

SECTION 1 Identification

1.1. Product identifier

Product form : Substance
Trade name : FLEXSORB™ SE
Chemical name : Hindered Alkanolamine
Formula : C8H19NO2

1.2. Other means of identification

EC Index No. (Report) : 603-089-00-X
EC-No. : 400-390-6

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Gas treatment, Laboratory chemical
Recommended use : Laboratory chemical

1.4. Supplier's details

Monument Chemical
10200 Bay Area Blvd.
Pasadena, TX, 77507
USA
T (281)474-5550
sds@monumentchemical.com - www.monumentchemical.com

1.5. Emergency phone number

Emergency number : 24 HR CHEMTREC: 1-800-424-9300 (International +1 703-741-5970)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral), Category 4	H302	Harmful if swallowed.
Skin corrosion/irritation, Category 1	H314	Causes severe skin burns and eye damage.
Full text of H statements : see section 16		

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS US) : P260 - Do not breathe dusts or mists.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.
P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell.

FLEXSORB™ SE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a doctor, a POISON CENTER.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P363 - Take off immediately all contaminated clothing and wash it before reuse.
P405 - Store locked up.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Chemical name : Hindered Alkanolamine

Name	Product identifier	%
Hindered Alkanolamine*	CAS-No.: Trade Secret	95 – 99
2,2' -oxybisethanol, diethylene glycol	CAS-No.: 111-46-6	≤ 2

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Do not apply (chemical) neutralizing agents without medical advice. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

FLEXSORB™ SE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

First-aid measures after eye contact	: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist. Do not apply (chemical) neutralizing agents without medical advice.
First-aid measures after ingestion	: Rinse mouth with water. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.html). Ingestion of large quantities: immediately to hospital.

4.2. Most important symptoms/effects, acute and delayed

Potential Adverse human health effects and symptoms	: Harmful if swallowed. Causes severe skin burns. Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Causes serious eye damage.
Symptoms/effects after inhalation	: EXPOSURE TO HIGH CONCENTRATIONS: Corrosion of the upper respiratory tract.
Symptoms/effects after skin contact	: Caustic burns/corrosion of the skin.
Symptoms/effects after eye contact	: Corrosion of the eye tissue.
Symptoms/effects after ingestion	: Possible esophageal perforation. Burns to the gastric/intestinal mucosa.
Chronic symptoms	: No effects known.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (alcohol-resistant). Water spray if puddle cannot expand.
Unsuitable extinguishing media	: Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

5.2. Specific hazards arising from the chemical

Fire hazard	: DIRECT FIRE HAZARD: Material presenting a fire hazard. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard.
Hazardous decomposition products in case of fire	: On heating/burning: release of toxic and corrosive gases/vapours (carbon monoxide - carbon dioxide, nitrous vapours).

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting	: Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment	: Gloves (EN 374). Face shield (EN 166). Corrosion-proof suit (EN 14605). Large spills/in enclosed spaces: gas-tight suit (EN 943).
Emergency procedures	: Mark the danger area. No naked flames. Wash contaminated clothes.

For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

FLEXSORB™ SE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Environmental precautions : Prevent soil and water pollution. Prevent spreading in sewers.

6.2. Methods and materials for containment and cleaning up

For containment : Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Heat exposure: dilute toxic gas/vapour with water spray. Take account of toxic/corrosive precipitation water.

Methods for cleaning up : Take up liquid spill into inert absorbent material. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

See Heading 8, Exposure controls and personal protection

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : At temperature > flashpoint: use spark-/explosionproof appliances. In finely divided state: use spark-/explosionproof appliances. Keep away from naked flames/heat. Finely divided: keep away from ignition sources/sparks. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Do not discharge the waste into the drain. Keep container tightly closed.

Hygiene measures : Observe very strict hygiene - avoid contact.

7.2. Conditions for safe storage, including incompatibilities

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

Storage area : Store in a cool area. Store in a dry area. Ventilation at floor level. Provide for a tub to collect spills. Meet the legal requirements. Keep out of direct sunlight.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. copper alloy.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.

