SAFETY DATA SHEET

SASOLAB® C13L Alkylate

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

<table>
<thead>
<tr>
<th>Trade name</th>
<th>SASOLAB® C13L 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></td>
<td>(an affiliate of Sasol Chemicals North America 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)</td>
</tr>
<tr>
<td></td>
<td>(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></td>
<td>(281) 588-3492</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® C13L 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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</thead>
<tbody>
<tr>
<td>Benzene, mono-C12-14-alkyl derivs.</td>
<td>129813-59-8</td>
<td>70 - 100</td>
</tr>
<tr>
<td>Benzene, C10-13-alkyl derivs.</td>
<td>67774-74-7</td>
<td>0 - 30</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 IIIB 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
Load/Unload temperature

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 149 °C, 300 °F; PM;

Flammability Upper explosion limit: no data available

Lower explosion limit: no data available

Boiling point/boiling range

297 - 315 °C, 566 - 599 °F;

Melting point/range pour point: < -65 °C, < -85 °F;

Auto-ignition temperature 241 °C, 465 °F;

Decomposition temperature no data available
SAFETY DATA SHEET

SASOLAB® C13L Alkylate

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability (solid, gas)</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>8.3 mm Hg @ 38 °C, 100 °F</td>
</tr>
<tr>
<td>Vapour density</td>
<td>8 - 10</td>
</tr>
<tr>
<td>Density</td>
<td>0.860 g/cm3 @ 16 °C, 60 °F</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>no data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>0.041 mg/l @ 27 °C, 81 °F; insoluble</td>
</tr>
<tr>
<td>Viscosity</td>
<td>5.2 cSt @ 40 °C, 104 °F</td>
</tr>
<tr>
<td>pH</td>
<td>no data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
</tbody>
</table>

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 product itself has not been tested. Information given is based on data obtained from similar substances. 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).
- **Acute dermal toxicity**: LD50 rabbit: > 2,000 mg/kg
Acute inhalation toxicity  
rat (1 hours): > 71 mg/l  
All rats survived at indicated concentration.

Acute oral toxicity  
LD50 rat: > 5,000 mg/kg

Skin corrosion/irritation  
Primary irritation (rabbit): 1.4 (Max. score is 8.0.)

Eye damage/irritation  
Primary irritation (rabbit): 0.7 (Max. score is 110.) (unwashed eyes)

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  
no data available

Aspiration toxicity  
no data available

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  
LC50 (Pimephales promelas (fathead minnow)) 96 hours  
Test substance: Linear Alkylbenzene
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In the range of water solubility not toxic under test conditions.

LC50 (Oncorhynchus mykiss (rainbow trout)) 96 hours
Test substance: Linear Alkylbenzene
In the range of water solubility not toxic under test conditions.

Toxicity to aquatic invertebrates
EC50 (Daphnia magna (Water flea)) 48 hours
Test substance: Linear Alkylbenzene
In the range of water solubility not toxic under test conditions.

Toxicity to algae
EC50 (Desmodesmus subspicatus (green algae)) 72 hours
Test substance: Linear Alkylbenzene
In the range of water solubility not toxic under test conditions.

Chronic toxicity to fish
no data available

Chronic toxicity to aquatic invertebrates
no data available

Biodegradation
Readily biodegradable.

OECD Test Guideline 301F (28 d): 64 %
Test substance: Linear Alkylbenzene

Bioaccumulation
no data available

Mobility in soil
no data available

Other adverse effects
no data available

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. 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.
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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)
Non-hazardous substance

TSCA Inventory Listing
Components
Benzene, mono-C12-14-alkyl derivs. 129813-59-8
Benzene, C10-13-alkyl derivs. 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 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.

US. EPA CERCLA Hazardous Substances (40 CFR 302)
Components
none

INTERNATIONAL REGULATIONS

WHMIS Classification
WHMIS hazardous composition: No ingredients are hazardous according to the CPR criteria.
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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>
</thead>
<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>
<td>0</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

SASOLAB® C13L Alkylate

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