SASOL® C12L Alkylate

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

<table>
<thead>
<tr>
<th>Trade name</th>
<th>SASOL® C12L Alkylate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonyms</td>
<td>Linear Alkylbenzene</td>
</tr>
<tr>
<td>Use</td>
<td>Raw material for chemical processes</td>
</tr>
<tr>
<td>Company</td>
<td>Sasol Chemicals (USA) LLC</td>
</tr>
<tr>
<td>Address</td>
<td>12120 Wickchester Lane  Houston TX 77079</td>
</tr>
<tr>
<td>Telephone</td>
<td>CHEMTREC North America Transportation Emergency (24-hr) (800) 424-9300</td>
</tr>
<tr>
<td></td>
<td>CHEMTREC World Wide</td>
</tr>
<tr>
<td></td>
<td>(703) 527-3887</td>
</tr>
<tr>
<td></td>
<td>Other Emergencies (24-hr)</td>
</tr>
<tr>
<td></td>
<td>(337) 494-5142</td>
</tr>
<tr>
<td></td>
<td>MSDS and Product Information (8:00am-4:30pm CST)</td>
</tr>
<tr>
<td></td>
<td>(281) 588-3491</td>
</tr>
<tr>
<td></td>
<td>Health and Safety Information (7:30am-4:00pm CST)</td>
</tr>
<tr>
<td>E-mail address</td>
<td><a href="mailto:SasolElectronicSDS@us.sasol.com">SasolElectronicSDS@us.sasol.com</a></td>
</tr>
</tbody>
</table>

SECTION 2  HAZARDS IDENTIFICATION

GHS Hazards

Aspiration hazard  Category 1

LABEL ELEMENTS

Hazard symbols

| Signal word | Danger |

Hazard statements  H304  May be fatal if swallowed and enters airways.

Precautionary statements

Response  P301 + P310  IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331  Do NOT induce vomiting.

Storage  P405  Store locked up.

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

SASOLAB® C12L Alkylate

SECTION 3  COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight percent</th>
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<tbody>
<tr>
<td>Benzene, mono-C10-13-alkyl derivs.</td>
<td>129813-58-7</td>
<td>75</td>
</tr>
<tr>
<td>Benzene, mono-C12-14-alkyl derivs.</td>
<td>129813-59-8</td>
<td>17.5 - 25</td>
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<tr>
<td>Benzene, C10-13-alkyl derivs.</td>
<td>67774-74-7</td>
<td>0 - 7.5</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.

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  May be ignited by open flame. NFPA Class IIB combustible liquid.

Suitable extinguishing media  Water spray or fog, foam, dry chemical, 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  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).

SECTION 7  HANDLING AND STORAGE

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

Storage/Transport pressure  Ambient
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 liquid;
Colour colourless oily
Form liquid
Odour odourless
Odour Threshold no data available
Flash point 143 °C, 290 °F; PM;
Flammability Upper explosion limit: no data available
Lower explosion limit: no data available
Boiling point/boiling range 283 - 303 °C, 542 - 577 °F;
Melting point/range pour point: < -65 °C, < -85 °F;
Auto-ignition temperature 238 °C, 460 °F;
Decomposition temperature no data available;
SAFETY DATA SHEET

SASOLAB® C12L Alkylate

Flammability (solid, gas) no data available

Vapour pressure < 0.1 mm Hg @ 20 °C, 68 °F;
Vapour density 8 - 9
Density 0.860 g/cm3 @ 16 °C, 60 °F;
Specific gravity no data available
Water solubility 0.041 mg/l @ 27 °C, 80 °F; insoluble
Viscosity 4.2 cSt @ 40 °C, 104 °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 Stable under recommended storage conditions.
Hazardous decomposition products None.
Materials to avoid Oxidizing agents
Hazardous polymerisation None.

SECTION 11 TOXICOLOGICAL INFORMATION

Additional Remarks The following effects have been reported in studies with animals exposed by a variety of routes to similar linear alkylbenzenes on a repeated basis: Decreased body weight, food consumption and maternal weight gain; effects on offspring (none at low dose); liver toxicity; increased tumors following lifetime dermal exposure at skin damaging concentrations (skin damage confounds the interpretation of the significance of these effects for human health). The product itself has not been tested.

