

ALFOTERRA® L167-4S 90 Surfactant

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Trade name	ALFOTERRA® L167-4S 90 Surfactant	
Synonyms	Alcohol propoxysulfate, sodium salt (aqueous solution)	
Use	Industrial use, Surfactant, Oilfield	
Company	Sasol Chemicals (USA) LLC (an affiliate of Sasol Chemicals North America LLC)	
Address	12120 Wickchester Lane Houston TX 77079	
Telephone	CHEMTREC North America Transportation Emergency (24-hr)	(800) 424-9300
	CHEMTREC World Wide	(703) 527-3887
	Other Emergencies (24-hr)	(337) 494-5142
	MSDS and Product Information (8:00am-4:30pm CST)	(281) 588-3491
	Health and Safety Information (7:30am-4:00pm CST)	(281) 588-3492
E-mail address	SasolElectronicSDS@us.sasol.com	

SECTION 2 HAZARDS IDENTIFICATION

GHS Hazards

Serious eye damage	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

LABEL ELEMENTS

Hazard symbols



Signal word Danger

Hazard statements H318 Causes serious eye damage.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention P280 Wear eye protection/ face protection.
P273 Avoid release to the environment.

Response 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 POISON CENTER or doctor/ physician.

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P391 Collect spillage.

Disposal P501 Dispose of contents/ container to an approved waste disposal plant.

Additional advice Pre-existing eye, skin, and respiratory disorders may be aggravated by exposure to this product.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS-No.</u>	<u>Weight percent</u>
Alcohols, C16-17-branched and linear, propoxylated, sulfated, sodium salts	958238-83-0	>=80
Water	7732-18-5	<=20

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

SECTION 4 FIRST AID MEASURES

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. When symptoms persist or in all cases of doubt seek medical advice. Wash contaminated clothing before re-use.

Inhalation Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.

Ingestion If swallowed, call a poison control centre or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

SECTION 5 FIREFIGHTING MEASURES

FLAMMABLE PROPERTIES

Fire/explosion NFPA Class IIIB combustible liquid.

Suitable extinguishing media Water spray, Foam, Dry chemical, Carbon dioxide (CO₂)

Protective equipment and precautions for firefighters Wear self contained breathing apparatus for fire fighting if necessary.

Further information Keep containers and surroundings cool with water spray. Do not use a solid water stream as it may scatter and spread fire. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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SECTION 6 ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up Evacuate personnel to safe areas. Remove all sources of ignition. Contain spilled liquid with sand, absorbent material, or concrete dikes for recovery or disposal. Large spills should be collected mechanically (remove by pumping) for disposal. Place in container for disposal according to local / national regulations (see Section 13). Do not flush into surface water or sanitary sewer system. For environmental releases and spills into waterways, immediately contact the local authorities.

SECTION 7 HANDLING AND STORAGE

Safe handling advice Take precautionary measures against static discharges.

Storage/Transport pressure Consult the ISO container maximum pressure specifications prior to loading or unloading.

Load/Unload temperature 64 - 86 °F
18 - 30 °C

Storage and handling materials Suitable: Stainless steel, fiberglass reinforced plastics, carbon steel coated with baked phenolic. Any moisture may cause rusting of carbon steel.
Unsuitable: Isophthalic polyester

Further information on storage conditions Heating above 40°C (104°F) must be avoided, even briefly, because hydrolysis may occur. The ideal storage temperature is 10 - 30°C (50 - 86°F). Prolonged storage in the presence of air or oxygen may cause product degradation. Oxidation is not expected when stored under a nitrogen atmosphere. Inert gas blanket and breathing system needed to maintain color stability. Use dry inert gas having at least -40°C (-40°F) dew point.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES

Ensure adequate ventilation, especially in confined areas.

PERSONAL PROTECTIVE EQUIPMENT

Eyes Wear as appropriate: Goggles, Face-shield

Skin Full protective clothing, chemical boots, and chemical gloves.

Inhalation Use respirator when performing operations involving potential exposure to vapour of the product. Use NIOSH approved respiratory protection.

EXPOSURE GUIDELINES

There are no exposure limits established for this product. Trace amounts of propylene oxide may be present in this product., The propylene oxide in this product is not expected to result in significant exposures or present a health hazard.

