

LIAL® 111A Alcohol

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

Trade name	LIAL® 111A Alcohol	
Synonyms	Monobranched and linear alcohol	
Use	Raw material for chemical processes, Industrial use	
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 2A
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 2

LABEL ELEMENTS

Hazard symbols



Signal word Warning

Hazard statements H319 Causes serious 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.
 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.

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P337 + P313 If eye irritation persists: Get medical advice/ attention.

P391 Collect spillage.

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

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS-No.</u>	<u>Weight percent</u>
Undecanol, branched and linear	128973-77-3	100

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.

Spill precautions Material can create slippery conditions.

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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 15 - 38 °C
60 - 100 °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 liquid;

Colour colourless

Form liquid

Odour characteristic

Odour Threshold no data available

Flash point approximately 126.5 °C, 260 °F;

Flammability Upper explosion limit: no data available

Lower explosion limit: no data available

Boiling point/boiling range approximately 238 - 244 °C, 460 - 471 °F;

Melting point/range approximately 0 °C, 32 °F; pour point

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Auto-ignition temperature	approximately 249 °C, 480 °F;
Decomposition temperature	no data available;
Flammability (solid, gas)	no data available
Vapour pressure	< 0.05 hPa @ 20 °C, 68 °F;
Vapour density	approximately 5.9
Density	approximately 0.833 g/cm ³ @ 20 °C, 68 °F;
Specific gravity	no data available
Water solubility	6.3 mg/l @ 20 °C,
Viscosity	9.7 mm ² /s @ 40 °C,
pH	not applicable
Evaporation rate	no data available
Partition coefficient: n-octanol/water	log Pow: 4.8;

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.
Hazardous decomposition products	Combustion products include carbon dioxide, carbon monoxide and possibly other unidentified organic compounds.
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	LD50 rabbit: > 2,000 mg/kg Test substance: Undecanol, branched and linear; (literature value)

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Acute inhalation toxicity	LC50 rat (6 hours): > 0.7 mg/l Test substance: Undecanol, branched and linear; (literature value)
Acute oral toxicity	LD50 rat: > 2,000 mg/kg; OECD Test Guideline 401 Test substance: Undecanol, branched and linear
Skin corrosion/irritation	Primary irritation (rabbit): 3.0 (Max. score is 8.0) Test substance: Undecanol, branched and linear Moderately irritating
Eye damage/irritation	(rabbit) Test substance: Undecanol, branched and linear Irritating to eyes.
Respiratory or skin sensitization	not sensitizing
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; NOAEL: 125 mg/kg Test substance: Undecanol, branched and linear; (literature value) 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

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SECTION 12 ECOLOGICAL INFORMATION

Aquatic toxicity	Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.
Toxicity to fish	LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 1 - 10 mg/l; flow-through test; US EPA 1975 Test substance: Undecanol, branched and linear (literature value), Category approach
Toxicity to aquatic invertebrates	LC50 (Nitocra spinipes) 96 hours: > 0.1 - 1 mg/l; static test Test substance: Undecanol, branched and linear (literature value), Category approach
Toxicity to algae	EC50 (calculated) 72 hours: > 0.1 - 1 mg/l Test substance: Undecanol, branched and linear (literature value), Category approach
Chronic toxicity to fish	no data available
Chronic toxicity to aquatic invertebrates	NOEC (Daphnia magna (Water flea)) 21 d: > 0.044 - 0.17 mg/l; Reproduction Test; QSAR (literature value), Category approach
Biodegradation	Readily biodegradable. OECD Test Guideline 301F (28 d): > 60 % Test substance: Undecanol, branched and linear
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. 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.

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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.(Undecanol, branched and linear), 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.(Undecanol, branched and linear), 9, III
- IMDG** UN 3082, Environmentally hazardous substance, liquid, n.o.s., (Undecanol, branched and linear), 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

Undecanol, branched and linear

CAS-No.

128973-77-3

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

LIAL® 111A Alcohol**US. EPA CERCLA Hazardous Substances (40 CFR 302)**Components

none

Reportable QuantityWeight percent**INTERNATIONAL REGULATIONS****WHMIS Classification**

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

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

none

CAS-No.

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SECTION 16 OTHER INFORMATION

HAZARD RATINGS

	<u>Health</u>	<u>Flammability</u>	<u>Physical Hazard/ Instability</u>
HMIS®	2	1	0
NFPA	2	1	0

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