

SAFETY DATA SHEET

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

1. Identification

Product identifier:
SURFYNOL® 104 PA

Chemical name:
Acetylenic Diol

Recommended use of the chemical and restrictions on use

Recommended use: Surfactant
Recommended restrictions: Not determined.

Manufacturer/Importer/Distributor Information

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Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)
Emergency : 800 681 9531 (CHEMTREC MEXICO)
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+1 973 929 8060 (Product Regulatory Services)

2. Hazard(s) identification

Hazard Classification According to Hazardous Product Regulations

Physical Hazards

Flammable liquids Category 2

Health Hazards

Serious Eye Damage/Eye Irritation Category 1
Skin sensitizer Category 1
Specific Target Organ Toxicity -
Single Exposure Category 3¹

Target Organs

1. Central nervous system.

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Highly flammable liquid and vapor.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting/...] equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/eye protection/face protection.

Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. 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. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire, use recommended extinguishing media for extinction.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

Disposal: Dispose of contents/ container to an approved waste disposal plant.

Physical Hazards Not Otherwise Classified: None.

Health Hazards Not Otherwise Classified: None.

3. Composition/information on ingredients

Chemical name:
Acetylenic Diol

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	Acetylenic Diol	126-86-3	50%
Propan-2-ol	Aliphatic alcohol solution	67-63-0	50%

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

Composition Comments: Acetylenic Diol.

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

General information: Seek medical advice. If breathing is irregular or stopped, administer artificial respiration.

Inhalation: Move to fresh air. If breathing is irregular or stopped, administer artificial respiration.

Skin Contact: Wash off immediately with soap and plenty of water. Wash off immediately with plenty of water for at least 15 minutes. Wash with soap and water. Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Take off contaminated clothing and shoes immediately.

Eye contact: Rinse immediately with plenty of water for at least 15 minutes. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses.

Ingestion: Prevent aspiration of vomit. Turn victim's head to the side. Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position.

Personal Protection for First-aid Responders: Use personal protective equipment., Wear self-contained breathing apparatus for firefighting if necessary.

Most important symptoms/effects, acute and delayed

Symptoms: Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.

5. Fire-fighting measures
Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Carbon Dioxide. Dry chemical. Dry sand. Limestone powder Alcohol resistant foam.

Unsuitable extinguishing media: No data available.

Specific hazards arising from the chemical: Incomplete combustion may form carbon monoxide. Burning produces noxious and toxic fumes. In the event of fire, cool tanks with water spray. Downwind personnel must be evacuated. Fire or intense heat may cause violent rupture of packages. May form explosive mixtures in air.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Use personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye/face protection. Use self-contained breathing apparatus and chemically protective clothing. Remove sources of ignition.

Accidental release measures: If possible, stop flow of product. Open enclosed spaces to outside atmosphere. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

Methods and material for containment and cleaning up: Place in appropriate chemical waste container. Call Emergency Response number for advice. Approach suspected leak areas with caution. Absorb with inert absorbent materials such as: Dry sand. Vermiculite. Activated charcoal.

Environmental Precautions: Construct a dike to prevent spreading. Shut off or remove all ignition sources.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation): Use explosion-proof equipment. Apply process controls to ensure safe operating conditions. Assess potential flammability hazards based on flashpoint and potential ignition sources.

Safe handling advice: Use personal protective equipment. Wash hands at the end of each workshift and before eating, smoking or using the toilet. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Use only in well-ventilated areas. Avoid contact with eyes. Avoid breathing vapors and/or aerosols. See "Flammable and Combustible Liquid Code" NFPA No. 30, National Fire Protection Association, Boston, MA.

Contact avoidance measures: No data available.

Hygiene measures: Provide readily accessible eye wash stations and safety showers.

Storage

Safe storage conditions: Keep away from open flames, hot surfaces and sources of ignition. Keep containers tightly closed in a dry, cool and well-ventilated place. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from heat and sources of ignition. Keep in a dry, cool place. Keep away from oxidizers.

Safe packaging materials: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Appropriate Engineering Controls Use explosion-proof equipment. Apply process controls to ensure safe operating conditions. Assess potential flammability hazards based on flashpoint and potential ignition sources.

Individual protection measures, such as personal protective equipment

Eye/face protection: Chemical resistant goggles must be worn.

Skin Protection

Hand Protection: Additional Information: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Additional Information: Neoprene gloves, Nitrile rubber.

Other: No specific recommendations. Long sleeve shirts and trousers without cuffs.

Respiratory Protection: Not required for properly ventilated areas. Wear appropriate respirator when ventilation is inadequate.

Hygiene measures: Provide readily accessible eye wash stations and safety showers.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	light yellow
Odor:	No data available.
Odor Threshold:	No data available.
pH:	No data available.
Freezing point:	No data available.
Boiling Point:	80 °C
Flash Point:	18.9 °C
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.

Explosive limit - upper (%): No data available.

Explosive limit - lower (%): No data available.

Vapor pressure: 47.9 hPa (21 °C)

Vapor density (air=1): No data available.

Density: 0.84 g/cm³ (21 °C)

Relative density: No data available.

Solubility(ies)

Solubility in Water: No data available.

Solubility (other): No data available.

Partition coefficient (n-octanol/water): No data available.

