SILVER FERN CHEMICAL, INC.

Safety Data Sheet

Fernestanol - Ester Alcohol Coalescent

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Substance
Trade name	:	Fernestanol - Ester Alcohol Coalescent
Chemical name	:	2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE
CAS No	:	25265-77-4
Product code	:	HP-040866-FP
Formula	:	C12H24O3
Synonyms	:	Isobutyric acid, monoester with 2,2,4-trimethylpentane-1,3-diol / Propanoic acid, 2-methyl-, monoester with 2,2,4-trimethyl-1,3-pentanediol / Propionic acid, 2-methyl-, monoester with 2,2,4-trimethyl-1,3-pentanediol / Texanol / 2,2,4-Trimethyl-1,3-pentanediol isobutyrate / 2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate / Propanoic acid, 2-methyl-, monoester with 2,2,4-trimethyl-1,3- pentanediol / Trimethyl pentanediol monoisobutyrate / Isobutyric acid, monoester with 2,2,4-trimethyl-1,3-pentanediol / 2-Methylpropanoic acid 1-hydroxy-2,2,4-trimethylpentane-3-yl/2-methylpropanoic acid 3-hydroxy-2,2,4-trimethylpentyl ester / 2,2,4-Trimethyl-1,3-pentanediol mono(2-methylpropanoate) / 2,2,4-Trimethyl-1,3-pentanediol 2-methylpropanoate / Isobutyric acid, monoester with 2,2,4-trimethylpentane-1,3-diol / Propanoic acid, 2-methyl-, monoester with 2,2,4-trimethyl-1,3-pentanediol / Propionic acid, 2-methyl-, monoester with 2,2,4-trimethyl-1,3-pentanediol / Texanol / 2,2,4-Trimethyl-1,3-pentanediol isobutyrate / 2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate / Propanoic acid, 2-methyl-, monoester with 2,2,4-trimethyl-1,3- pentanediol / Trimethyl pentanediol monoisobutyrate / Isobutyric acid, monoester with 2,2,4-trimethyl-1,3-pentanediol / 2-Methylpropanoic acid 1-hydroxy-2,2,4-trimethylpentane-3-yl/2-methylpropanoic acid 3-hydroxy-2,2,4-trimethylpentyl ester / 2,2,4-Trimethyl-1,3-pentanediol mono(2-methylpropanoate) / 2,2,4-Trimethyl-1,3-pentanediol 2-methylpropanoate

1.2. Relevant identified uses of the substance or mixture and uses advised against

None identified.

1.3. Details of the supplier of the safety data sheet

Silver Fern Chemical, Inc.
2226 Queen Anne Ave. North, Suite C
Seattle, WA 98109, USA
Phone: 1-866-282-3384

Business Contact
Customer Service: 1-866-282-3384
info@silverfernchemical.com

1.4. Emergency telephone number

Emergency number : 24 HR Infotrac: 1-800-5053 (USA & Canada); Outside USA & Canada 1-352-323-3500

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS Classification

Aquatic Acute 3 H402

Full text of H-phrases: see section 14

2.2. Label elements

GHS labeling

Hazard Statements:

H402- Harmful to aquatic life

Precautionary Statements:

P273- Avoid release to the environment

P501- Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national, and /or international regulation.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	Classification (GHS-US)
2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE (Main constituent)	(CAS No) 25265-77-4	>= 98.5	Aquatic Acute 3, H402

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Ignition sources, Incompatible materials. Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE (25265-77-4)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear, colorless liquid.

Color : Colorless

Odor : characteristic

Odor threshold : No data available

pH : No data available

Melting point : -50 °C ; -58.0 °F

Freezing point : No data available

Boiling point : 255 - 260 °C ; 491 - 500 °F

Flash point : 120 °C (open cup)

Relative evaporation rate (butyl acetate=1) : No data available

Flammability (solid, gas) : No data available

Explosion limits : 0.6 - 4.2 vol %

Explosive properties : No data available

Oxidizing properties : No data available

Vapor pressure : < 0.01 mm Hg at 20°C

Relative density : 0.95

Relative vapor density at 20 °C : 7.5

Molecular mass : 216.3 g/mol

Solubility : Water: 2 g/100ml

Log Pow : 3.47 (at 25 °C)

Log Kow : No data available

Auto-ignition temperature : 393 °C ; 739 °F

Decomposition temperature : No data available

Viscosity : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE (25265-77-4)	
LD50 oral rat	3200 mg/kg
LD50 dermal rat	> 15200 mg/kg
LC50 inhalation rat (mg/l)	> 3.5 mg/l (Exposure time: 6hr)
ATE US (oral)	3200.000 mg/kg body weight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life.

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE (25265-77-4)	
LC50 fish 1	30 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
LC50 fish 2	> 95 mg/l (Exposure time: 96 h - Species: Daphnia Magna)

12.2. Persistence and degradability

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE (25265-77-4)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE (25265-77-4)	
Log Pow	3.47 (at 25 °C)
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE (25265-77-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE (25265-77-4)	
Listed on the Canadian DSL (Domestic Sustances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

EU-Regulations

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE (25265-77-4)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

National regulations

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE (25265-77-4)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican national Inventory of Chemical Substances) Listed on Turkish inventory of chemical

15.3. US State regulations

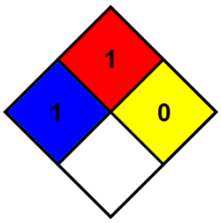
No additional information available

SECTION 16: Other information

Full text of H-phrases:

Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
H402	Harmful to aquatic life

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard : 1 - Must be preheated before ignition can occur.
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions and are not reactive with water.



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