Acute dermal toxicity LD50 rat: 2,000 mg/kg; OECD Test Guideline 402(literature value)
Acute inhalation Negligible or unlikely exposure pathways
## Toxicity

### Acute oral toxicity
LD50 rat: > 2,000 mg/kg; Directive 67/548/EEC, Annex V, B.1.

### Skin corrosion/irritation
(rabbit)
Moderately irritating

### Eye damage/irritation
(rabbit)
Not irritating

### Respiratory or skin sensitization
Guinea pig: not sensitizing; Maximisation Test
OECD Test Guideline 406

### Germ cell mutagenicity
**Genotoxicity in vitro:**
Result: In vitro tests did not show mutagenic effects.
(literature value)

**Genotoxicity in vivo:**
Result: In vivo tests did not show mutagenic effects
(literature value)

**Assessment Mutagenicity:**
Based on available data, the classification criteria are not met.

### Reproductive toxicity
**Reproductive toxicity:**
rat; Oral; OECD Test Guideline 416
NOAEL (parents): 50 mg/kg
NOAEL (F1): 50 mg/kg
NOAEL (F2): 50 mg/kg
(literature value)

**Assessment Reproductive toxicity:**
Based on available data, the classification criteria are not met.

**Teratogenicity:**
rat; Oral; OECD Test Guideline 414
NOAEL (teratogen): 125 mg/kg
NOAEL (maternal): 125 mg/kg
(literature value)

**Assessment teratogenicity:**
Based on available data, the classification criteria are not met.

### STOT - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.

### STOT - repeated exposure
rat; Oral; 28-day; OECD Test Guideline 407
LOAEL: 125 mg/kg
(literature value)
Symptoms: reduced food consumption, reduced body weight gain

rat; Oral; 127-day; OECD Test Guideline 416
NOAEL: 50 mg/kg
LOAEL: 500 mg/kg
SAFETY DATA SHEET

SASOLAB® C12L Alkylate

Subchronic toxicity
Symptoms: reduced body weight gain
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity May be fatal if swallowed and enters airways.

Carcinogenicity Assessment carcinogenicity:
Contains no ingredient listed as a carcinogen

SECTION 12 ECOLOGICAL INFORMATION

Aquatic toxicity Not toxic to aquatic organisms (fish, daphnia, algae) up to water solubility.

Toxicity to fish (Danio rerio (zebra fish)) 14 d; semi-static test; OECD Test Guideline 204
In the range of water solubility not toxic under test conditions.

Toxicity to aquatic invertebrates (Daphnia magna (Water flea)) 48 hours; Directive 67/548/EEC, Annex V, C.2.
In the range of water solubility not toxic under test conditions., (literature value)

Toxicity to algae (Scenedesmus subspicatus) 72 hours
In the range of water solubility not toxic under test conditions., (literature value)

Chronic toxicity to fish no data available

Chronic toxicity to aquatic invertebrates NOEC (Daphnia magna (Water flea)) 21 d
In the range of water solubility not toxic under test conditions.

Biodegradation Readily biodegradable.
(28 d): > 60 %

Bioaccumulation Lepomis macrochirus (Bluegill sunfish) (96 d, 0.092 mg/l): BCF: 35;
Does not significantly accumulate in organisms., (literature value)

Mobility in soil Adsorption/Soil
Koc: 22000; log Koc: 4.34
immobile, (literature value)

Other adverse effects This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).;

SECTION 13 DISPOSAL CONSIDERATIONS
SASOLAB® C12L Alkylate

**Waste Code**
Any unused product or empty containers may be disposed of as non-hazardous in accordance with state and federal requirements. If the resulting material is determined to be hazardous, please dispose in accordance with state and federal (40 CFR 262) hazardous waste regulations. 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.

**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**
Not regulated.

**IATA**
Not regulated.

**IMDG**
Not regulated.

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)**
No OSHA Hazards

**TSCA Inventory Listing**

**Components**

- Benzene, mono-C10-13-alkyl derivs.
  - CAS-No.: 129813-58-7
- Benzene, mono-C12-14-alkyl derivs.
  - CAS-No.: 129813-59-8
- Benzene, C10-13-alkyl derivs.
  - CAS-No.: 67774-74-7

**SARA 302 Status**

**Components**

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**
SAFETY DATA SHEET

SASOLAB® C12L Alkylate

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 | none | |

INTERNATIONAL REGULATIONS

WHMIS Classification

WHMIS hazardous composition: No ingredients are hazardous according to the CPR criteria.

European Union

Classification according to Regulation (EU) 1272/2008.

- Aspiration hazard, Category 1
- Repeated exposure may cause skin dryness or cracking.

Australia. Inventory of Chemical Substances (AICS) | Listed
Japan. Inventory of Existing and New Chemical Substances (ENCS) | Listed
Japan. Industrial Safety & Health Law (ISHL) Inventory | Not 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) | Not listed
New Zealand. Inventory of Chemicals (NZIoC) | Not listed
Switzerland. Inventory of Notified New Substances (CHINV) | Listed
Taiwan. National Existing Chemical Inventory (NECI) | Not 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

CAS-No.

SECTION 16 OTHER INFORMATION

HAZARD RATINGS

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard/Instability</th>
</tr>
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<tbody>
<tr>
<td>HMIS®</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>NFPA</td>
<td>1</td>
<td>1</td>
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