ALFOL® 12 Alcohol

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

Trade name ALFOL® 12 Alcohol
Synonyms 1-Dodecanol
Use Flavors and Fragrances, Detergent, Industrial use, Personal care
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
Eye irritation Category 2B
Acute aquatic toxicity Category 1
Chronic aquatic toxicity Category 2

LABEL ELEMENTS

Hazard symbols

Signal word Warning

Hazard statements
H320 Causes eye irritation.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention P264 Wash skin thoroughly after handling.
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.
P337 + P313 If eye irritation persists: Get medical advice/attention.
SAFETY DATA SHEET

ALFOL® 12 Alcohol

P391 Collect spillage.

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

SECTION 3 COMPOSITION INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Dodecanol</td>
<td>112-53-8</td>
<td>98</td>
</tr>
<tr>
<td>1-Tetradecanol</td>
<td>112-72-1</td>
<td>1.5</td>
</tr>
<tr>
<td>1-Decanol</td>
<td>112-30-1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

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. In case of shortness of breath, give oxygen. 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, Alcohol-resistant foam, Dry chemical, Carbon dioxide (CO2)

Protective equipment and precautions for firefighters Wear self-contained breathing apparatus and protective suit. Keep containers and surroundings cool with water spray.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up Evacuate personnel to safe areas. Remove all sources of ignition. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local national regulations (see section 13). Do not flush into surface water or sanitary sewer system.
ALFOL® 12 Alcohol

Spill precautions  Material can create slippery conditions.

SECTION 7  HANDLING AND STORAGE

Safe handling advice  Ensure all equipment is electrically grounded before beginning transfer operations.

Storage/Transport pressure  Ambient

Load/Unload temperature  24 - 43 °C  75 - 110 °F

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  Wear suitable protective clothing, gloves and eye/face protection.

Inhalation  Respiratory protection is normally not required except in emergencies or when conditions cause excessive airborne levels of mists or vapors. Use NIOSH approved respiratory protection.

EXPOSURE GUIDELINES

Contains no substances with occupational exposure limit values.

SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES

Appearance  solid; colorless liquid when melted;

Colour  white

Form  Solid

Odour  sweet pungent

Odour Threshold  no data available

Flash point  129 °C, 265 °F; ASTM D 93;

Flammability Upper explosion limit: approximately 5.1 %(V)

Lower explosion limit: approximately 0.6 %(V)

Boiling point/boiling range  254 - 259 °C, 490 - 498 °F;
SAFETY DATA SHEET

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Melting point/range 23 °C, 74 °F;
Auto-ignition temperature 260 °C, 500 °F;
Decomposition temperature no data available
Flammability (solid, gas) no data available
Vapour pressure 0.014 mm Hg @ 38 °C, 100 °F;
Vapour density 6.4
Density 0.830 g/cm3 @ 15 °C, 60 °F;
Specific gravity no data available
Water solubility insoluble
Viscosity 12.3 cSt @ 38 °C, 100 °F;
pH no data available
Evaporation rate no data available
Partition coefficient: n-octanol/water no data available

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 Keep away from heat and sources of ignition.
Hazards Combustion products include carbon dioxide, carbon monoxide, and possibly other unidentified organic compounds.
Decomposition products
Materials to avoid Can react with strong oxidizers, inorganic acids, and halogens.
Polymerisation None.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute dermal toxicity LD50 rabbit: 8,000 - 12,000 mg/kg
SAFETY DATA SHEET

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Acute inhalation toxicity
rat (1 hours): > 71 mg/l; dust/mist
All rats survived at indicated concentration.

Acute oral toxicity
LD50 rat: > 20,000 mg/kg

Skin corrosion/irritation
Primary irritation (rabbit): 4.6 (Max. score is 8.0.)

Eye damage/irritation
Primary irritation (rabbit): 24 hours; 27 (Max. score is 110.)
Corneal opacity was observed. Irritation not completely gone by day 3, the last day of observation.

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
Genotoxicity in vitro:
no data available

Genotoxicity in vivo:
no data available

Assessment Mutagenicity:
no data available

Reproductive toxicity
Reproductive toxicity:
no data available

Assessment Reproductive toxicity:
no data available

Teratogenicity:
no data available

Assessment teratogenicity:
no data available

STOT - single exposure
no data available

STOT - repeated exposure
rat; Oral;
Reduction in white blood cell count.
Based on available data, the classification criteria are not met.