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid/paste;
Colour	light yellow to brown
Form	liquid, slurry
Odour	slight hydrocarbon-like
Odour Threshold	no data available
Flash point	> 105 °C, > 221 °F;
Flammability	Upper explosion limit: Not determined Lower explosion limit: Not determined
Boiling point/boiling range	not applicable
Melting point/range	5 - 9 °C, 41 - 48 °F; pour point
Auto-ignition temperature	not applicable
Decomposition temperature	no data available
Flammability (solid, gas)	no data available
Vapour pressure	no data available
Vapour density	no data available
Density	1.03 g/cm ³ @ 40 °C, 104 °F;
Specific gravity	no data available
Water solubility	completely miscible
Viscosity	638.42 cSt @ 40 °C, 104 °F;
pH	6.5 - 11.5 (5% in water)
Evaporation rate	no data available
Partition coefficient: n-octanol/water	no data available

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SECTION 10 STABILITY AND REACTIVITY

Reactivity	Stable at normal ambient temperature and pressure.
Chemical stability	No decomposition if stored and applied as directed.
Conditions to avoid	Reacts slowly with air or oxygen. Hydrolysis is catalyzed by heat and low pH conditions. Storage under heated conditions in the presence of air or oxygen increases reaction rate. Lower temperatures will allow for longer storage time and higher temperatures will shorten the storage time if stored under an air or oxygen atmosphere.
Hazardous decomposition products	When storing this product in air or oxygen, decomposition may occur, generating vapors which could be irritating. Ensure adequate ventilation, especially in confined areas. Oxidation is not expected when stored under a nitrogen atmosphere.
Materials to avoid	Can react with strong oxidizers, inorganic acids, and halogens.
Hazardous polymerisation	None.

SECTION 11 TOXICOLOGICAL INFORMATION

Additional Remarks	Information given is based on data obtained from similar substances.
Acute dermal toxicity	no data available
Acute inhalation toxicity	no data available
Acute oral toxicity	LD50 rat: > 2,600 mg/kg
Skin corrosion/irritation	Primary irritation (rabbit): 0.7 (Max. score is 8.0.); Draize Test
Eye damage/irritation	May cause eye burns due to high pH.
Respiratory or skin sensitization	no data available
Germ cell mutagenicity	Genotoxicity in vitro: no data available Genotoxicity in vivo: no data available Assessment Mutagenicity: While the material was not mutagenic in an Ames Assay, changes in the number of chromosomes (polyploidy) were observed in another in-vitro assay (Chromosome Aberration Assay). The relevance of this result to human health is questionable. Results from a more relevant follow-up study (in vivo Micronucleus Assay) indicated the material was not genotoxic (absence of micronuclei formation). Based on all of the results, this material is not considered to be a human health concern for genotoxicity.

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Reproductive toxicity	<p>Reproductive toxicity: no data available</p> <p>Assessment Reproductive toxicity: no data available</p> <p>Teratogenicity: no data available</p> <p>Assessment teratogenicity: no data available</p>
STOT - single exposure	no data available
STOT - repeated exposure	High oral doses (250 and 500 mg/kg/day) resulted in increased liver weights and gastric lesions in laboratory animals. These effects were not observed at a lower dose (100 mg/kg/day). No adverse effects for humans are anticipated under expected handling conditions.
Aspiration toxicity	no data available
Carcinogenicity	<p>Assessment carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.</p>

SECTION 12 ECOLOGICAL INFORMATION

Aquatic toxicity	Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Toxicity to fish	LC50 (Pimephales promelas (fathead minnow)) 96 hours: 0.49 mg/l
Toxicity to aquatic invertebrates	EC50 (Daphnia pulex (Water flea)) 48 hours: 7.56 mg/l
Toxicity to algae	ErC50 (Pseudokirchneriella subcapitata (green algae)) 96 hours: 0.49 mg/l
Chronic toxicity to fish	no data available
Chronic toxicity to aquatic invertebrates	no data available
Biodegradation	Not readily biodegradable. OECD Test Guideline 301F (28 d): < 60 %
Bioaccumulation	no data available
Mobility in soil	no data available

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Other adverse effects no data available

