

Product name: SURFYNOL® 104 E

SAFETY DATA SHEET

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

1. Identification

Product identifier:
SURFYNOL® 104 E**Chemical name:**
Acetylenic diol in solvent

Recommended use of the chemical and restrictions on use

Recommended use: Industrial use
Recommended restrictions: None known.

Manufacturer/Importer/Distributor Information

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Canada

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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)
+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

Acute toxicity (Oral)	Category 4
Serious Eye Damage/Eye Irritation	Category 1
Skin sensitizer	Category 1B
Specific Target Organ Toxicity - Repeated Exposure	Category 2

Environmental Hazards

Acute hazards to the aquatic environment	Category 3
Chronic hazards to the aquatic environment	Category 3

Label Elements

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Hazard Symbol:



Signal Word:

Danger

Hazard Statement:

Harmful if swallowed.
Causes serious eye damage.
May cause an allergic skin reaction.
May cause damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention:

Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. 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 SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. 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.

Physical Hazards Not Otherwise Classified:

Classification not possible

Health Hazards Not Otherwise Classified:

Classification not possible

3. Composition/information on ingredients

Chemical name:

Acetylenic diol in solvent

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Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)* Reference quantity: Fraction (Weight)
Ethane-1,2-diol	No data available.	107-21-1	30 - 60%
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.	126-86-3	30 - 60%

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

4. First-aid measures
Description of necessary 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.
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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 Aldehydes. 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

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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 (e.g. Local and general 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 with acids or alkalies Do not store together with oxidizing agents.

Safe packaging materials:

No data available.

8. Exposure controls/personal protection
Control Parameters
Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
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Ethane-1,2-diol	CEILING		100 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
Ethane-1,2-diol - Vapor.	CEILING	50 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
Ethane-1,2-diol - Vapor fraction		50 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
Ethane-1,2-diol - Aerosol, inhalable.			10 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
Ethane-1,2-diol - Vapor fraction		25 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
Ethane-1,2-diol - Aerosol.	Ceiling		100 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
Ethane-1,2-diol - Vapor and mist.	CEILING	50 ppm	127 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
Ethane-1,2-diol - Aerosol, inhalable.	STEL		10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
Ethane-1,2-diol - Aerosol total	CEILING		100 mg/m3	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
	TWA		10 mg/m3	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
	STEL		20 mg/m3	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
Ethane-1,2-diol - Aerosol, inhalable.	STEL		10 mg/m3	US. ACGIH Threshold Limit Values, as amended
Ethane-1,2-diol - Vapor fraction	TWA	25 ppm		US. ACGIH Threshold Limit Values, as amended
	STEL	50 ppm		US. ACGIH Threshold Limit Values, as amended

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

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: gloves made of chloroprene (CR, e.g. Neoprene), 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.

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9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Pale yellow
Odor:	Menthol.
Odor Threshold:	not measured
Freezing point:	not measured
Boiling Point:	> 390 °F/> 199 °C
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:	5 - 7 (100 g/l, 25 °C) in Water

Viscosity

Dynamic viscosity:	not measured
Kinematic viscosity:	not measured
Flow Time:	No data available.

Solubility(ies)

Solubility in Water:	not measured
Solubility (other):	not measured
Partition coefficient (n-octanol/water):	not measured
Vapor pressure:	< 1.3 hPa (70 °F/21 °C)
Relative density:	not measured
Density:	1 g/cm ³ (70 °F/21 °C)
Bulk density:	No data available.
Relative vapor density:	not measured

Other information

Explosive properties:	not measured
Oxidizing properties:	not oxidizing
Minimum ignition temperature:	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.

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Incompatible Materials: Oxidizing agents. Acids. Alkalies.

Hazardous Decomposition Products: None with proper storage and handling.

11. Toxicological information

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): 1,000 - 2,000 mg/kg

Dermal
Product: LD 50 (Rat): > 2,000 mg/kg (OECD 402)

Inhalation
Product: LC 50 (Rat, 4 h): > 20 mg/l Vapour

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

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

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

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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: No data available.

Components:

Ethane-1,2-diol

Bacterial reverse mutation assay (OECD 471): negative

Chromosomal aberration (OECD 473): negative

2,4,7,9-Tetramethyldec-

Ames test (OECD 471): negative Own study

5-yne-4,7-diol

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 (Pimephales promelas, 96 h): 81 mg/l

Aquatic Invertebrates

Product: LC 50 (Daphnia magna, 48 h): 185 mg/l

Toxicity to Aquatic Plants

Product: No data available.

Components:

2,4,7,9-Tetramethyldec-

EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): 15 mg/l (OECD 201)

5-yne-4,7-diol

EC 10 (Algae (Pseudokirchneriella subcapitata), 72 h): 1.8 mg/l (OECD 201)

ErC50 (Algae (Pseudokirchneriella subcapitata), 72 h): 82 mg/l (OECD 201)

Toxicity to microorganisms

Product: No data available.

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Chronic hazards to the aquatic environment:**Fish****Product:** No data available.**Aquatic Invertebrates****Product:** No data available.**Toxicity to Aquatic Plants****Product:** No data available.**Components:**Ethane-1,2-diol NOEC (Algae (*Pseudokirchneriella subcapitata*), 72 h): > 100 mg/l (OECD 201) (analogy)**Toxicity to microorganisms****Product:** No data available.**Persistence and Degradability****Biodegradation****Product:** No data available.**BOD/COD Ratio****Product:** No data available.**Bioaccumulative potential****Bioconcentration Factor (BCF)****Product:** No data available.**Partition Coefficient n-octanol / water (log Kow)****Product:** Log Kow: not measured**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**

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TDG

Not regulated as a dangerous good

Remarks : Not dangerous according to transport regulations., FOR USA
ONLY: When shipping in, by or via USA note of the
Reportable Quantity-Regulation!**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**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 2-Pentanone, 4-methyl-

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

NPRI Ethane-1,2-diol

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

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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**Version #:** 2.0**Further Information:** No data available.**Revision Information:** Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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