Aspiration toxicity
no data available

Carcinogenicity
Assessment carcinogenicity:
Contains no ingredient listed as a carcinogen

SECTION 12 ECOLOGICAL INFORMATION

Aquatic toxicity
Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.
### ALFOL® 12 Alcohol

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>LC50 (Pimephales promelas (fathead minnow)) 96 hours: &gt; 1 - 10 mg/l; flow-through test (literature value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to aquatic invertebrates</td>
<td>EC50 (Daphnia magna (Water flea)) 48 hours: &gt; 0.1 - 1 mg/l; static test (literature value)</td>
</tr>
<tr>
<td>Toxicity to algae</td>
<td>ErC50 (Desmodesmus subspicatus (green algae)) 72 hours: &gt; 0.1 - 1 mg/l; OECD Test Guideline 201</td>
</tr>
<tr>
<td>Chronic toxicity to fish</td>
<td>no data available</td>
</tr>
<tr>
<td>Chronic toxicity to aquatic invertebrates</td>
<td>NOEC (Daphnia magna (Water flea)) 21 d: &gt; 0.01 - 0.1 mg/l; semi-static test; OECD Test Guideline 211 (literature value)</td>
</tr>
<tr>
<td>Biodegradation</td>
<td>Readily biodegradable. OECD Test Guideline 301B (28 d): &gt; 60 % (literature value)</td>
</tr>
<tr>
<td>Bioaccumulation</td>
<td>no data available</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>no data available</td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>no data available</td>
</tr>
</tbody>
</table>

### SECTION 13 DISPOSAL CONSIDERATIONS

**Waste Code**

Any unused product or empty containers may be disposed of as non-hazardous in accordance with state and federal requirements. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification. If the resulting material is determined to be hazardous, please dispose in accordance with state and federal (40 CFR 262) hazardous waste regulations.

**Disposal methods**

Dispose of only in accordance with local, state, and federal regulations.

**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. (1-Dodecanol), 9, III
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. (1-Dodecanol), 9, III

IMDG UN 3082, Environmentally hazardous substance, liquid, n.o.s., (1-Dodecanol), 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

SECTION 15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

OSHA Hazards (HCS 1994)
Eye irritant

TSCA Inventory Listing

Components | CAS-No.
--- | ---
1-Dodecanol | 112-53-8
1-Tetradecanol | 112-72-1
1-Decanol | 112-30-1

SARA 302 Status

Components | CAS-No.
--- | ---

Weight percent

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

SARA 311/312 Classification
"Immediate (acute) health hazard"

SARA 313 Chemical

Components | CAS-No.
--- | ---

Weight percent

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.

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Components | Reportable Quantity | Weight percent
--- | --- | ---
none

INTERNATIONAL REGULATIONS

WHMIS Classification
Class D, Division 2, Subdivision B: Toxic material.
ALFOL® 12 Alcohol

European Union
Classification according to Regulation (EU) 1272/2008.

- Eye irritation, Category 2
- Acute aquatic toxicity, Category 1
- Chronic aquatic toxicity, Category 2

Australia. Inventory of Chemical Substances (AICS) Listed
Japan. Inventory of Existing and New Chemical Substances (ENCS) Listed
Japan. Industrial Safety & Health Law (ISHL) Inventory Listed
Canada. Domestic Substances List (DSL) Inventory Listed
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) Listed
Korea. Existing Chemicals Inventory (KECI) Listed
China. Inventory of Existing Chemical Substances (IECSC) Listed
Mexico. National Inventory of Chemical Substances (INSQ) Listed
New Zealand. Inventory of Chemicals (NZIoC) Listed
Switzerland. Inventory of Notified New Substances (CHINV) 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 none

SECTION 16 OTHER INFORMATION

HAZARD RATINGS

<table>
<thead>
<tr>
<th>HMIS®</th>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard/Instability</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
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<tr>
<td>NFPA</td>
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Revision Date 05/15/2015 Version 1.2 Print Date 05/22/2015
SAFETY DATA SHEET

ALFOL® 12 Alcohol

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