

Product name: SURFYNOL® 420

SAFETY DATA SHEET

Classified in accordance with Health Canada Hazardous Products Regulations
(SOR/2015-17)

1. Identification

Product identifier:
SURFYNOL® 420

Chemical name:
Ethoxylated Acetylenic Diols

Other means of identification
CAS Number: 9014-85-1

Recommended use of the chemical and restrictions on use

Recommended use: Industrial use

Restrictions on use: None known.

Manufacturer/Importer/Distributor Information

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Emergency : 800 681 9531 (CHEMTREC MEXICO)
+1 703 527 3887 (CHEMTREC WORLD)
+1 613 996 6666 (CANUTEC – For Transportation Emergencies Only)
+1 973 929 8060 (Product Regulatory Services)

2. Hazard identification

According to Hazardous Products Regulations

Health Hazards

Serious Eye Damage/Eye Irritation	Category 1
Skin sensitizer	Category 1B

Label Elements

Hazard Symbol:

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Signal Word:	Danger
Hazard Statement:	Causes serious eye damage. May cause an allergic skin reaction.
Precautionary Statements	
Prevention:	Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/ eye protection/ face protection.
Response:	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instructions on this label). Take off contaminated clothing and wash it before reuse. 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 or doctor/ physician.
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	80 - 100%

^{*} 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.

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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.
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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
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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.

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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.**Individual protection measures, such as personal protective equipment**

Eye/face protection:	Tightly fitting safety goggles
Hand Protection:	Additional Information: Neoprene gloves, gloves made of nitril (NBR)
Other:	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. Use skin protective preparation as preventive skin protection.

9. Physical and chemical properties**Information on basic physical and chemical properties****Appearance**

Physical state:	liquid
Form:	liquid
Color:	Amber

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Odor:	Mild
Odor Threshold:	not measured
Freezing point:	-4 °F/ -20 °C
Boiling Point:	500 - 518 °F/260 - 270 °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:	not measured
Decomposition Temperature:	not measured
pH:	8 at 68 °F/20 °C Concentration: 100 %
Viscosity	
Dynamic viscosity:	not measured
Kinematic viscosity:	not measured
Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	2,890 mg/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 pH: 7 Method: EU Method A.8
Vapor pressure:	0.006 hPa at 68 °F/20 °C Method: OECD 104
Relative density:	not measured
Density:	0.98 g/cm ³ at 70 °F/21 °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

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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, Male, 6,370 mg/kg**Dermal****Product:** LD 50, Rat, Female, Male, > 2,000 mg/kg, OECD 402**Inhalation****Product:** LC 50, Rat, 1 h, > 20 mg/l, Dust and mist, Dust and mist, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
LC 50, Rat, 4 h, > 5 mg/l, Dust and mist, Dust and mist, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).**Repeated dose toxicity****Product:** NOAEL - No Observable Adverse Effect Level, Rat, Oral, daily, 500 mg/kg, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).**Skin Corrosion/Irritation****Product:** Not irritating, OECD 404, (Rabbit, 24 h), Not irritating, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).**Serious Eye Damage/Eye Irritation****Product:** Risk of serious damage to eyes., US-EPA-method, Rabbit, Risk of serious damage to eyes., The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).**Respiratory or Skin Sensitization****Product:** Local Lymph Node Assay (LLNA), OECD 429, Mouse, Skin sensitizer, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).**Carcinogenicity****Product:** No data available.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogens present or none present in regulated quantities

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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

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended

No carcinogens present or none present in regulated quantities

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended

No carcinogens present or none present in regulated quantities

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended

No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity

No data available.

In vitro

Product: Bacterial reverse mutation assay, OECD 471: , negative, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Chromosomal aberration, OECD 473: , negative, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
gene mutation test, OECD 476: , negative, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available. Oral

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, Scophtalmus maximus (turbot), 96 h, 52 mg/IOECD 203, salt

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water

LC 50, Pimephales promelas, 96 h, 36 mg/IOECD 203, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

LC 50, Cyprinus carpio, 96 h, 42 mg/IOECD 203, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

NOEC, Cyprinus carpio, 96 h, 10 mg/IOECD 203, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

Aquatic Invertebrates

Product:

LC 50, Acartia tonsa, 48 h, 166 mg/ISO 14669, salt water

EC 50, Daphnia magna, 48 h, 88 mg/IOECD 202, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

EC 50, Daphnia magna, 48 h, 91 mg/IOECD 202, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

NOEC, Daphnia magna, 48 h, 43 mg/IOECD 202, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

Toxicity to Aquatic Plants

Product:

EC 50, Selenastrum capricornutum (green algae), 72 h, 82 mg/l, OECD 201, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

EC 10, Selenastrum capricornutum (green algae), 72 h, 15 mg/l, OECD 201, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

Toxicity to microorganisms

Product:

EC 50, activated sludge, 0.5 h, Approximate, 680 mg/l, OECD 209, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to microorganisms

Product: EC 50, activated sludge, 0.5 h, Approximate, 680 mg/l, OECD 209, The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

Persistence and Degradability

Biodegradation

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Product: 2 %, 28 d, The product is not biodegradable.
10 %, 60 d, The product is not biodegradable. The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy)., aerobic
0 %, 28 d, The product is not biodegradable., aerobic
6 %, 28 d, OECD 302 B, The product is not biodegradable. The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy)., aerobic
25 %, 57 d, OECD 302 A, The product is not biodegradable. The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy)., aerobic

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

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

Mobility in soil:

Product: No data available.

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

TDG

Not regulated as a dangerous good

Remarks : Not dangerous according to transport regulations.

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

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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
Canada Federal Regulations
List of Toxic Substances (CEPA, Schedule 1)

Not Regulated

Export Control List (CEPA 1999, Schedule 3)

Not Regulated

National Pollutant Release Inventory (NPRI)
Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements

NPRI PT5 Not Regulated

Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)

NPRI Not Regulated

Greenhouse Gases

Not Regulated

Canada. Substances Subject to Significant New Activity (SNAc) Reporting Requirements

Not Regulated

Controlled Drugs and Substances Act

CA CDSI	Not Regulated
CA CDSII	Not Regulated
CA CDSIII	Not Regulated
CA CDSIV	Not Regulated
CA CDSV	Not Regulated
CA CDSVII	Not Regulated
CA CDSVIII	Not Regulated

Precursor Control Regulations

Not Regulated

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
Issue Date: 03/13/2019

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Version #: 1.1**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); EC_x - Concentration associated with x% response; EHS - Extremely Hazardous Substance; EL_x - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErC_x - 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:** Changes since the last version are highlighted in the margin. This version replaces all previous versions.**Disclaimer:** This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.