SECTION 13 DISPOSAL CONSIDERATIONS

- Waste Code** This product is not classified or listed as a hazardous waste according to 40 CFR 261. However, Sasol recommends the substance waste be disposed according to the criterion defined for "P-listed" chemicals.
- Disposal methods** Do not allow product to enter surface water or sanitary sewer systems. Dispose of only in accordance with local, state, and federal regulations. Possible disposal options include:
- (a) on-shore deep-well injection;
 - (b) incineration in a disposal facility; or
 - (c) landfilled when in compliance with local regulation if it cannot be destroyed or disposed of in accordance with paragraph (a) or (b).
- Disposal may include disposal of "waste" which includes wastes resulting from rinsing transport vessels, storage vessels or blending vessels that contained the substance, process effluents, and any residual amounts of the substance.
- Empty containers.** Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

SECTION 14 TRANSPORT INFORMATION

- DOT** UN 3082, Environmentally hazardous substance, liquid, n.o.s.(Alcohol propoxysulfate), 9, III, Marine pollutant
This product is regulated as a hazardous material according to the Department of Transportation only in bulk quantities (greater than 119 gallons per package).
- IATA** UN 3082, Environmentally hazardous substance, liquid, n.o.s.(Alcohol propoxysulfate), 9, III
This product is regulated as a dangerous good when shipped by air in all quantities according to IATA.
- IMDG** UN 3082, Environmentally hazardous substance, liquid, n.o.s., (Alcohol propoxysulfate), 9, III, Marine pollutant
This product is regulated as a Marine Pollutant when shipped by water in all quantities according to the IMDG Code.

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

Remarks no data available

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SECTION 15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

OSHA Hazards (HCS 1994)

Corrosive to eyes

TSCA Inventory Listing

Components

Poly[oxy(methyl-1,2-ethanediyl)], alpha-sulfo-omega-hydroxy-, C16-17-branched and linear alkyl ethers, sodium salts

Water

Not listed on TSCA

CAS-No.

958238-83-0

7732-18-5

SARA 302 Status

Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

CAS-No.

Weight percent

SARA 311/312 Classification

"Immediate (acute) health hazard"

SARA 313 Chemical

Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

CAS-No.

Weight percent

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Components

none

Reportable Quantity

Weight percent

INTERNATIONAL REGULATIONS

WHMIS Classification

Class D, Division 2, Subdivision B: Toxic material.

European Union

Classification according to Regulation (EU) 1272/2008.

Serious eye damage, Category 1

Acute aquatic toxicity, Category 1

Chronic aquatic toxicity, Category 1

Australia. Inventory of Chemical Substances (AICS)

Not listed

Japan. Inventory of Existing and New Chemical Substances (ENCS)

Not listed

Japan. Industrial Safety & Health Law (ISHL) Inventory

Not listed

Canada. Domestic Substances List (DSL) Inventory

Not listed

The importation of this product into Canada is subject to Ministerial Condition No. 17074.

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Canadian Non-Domestic Substance Listing (NDSL)	Not listed
European Inventory of Existing Commercial Chemical Substances (EINECS) Listing	Listed
Philippines. Inventory of Chemicals / Chemical Substances (PICCS)	Not listed
Korea. Existing Chemicals Inventory (KECI)	Not listed
China. Inventory of Existing Chemical Substances (IECSC)	Not listed
Mexico. National Inventory of Chemical Substances (INSQ)	Not listed
New Zealand. Inventory of Chemicals (NZIoC)	Not listed
Switzerland. Inventory of Notified New Substances (CHINV)	Not listed
Taiwan. National Existing Chemical Inventory (NECI)	Listed

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

STATE REGULATIONS

California Prop. 65

Components

Oxirane, 2-methyl-

CAS-No.

75-56-9

This product may contain detectable quantities of propylene oxide which is a chemical on the California Proposition 65 list. The level is typically below 1.0 ppm, although it may vary. The manufacturing process is controlled to reduce the residual propylene oxide content.

SECTION 16 OTHER INFORMATION

HAZARD RATINGS

	<u>Health</u>	<u>Flammability</u>	<u>Physical Hazard/ Instability</u>
HMIS®	3	1	0
NFPA	3	1	0

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