

MATERIAL SAFETY DATA SHEET

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Version 1.3

Section 1 - Product and Company Information

Product Name	ASTM D5307 CRUDE OIL QUALITATIVE STD,1X1ML VARIED
Product Number	48182
Brand	SUPELCO
Company	Sigma-Aldrich
Address	3050 Spruce Street SAINT LOUIS MO 63103 US
Technical Phone:	800-325-5832
Fax:	800-325-5052
Emergency Phone:	314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	
ASTM D5307 CRUDE OIL QUALITATIVE STD	None	Yes	
Ingredient Name	CAS #	Percent	SARA 313
N-HEXANE	110-54-3	> 10 < 20	Yes
HEPTANE	142-82-5	> 10 < 20	No
N-OCTANE	111-65-9	> 10 < 20	No
N-NONANE	111-84-2	> 10 < 20	No
N-PENTANE	109-66-0	> 10 < 20	No
BUTANE	106-97-8	> 10 < 20	No
PROPANE	74-98-6	> 5 < 15	No

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Flammable (USA) Extremely Flammable (EU). Harmful. Dangerous for the environment.

Harmful by inhalation. Irritating to eyes, respiratory system and skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.

Target organ(s): Central nervous system. Kidneys.

HMIS RATING

HEALTH: 2*

FLAMMABILITY: 3

REACTIVITY: 0

NFPA RATING

HEALTH: 2

FLAMMABILITY: 3

REACTIVITY: 0

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do not induce vomiting.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

FLAMMABLE HAZARDS

Flammable Hazards: Yes

EXPLOSION HAZARDS

Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions.

FLASH POINT

- 7.0 °F - 21.0 °C Method: closed cup

EXPLOSION LIMITS

Lower: 1.1 % Upper: 7.5 %

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Extremely flammable. Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep container closed. Keep away from heat, sparks, and open flame.

Incompatible Materials: Oxidizing agents

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Remove and wash contaminated clothing promptly. Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance

Physical State: Liquid

Odor: Odorless to gasoline-like

Property

Value

At Temperature or Pressure

pH

N/A

BP/BP Range

N/A

MP/MP Range

N/A

Freezing Point

N/A

Vapor Pressure

N/A

Vapor Density

N/A

Saturated Vapor Conc.	N/A
Bulk Density	N/A
Odor Threshold	N/A
Volatile%	N/A
VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Surface Tension	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point	- 7.0 °F - 21.0 °C Method: closed cup

Explosion Limits	Lower: 1.1 %
	Upper: 7.5 %

Flammability	N/A
Autoignition Temp	N/A
Refractive Index	N/A
Optical Rotation	N/A
Miscellaneous Data	N/A
Solubility	N/A

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Nature of decomposition products not known.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)

Peripheral nervous system. Kidneys. Testes. Central nervous system. Ears. Lungs. Heart.

SIGNS AND SYMPTOMS OF EXPOSURE

Narcotic effect. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Contact with eyes can cause redness, tearing, and blurred vision. Prolonged or repeated contact with skin can cause defatting and dermatitis. Light headedness, giddiness, shortness of breath, possible narcosis and possible cardiac arrhythmias at high concentrations. May cause frostbite on direct contact. Use only as directed. Intentional misuse by deliberately concentrating vapors and

inhaling contents can be harmful or fatal. Inhalation of propane at concentrations sufficient to exclude an adequate supply of oxygen to the lungs can result in dizziness, drowsiness, and eventual unconsciousness. It has a narcotic action and acts as a depressant on the central nervous system. Prolonged or repeated contact with skin can cause defatting and dermatitis. Contact with eyes can cause redness, tearing, and blurred vision. Ingestion may cause gastrointestinal irritation. Can cause CNS depression. Lung irritation, chest pain, and edema which may be fatal. Headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Result: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Hydrocarbons, liquid, n.o.s.
UN#: 3295
Class: 3
Packing Group: Packing Group II
Hazard Label: Flammable liquid
PIH: Not PIH

IATA

Proper Shipping Name: Hydrocarbons, liquid, n.o.s.
IATA UN Number: 3295
Hazard Class: 3
Packing Group: II

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: F+-Xn-N
Indication of Danger: Extremely Flammable. Harmful. Dangerous for the environment.
R: 12-48/20-51/53-62-65-67
Risk Statements: Extremely flammable. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility.
Harmful: may cause lung damage if swallowed. Vapors may cause

drowsiness and dizziness.

S: 61-36/37

Safety Statements: Avoid release to the environment. Refer to special instructions/safety data sheets. Wear suitable protective clothing and gloves.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Flammable (USA) Extremely Flammable (EU). Harmful. Dangerous for the environment.

Risk Statements: Harmful by inhalation. Irritating to eyes, respiratory system and skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility.

Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.

Safety Statements: Avoid release to the environment. Refer to special instructions/safety data sheets. Wear suitable protective clothing and gloves.

US Statements: Target organ(s): Central nervous system. Kidneys.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes

NOTES: This product is or contains a component that is subject to SARA313 reporting requirements.

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2009 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.