SAFETY DATA SHEET

1. Identification

Product identifier: SURFYNOL 104 E

Chemical name: Acetylenic diol in solvent

Other means of identification

Recommended use: Industrial use

Recommended restrictions: None known.

Manufacturer/Importer/Distributor Information

Company Name : Evonik India Pvt Ltd
Krislon House, Saki Vihar Road,
Sakinaka, Andheri (East)
Mumbai - 400072
Maharashtra, India

Telephone : +91 22 6723 8800

E-mail : productsafety-sp@evonik.com

Emergency telephone number:

24-Hour Health Emergency : 000-800-100-7141

2. Hazard(s) identification

Classification according to GHS

Health Hazards

Acute toxicity (Oral)	Category 4
Acute toxicity (Dermal)	Category 5
Serious Eye Damage/Eye Irritation	Category 1
Skin sensitizer	Category 1
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

Hazard Symbol:

Signal Word: Danger

Hazard Statement:
Harmful if swallowed.
May be harmful in contact with skin.
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. Call a POISON CENTER or doctor/ physician if you feel unwell. 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. Get medical advice/attention if you feel unwell.

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

Other hazards: None known.

3. Composition/information on ingredients

Chemical name:
Acetylenic diol in solvent

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
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.

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 combusition 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.
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

Observe national threshold limit values.

Biological Limit Values

Observe national threshold limit values.

Appropriate Engineering Controls	No data available.

Individual protection measures, such as personal protective equipment

General information:	No data available.
Eye/face protection:	Tightly fitting safety goggles

Skin Protection

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.

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
Self Ignition Temperature:	not measured
Decomposition Temperature:	not measured
pH:	5 - 7 (100 g/l, 77 °F/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/cm3 (70 °F/21 °C)
Bulk density:	No data available.
Relative vapor density:	not measured

Particle characteristics

Particle Size:	No data available.
Particle Size Distribution:	No data available.
Specific surface area:	No data available.
Surface charge/Zeta potential:	No data available.
Shape:	No data available.
Crystallinity:	No data available.
Surface treatment:	No data available.

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.
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
Components:	

Ethane-1,2-diol	LD 50 (Rat): 7.712 mg/kg
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	LD 50 (Rat): > 5.000 mg/kg

Dermal

Product:	LD 50 (Rat): > 2.000 mg/kg (OECD 402)
Components:	
Ethane-1,2-diol	LD 50 (Mouse): > 3.500 mg/kg
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	LD 50 (Rabbit): > 5.000 mg/kg

Inhalation

Product:	LC 50 (Rat, 4 h): > 20 mg/l Vapour
Components:	
Ethane-1,2-diol	No data available., Vapour Not applicable, Dusts, mists and fumes
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	LC 50 (Rat, 1 h): > 20 mg/l Dusts, mists and fumes LC 50 (Rat, 4 h): > 5 mg/l Dusts, mists and fumes Vapour, No data available.

Repeated dose toxicity

Product:	No data available.
Components:	
Ethane-1,2-diol	No data available.
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	NOAEL - No Observable Adverse Effect Level (Rat, Oral, daily): 500 mg/kg

Skin Corrosion/Irritation

Product:	No data available.
Components:	
Ethane-1,2-diol	(Rabbit): Not irritating
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	OECD 404 (Rabbit): Not irritating , 4 h

Serious Eye Damage/Eye Irritation

Product:	No data available.
Components:	
Ethane-1,2-diol	(Rabbit): Not irritating
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	US-EPA-method (Rabbit): Risk of serious damage to eyes.

Respiratory or Skin Sensitization

Product:	No data available.
Components:	
Ethane-1,2-diol	Sensitization test, OECD 406 (Guinea Pig): Not a skin sensitizer. Not a respiratory sensitizer
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	Local Lymph Node Assay (LLNA), OECD 429 (Mouse): Skin sensitizer

Carcinogenicity

Product:	No data available.
Components:	

Ethane-1,2-diol	Not classified
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.

Germ Cell Mutagenicity

No data available.

In vitro

Product:	No data available.
Components:	
Ethane-1,2-diol	No data available.
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.
Components:	
Ethane-1,2-diol	No data available.
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.

Reproductive toxicity

Product:	No data available.
Components:	
Ethane-1,2-diol	Not classified
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	Oral

Specific Target Organ Toxicity - Single Exposure

Product:	No data available.
Components:	
Ethane-1,2-diol	Not classified
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.
Components:	
Ethane-1,2-diol	Oral: Kidney - Category 2 May cause damage to organs through prolonged or repeated exposure.
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.

Aspiration Hazard

Product:	Not classified
Components:	
Ethane-1,2-diol	Not classified
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	Not applicable

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
Components:	
Ethane-1,2-diol	LC 50 (Pimephales promelas, 96 h): 72.860 mg/l
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	LC 50 (Pimephales promelas, 96 h): 36 mg/l LC 50 (Cyprinus carpio (Carp), 96 h): 42 mg/l NOEC (Cyprinus carpio (Carp), 96 h): 10 mg/l

Aquatic Invertebrates

Product:	LC 50 (Daphnia magna, 48 h): 185 mg/l
Components:	
Ethane-1,2-diol	EC 50 (Daphnia magna, 48 h): > 100 mg/l
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	EC 50 (Daphnia magna, 48 h): 88 mg/l EC 50 (Daphnia magna, 48 h): 91 mg/l NOEC (Daphnia magna, 48 h): 43 mg/l

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
Ethane-1,2-diol	EC 50 (Selenastrum capricornutum (green algae), 96 h): 6.500 - 13.000 mg/l
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)

Toxicity to microorganisms

Product:	No data available.
Components:	
Ethane-1,2-diol	EC 20 (activated sludge, 0,5 h): > 1.995 mg/l
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	EC 50 (activated sludge, 3 h): Approximate 630 mg/l (OECD 209)

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
Ethane-1,2-diol	NOEC (Pimephales promelas, 7 d): 15.380 mg/l
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.

Aquatic Invertebrates

Product:	No data available.
Components:	
Ethane-1,2-diol	NOEC (Ceriodaphnia dubia, 7 d): 8.590 mg/l
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.

Toxicity to Aquatic Plants

Product:	No data available.

Components:

Ethane-1,2-diol	No data available.
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.

Toxicity to microorganisms

Product:	No data available.
Components:	
Ethane-1,2-diol	EC 20 (activated sludge, 0,5 h): > 1.995 mg/l
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	EC 50 (activated sludge, 3 h): Approximate 630 mg/l (OECD 209)

Persistence and Degradability

Biodegradation

Product:	No data available.
Components:	
Ethane-1,2-diol	90 - 100 % (10 d, OECD 301 A) The product is easily biodegradable.
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

BOD/COD Ratio

Product:	No data available.
Components:	
Ethane-1,2-diol	No data available.
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	No data available.
Components:	
Ethane-1,2-diol	No data available.
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.

Partition Coefficient n-octanol / water (log Kow)

Product:	Log Kow: not measured
Components:	
Ethane-1,2-diol	No data available.
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	Log Kow: 2,8 22 °C (OECD 117) Yes

Mobility in soil:

Product	No data available.
Components:	
Ethane-1,2-diol	No data available.
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.

Results of PBT and vPvB assessment:

Product	No data available.

Components:

Ethane-1,2-diol	No data available.
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	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

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

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

Issue Date: 21.02.2022

Version #: 2.2

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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