Special rules on packaging : SPECIAL REQUIREMENTS: closing. hermetical. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: aluminium. glass. HDPE. stainless steel. steel. carbon steel. MATERIAL TO AVOID: plastics.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

2,2' -oxybisethanol, diethylene glycol (111-46-6)

USA - AIHA - Occupational Exposure Limits

WEEL TWA	10 mg/m ³
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8.2. Appropriate engineering controls

No additional information available

FLEXSORB™ SE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Materials for protective clothing:

Good resistance: neoprene (chloroprene rubber). Nitrile rubber. Polyvinylchloride (PVC). butyl rubber

Hand protection:

Gloves

Eye protection:

Face shield (EN 166)

Skin and body protection:

Corrosion-proof clothing (EN 14605)

Respiratory protection:

High gas/vapour concentration: full face mask

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: Colorless to amber colored liquid.
Color	: Colorless amber
Odor	: Amine-like
Odor threshold	: No data available
pH	: 12.7
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 230 °C (446°F)
Flash point	: 112 °C (234°F)
Relative evaporation rate (butyl acetate=1)	: < 1
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: 4 Pa (38°C; 100°F)
Relative vapor density at 20°C	: 5.6 (Calculated)
Relative density	: 0.94 (24 °C, ISO 1183-1: Pycnometer Method)
Density	: 0.939 g/cm³ at 24°C (75°F)
Molecular mass	: 161.24 g/mol
Solubility	: Soluble in water. Water: > 500000 mg/l
Partition coefficient n-octanol/water (Log Pow)	: -2.6 (20°C; 68°F)
Auto-ignition temperature	: 320 °C (608°F)
Decomposition temperature	: No data available
Viscosity, kinematic	: 64 mm²/s (20 °C, OECD 114: Viscosity of Liquids)
Explosion limits	: No data available

FLEXSORB™ SE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Explosive properties : Not explosive.
Particle characteristics : No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

VOC content : 100 %
Fat solubility : > 50 g/100ml (37°C; 99°F)
Other properties : Gas/vapour heavier than air at 20°C. Slightly volatile.

SECTION 10 Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stabilised product.

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 (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Hindered Alkanolamine	
LD50 oral rat	1470 mg/kg
LD50 dermal rabbit	> 3160 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Male / female, Experimental value, Dermal)
ATE US (oral)	1470 mg/kg body weight
Hindered Alkanolamine	
LD50 oral rat	1470 mg/kg
LD50 dermal rabbit	> 3160 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Male / female, Experimental value, Dermal)
ATE US (oral)	1470 mg/kg body weight
2,2' -oxybisethanol, diethylene glycol (111-46-6)	
LD50 oral rat	12565 mg/kg

FLEXSORB™ SE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

2,2' -oxybisethanol, diethylene glycol (111-46-6)	
LD50 dermal rabbit	11890 mg/kg
LC50 Inhalation - Rat	> 4600 mg/m³ (Exposure time: 4 h)
ATE US (oral)	500 mg/kg body weight
ATE US (dermal)	11890 mg/kg body weight

Skin corrosion/irritation : Causes severe skin burns.
pH: 12.7

Hindered Alkanolamine	
pH	9 1% in water

2,2' -oxybisethanol, diethylene glycol (111-46-6)	
pH	5 – 8 (50 %)

Serious eye damage/irritation : Not classified.
pH: 12.7

Hindered Alkanolamine	
pH	9 1% in water

2,2' -oxybisethanol, diethylene glycol (111-46-6)	
pH	5 – 8 (50 %)

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

2,2' -oxybisethanol, diethylene glycol (111-46-6)	
NOAEL (chronic,oral,animal/male,2 years)	1210 mg/kg body weight Animal: rat, Animal sex: male, Remarks on results: other:Effect type: carcinogenicity (migrated information)
NOAEL (chronic,oral,animal/female,2 years)	1160 mg/kg body weight Animal: rat, Animal sex: female, Remarks on results: other:Effect type: carcinogenicity (migrated information)

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified.

