °F/20 °C
Relative density:	not measured
Density:	0.98 g/cm ³ at 70 °F/21 °C
	0.984 g/cm ³ at 77 °F/25 °C
Bulk density:	No data available.
Relative vapor density:	not measured
Other information	
Explosive properties:	not measured
Oxidizing properties:	not oxidizing
Self-ignition:	not measured
Metal Corrosion:	Not corrosive to metals

Evaporation Rate: not measured

10. Stability and reactivity

Reactivity: see section "Possibility of hazardous reactions".

Chemical Stability: The product is stable under normal conditions.

Possibility of hazardous reactions: No hazardous reactions with proper storage and handling

Conditions to avoid: None with proper storage and handling.

Incompatible Materials: Oxidizing agents.

Hazardous Decomposition Products: None with proper storage and handling.

11. Toxicological information

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, 6,300 mg/kg

Dermal

Product: Not toxic after single exposure, No data available.

Inhalation

Product: LC 50, Rat, 1 h, > 20 mg/l, Dust and mist
LC 50, Rat, 4 h, > 5 mg/l, Dust and mist
Vapour, Not toxic after single exposure, No data available.

Repeated dose toxicity

Product: 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: Not irritating, 16 CFR 1500.41, (Rabbit, 24 h)

Serious Eye Damage/Eye Irritation

Product: Risk of serious damage to eyes., 16 CFR 1500.42, Rabbit

Respiratory or Skin Sensitization

Product: direct peptide binding assay, OECD 442 C, Not a skin sensitizer., Own study
Human Cell Line Activation test (h-CLAT), OECD 442 E, Not a skin sensitizer., Own study

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogens present or none present in regulated quantities

ACGIH: US.ACGIH Threshold Limit Values:

No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogens present or none present in regulated quantities

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended:

No carcinogens present or none present in regulated quantities

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

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: Not classified

Information on health hazards

Other hazards

Product: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: LC 50, *Scophthalmus maximus* (turbot), 96 h, 52 mg/l/OECD 203, salt water Own study

Aquatic Invertebrates

Product: LC 50, *Acartia tonsa*, 48 h, 166 mg/l, salt water

Toxicity to Aquatic Plants

Product: EC 50, Skeletonema costatum (marine diatom), 72 h, 105 mg/l

Toxicity to microorganisms

Product: No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: LC 50, Corophium volutator, 10 d, 533 mg/l

Toxicity to microorganisms

Product: No data available.

Persistence and Degradability

Biodegradation

Product: 1 %, 28 d, OECD 301 D, The product is not biodegradable.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log K_{ow})

Product: > 1.8 - < 2.5, 21 °C, EU Method A.8

Mobility in soil:

Product: No data available.

Components:

2,4,7,9-Tetramethyldec-5-yne-4,7-diol water / soil: - Log K_{oc}: 1.48 K_{oc}: 30 OECD 106)

Results of PBT and vPvB assessment:

Product: No data available.

Other adverse effects:

Other hazards

Product: Do not allow to enter soil, waterways or waste water canal.

13. Disposal considerations

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.

14. Transport information

Domestic regulation

49 CFR

Not regulated as a dangerous good

Remarks : Not dangerous according to transport regulations.

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721 and 725, Subpt E)

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

CERCLA Hazardous Substance List (40 CFR 302.4):

Reportable Quantity not reasonably exceeded.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Serious eye damage or eye irritation

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (TRI) Reporting

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

US State Regulations

US. California Proposition 65

No ingredient requiring a warning under CA Prop 65.

Inventory Status:

US TSCA Inventory:	Included on Inventory.
Canada DSL Inventory List:	Included on Inventory.

16. Other information, including date of preparation or last revision

HMIS Hazard ID

Health	2
Flammability	1
Physical Hazards	0
PERSONAL PROTECTION	B

B - Safety Glasses & Gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Version #: 2.1
Generation date: 05/05/2025
Date of first report version: 03/13/2019

Abbreviations and acronyms:

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further Information: No data available.

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

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