Self Ignition Temperature: No data available.

Decomposition Temperature: No data available.
Kinematic viscosity: No data available.
Dynamic viscosity: No data available.

Other information

Explosive properties: No data available.
Oxidizing properties: No data available.
Minimum ignition temperature: > 350 °C No data available.
Metal Corrosion: No data available.

10. Stability and reactivity

Reactivity: see section "Possibility of hazardous reactions"
Chemical Stability: Stable under normal conditions.
Possibility of hazardous reactions: No data available.
Conditions to avoid: Heat, flames and sparks.
Incompatible Materials: Reactive metals (e.g. sodium, calcium, zinc etc.). Materials reactive with hydroxyl compounds. Dehydrating Agents. Oxidizing agents. acids Alkalies.
Hazardous Decomposition Products: Carbon Monoxide. Carbon Dioxide. Aldehydes. Flammable hydrocarbon fragments. Heating above 65 °C in the presence of strong base can liberate flammable hydrocarbon fragments. Carbon oxides

11. Toxicological information

Information on likely routes of exposure

Inhalation: No data available.
Skin Contact: No data available.
Eye contact: No data available.
Ingestion: No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: No data available.
Skin Contact: No data available.
Eye contact: No data available.
Ingestion: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: LD 50 ((Rat)): > 2,000 mg/kg

Dermal
Product: LD 50 (Rabbit): > 2,000 mg/kg

Inhalation**Product:** No data available.No data available.**Specified substance(s):**

Propan-2-ol LC 50 (Rat): 72.6 mg/l

Repeated dose toxicity**Product:** A similar material has caused mild liver toxicity . Repeated exposure increases liver weights in animals.**Skin Corrosion/Irritation****Product:** Mildly Irritating**Serious Eye Damage/Eye Irritation****Product:** Severe eye irritation**Respiratory or Skin Sensitization****Product:** Component of this product has been found to cause mild skin sensitization in a Local Lymph Node Assay (LLNA).**Carcinogenicity****Product:** No data available.**Germ Cell Mutagenicity****In vitro****Product:** No data available.**Specified substance(s):**

Propan-2-ol Ames test (Mutagenicity (Salmonella typhimurium - reverse mutation assay)): no evidence of mutagenic effects literature

In vivo**Product:** No data available.**Reproductive toxicity****Product:** There is no evidence of teratogenic or embryotoxic effects in animals in the absence of maternal toxicity.**Specific Target Organ Toxicity - Single Exposure****Product:** No data available.**Specific Target Organ Toxicity - Repeated Exposure****Product:** No data available.**Aspiration Hazard****Product:** No data available.**Other effects:**

No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

2,4,7,9-Tetramethyldec-5-yne-4,7-diol
 LC 50 (Cyprinus carpio (Carp), 24 h): 42 mg/l
 LC 50 (Pimephales promelas (fathead minnow), 96 h): 36 mg/l
 LC 50 (Cyprinus carpio (Carp), 96 h): 42 mg/l
 LC 50 (Scophthalmus maximus (turbot), 96 h): 43 mg/l

Propan-2-ol
 LC 50 (Leuciscus idus melanotus, 48 h): > 100 mg/l literature

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

2,4,7,9-Tetramethyldec-5-yne-4,7-diol
 EC 50 (Daphnia magna (Water flea), 48 h): 91 mg/l
 LC 50 (Acartia tonsa, 48 h): 166 mg/l

Propan-2-ol
 EC 50 (Daphnia magna, 24 h): > 1,000 mg/l literature

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.

Specified substance(s):

2,4,7,9-Tetramethyldec-5-yne-4,7-diol
 EC 50 (Pseudokirchneriella subcapitata (green algae), 72 h): 82 mg/l
 EC 50 (Skeletonema costatum (marine diatom), 72 h): 112 mg/l

Propan-2-ol
 EC 50 (Desmodesmus subspicatus (green algae), 72 h): > 1,000 mg/l literature

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

Propan-2-ol
 99 % literature
 95 % (19 d, (DOC; modif. OECD screening test / OECD 301 E)) literature

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: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

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

Propan-2-ol No data available.

Other adverse effects: Do not allow to enter soil, waterways or waste water canal.

13. Disposal considerations

Disposal methods: Contact supplier if guidance is required.

Contaminated Packaging: Dispose of container and unused contents in accordance with federal, state, and local requirements.

14. Transport information

Domestic regulation

TDG

UN number : UN 1219
Proper shipping name : ISOPROPANOL

Class : 3
Packing group : II
Labels : 3
Marine pollutant : no

International Regulations

IATA-DGR

UN/ID No. : UN 1219
Proper shipping name : Isopropanol
Class : 3
Packing group : II
Labels : 3
Packing instruction (cargo aircraft) : 364
Packing instruction (passenger aircraft) : 353
Remarks : ERG-Code 3L

IMDG-Code

UN number : UN 1219
Proper shipping name : ISOPROPANOL
Class : 3
Packing group : II
Labels : 3
EmS Code : F-E, S-D
Marine pollutant : no

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

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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 Propan-2-ol4-
Methylpentan-2-one**Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)**

NPRI Propan-2-ol

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:** 03/15/2019**Revision Date:** No data available.**Version #:** 1.0**Further Information:** No data available.

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