Hindered Alkanolamine	
NOAEL (oral,rat,90 days)	60 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

2,2' -oxybisethanol, diethylene glycol (111-46-6)	
LOAEL (oral,rat,90 days)	40000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

Aspiration hazard : Not classified

Hindered Alkanolamine	
Viscosity, kinematic	64 mm²/s (20 °C, OECD 114: Viscosity of Liquids)

FLEXSORB™ SE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Hindered Alkanolamine	
Viscosity, kinematic	64 mm²/s (20 °C, OECD 114: Viscosity of Liquids)
2,2' -oxybisethanol, diethylene glycol (111-46-6)	
Viscosity, kinematic	No data available in the literature
Potential Adverse human health effects and symptoms	: Harmful if swallowed. Causes severe skin burns. Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Causes serious eye damage.
Symptoms/effects after inhalation	: EXPOSURE TO HIGH CONCENTRATIONS: Corrosion of the upper respiratory tract.
Symptoms/effects after skin contact	: Caustic burns/corrosion of the skin.
Symptoms/effects after eye contact	: Corrosion of the eye tissue.
Symptoms/effects after ingestion	: Possible esophageal perforation. Burns to the gastric/intestinal mucosa.
Chronic symptoms	: No effects known.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	: Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573). Photooxidation in the air. Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Slightly harmful to crustacea. Slightly harmful to fishes. No inhibition of activated sludge. Slightly harmful to algae.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Hindered Alkanolamine	
LC50 - Fish [1]	255.3 mg/l (96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	113.6 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	170 – 180 mg/l (ISO 10253, 72 h, Skeletonema costatum, Static system, Experimental value, Nominal concentration)

Hindered Alkanolamine	
LC50 - Fish [1]	255.3 mg/l (96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	113.6 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	170 – 180 mg/l Test organisms (species): Skeletonema costatum
ErC50 algae	170 – 180 mg/l (ISO 10253, 72 h, Skeletonema costatum, Static system, Experimental value, Nominal concentration)
LOEC (chronic)	32 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

2,2' -oxybisethanol, diethylene glycol (111-46-6)	
LC50 - Fish [1]	75200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

FLEXSORB™ SE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

2,2' -oxybisethanol, diethylene glycol (111-46-6)	
EC50 - Crustacea [1]	84000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 96h - Algae [1]	9362 mg/l (ECOSAR, Algae, QSAR)
EC50 96h - Algae [2]	9362 mg/l Test organisms (species): other:green algae
NOEC (chronic)	≥ 1000 mg/l Test organisms (species): Americamysis bahia (previous name: Mysisidopsis bahia) Duration: '23 d'

12.2. Persistence and degradability

Hindered Alkanolamine	
Persistence and degradability	Readily biodegradable in water.

Hindered Alkanolamine	
Persistence and degradability	Readily biodegradable in water.

2,2' -oxybisethanol, diethylene glycol (111-46-6)	
Persistence and degradability	Biodegradable in the soil, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.02 g O ₂ /g substance
Chemical oxygen demand (COD)	1.51 g O ₂ /g substance
ThOD	1.51 g O ₂ /g substance

12.3. Bioaccumulative potential

Hindered Alkanolamine	
BCF - Fish [1]	3.162 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	-2.6 (20°C; 68°F)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Hindered Alkanolamine	
BCF - Fish [1]	3.162 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	-2.6 (20°C; 68°F)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

2,2' -oxybisethanol, diethylene glycol (111-46-6)	
BCF - Fish [1]	100 – 180
Partition coefficient n-octanol/water (Log Pow)	-1.98 (at 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Hindered Alkanolamine	
Surface tension	38 mN/m (24 °C, 250 g/l)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0 – 4.28 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Adsorbs into the soil.

FLEXSORB™ SE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Hindered Alkanolamine	
Surface tension	38 mN/m (24 °C, 250 g/l)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0 – 4.28 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Adsorbs into the soil.
2,2' -oxybisethanol, diethylene glycol (111-46-6)	
Surface tension	48.5 mN/m
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No
Other information	: Avoid release to the environment.

SECTION 13 Disposal considerations

Product/Packaging disposal recommendations	: Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove to an authorized dump (Class I). Remove to an authorized incinerator with energy recovery.
Additional information	: Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
Ecological waste information	: Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / IMDG / IATA

14.1. UN number

UN-No. (DOT)	: UN2735
UN-No. (IMDG)	: 2735
UN-No. (IATA)	: 2735

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT)	: Amines, liquid, corrosive, n.o.s. (Alkyl amine alcohol)
Proper Shipping Name (IMDG)	: AMINES, LIQUID, CORROSIVE, N.O.S. (Alkyl amine alcohol)
Proper Shipping Name (IATA)	: Amines, liquid, corrosive, n.o.s. (Alkyl amine alcohol)
Transport document description (DOT)	: UN2735 Amines, liquid, corrosive, n.o.s. (Alkyl amine alcohol), 8, II
Transport document description (IMDG)	: UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (Alkyl amine alcohol), 8, II
Transport document description (IATA)	: UN 2735 Amines, liquid, corrosive, n.o.s. (Alkyl amine alcohol), 8, II

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT)	: 8
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FLEXSORB™ SE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Hazard labels (DOT) : 8



IMDG

Transport hazard class(es) (IMDG) : 8

Hazard labels (IMDG) : 8



IATA

Transport hazard class(es) (IATA) : 8

Hazard labels (IATA) : 8



14.4. Packing group

Packing group (DOT) : II

Packing group (IMDG) : II

Packing group (IATA) : II

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

UN-No. (DOT) : UN2735

DOT Special Provisions (49 CFR 172.102) : B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.

IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L

FLEXSORB™ SE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 52 - Stow "separated from" acids
IMDG	
Transport regulations (IMDG)	: Subject to the provisions
Special provision (IMDG)	: 274
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T11
Tank special provisions (IMDG)	: TP1, TP27
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	: A
Segregation (IMDG)	: SG35
Properties and observations (IMDG)	: Colorless to yellowish liquids or solutions with a pungent odor. Miscible with or soluble in water. When involved in a fire, evolve toxic gases. Corrosive to most metals, especially to copper and its alloys. Reacts violently with acids. Cause burns to skin, eyes and mucous membranes.

IATA

Special provision (IATA)	: A3, A803
Transport regulations (IATA)	: Subject to the provisions
PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y840
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 851
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
ERG code (IATA)	: 8L

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Hindered Alkanolamine

Listed on the Canadian DSL (Domestic Substances List)

Hindered Alkanolamine

Listed on the Canadian DSL (Domestic Substances List)

2,2'-oxybisethanol, diethylene glycol (111-46-6)

Listed on the Canadian DSL (Domestic Substances List)

FLEXSORB™ SE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

EU-Regulations

Hindered Alkanolamine

Listed on ELINCS (European List of Notified Chemical Substances)

Hindered Alkanolamine

Listed on ELINCS (European List of Notified Chemical Substances)

2,2' -oxybisethanol, diethylene glycol (111-46-6)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Hindered Alkanolamine

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

Hindered Alkanolamine

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

2,2' -oxybisethanol, diethylene glycol (111-46-6)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
2,2' -oxybisethanol, diethylene glycol(111-46-6)	U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

FLEXSORB™ SE

Safety Data Sheet

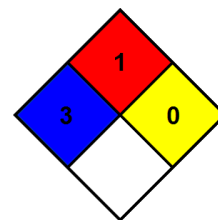
according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date : 1/7/2025
Issue date : 1/7/2025
Other information : None.

Full text of hazard classes and H-statements

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.
NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating
Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
Personal protection : H - Splash goggles, Gloves, Synthetic apron, Vapor respirator

Safety Data Sheet (SDS), USA

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