Syncrude

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	**Vacuum Tower Overhead Liquid - SAN 10383**
Version #	01
Issue date	12-January-2015
Revision date	-
Supersedes date	-
CAS #	Mixture
Product use	Intermediate stream in petroleum refining.
Synonym(s)	Plant 37 Overhead Liquid, Syncrude Sample Tag # 371017
Manufacturer information	Syncrude Canada Ltd. P.O. Bag 4009 Fort McMurray, AB T9H 3L1 Canada
	(780) 790-5249 Telephone Number
	(780) 790-5094 Emergency Telephone Number

2. Hazards Identification

Emergency overview May cause irritation to the skin, respiratory tract and digestive tract. Flammable. Severe stench.

Potential health effects

Routes of exposure	Skin and/or eye contact. Skin absorption. Ingestion. Inhalation.
Eyes	May cause irritation with redness and pain.
Skin	May cause irritation, redness, burns and/ or drying. Irritating and defatting to skin.
Inhalation	May cause irritation of nose, throat and mucous membranes. May cause central nervous system effects. Vapors may cause headache, fatigue, dizziness and nausea.
Ingestion	Symptoms of exposure may include; gastrointestinal irritation, nausea, vomiting, diarrhea, stomach pain, difficulty breathing, headache, drowsiness, fatigue, dizziness, mood swings, tremors, loss of coordination, blurred vision, convulsions, unconsciousness, coma, kidney damage, liver damage, aspiration hazard and death.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Hydrogen sulfide	7783-06-4	<0.1

Composition comments A complex combination of hydrocarbons produced by the vacuum distillation of bitumen. It consists of hydrocarbons having carbon numbers predominantly in the range of C10 to C20, boiling from approximately 170 °C to 400 °C.

4. First Aid Measures

First aid procedures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
General advice	If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties Flammable by WHMIS criteria.

Extinguishing media

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters

Protective equipment for firefighters	Firefighters must use full bunker gear including NIOSH-approved (or equal), full-face, self-contained breathing apparatus (SCBA) operated in positive pressure mode.
Fire fighting equipment/instructions	Remove or isolate all sources of ignition.

Explosion data

Sensitivity to static discharge	May be sensitive to static discharge.
Sensitivity to mechanical impact	No data available.
Hazardous combustion products	Carbon oxides (COx). Sulfur oxides (SOx). Uncombusted hydrocarbons, soot.
General fire hazards	Vapors may travel to a source of ignition and flash back.

6. Accidental Release Measures

Personal precautions	Eliminate all sources of ignition. Ventilate closed spaces before entering them. Keep unnecessary personnel away. For personal protection, see section 8 of the MSDS.
Methods for containment	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.
Methods for cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the MSDS.

7. Handling and Storage

Handling	Avoid inhalation of vapors and contact with skin and eyes.
Storage	Keep away from direct sunlight, heat, flame, or sources of spark. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the MSDS). Oxidizing material - Keep away from flammable and combustible materials. Ground/bond container and equipment. Keep container tightly closed.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Hydrogen sulfide (CAS 7783-06-4)	STEL	5 ppm
	TWA	1 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Hydrogen sulfide (CAS 7783-06-4)	Ceiling	21 mg/m3
		15 ppm
	TWA	14 mg/m3
		10 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Hydrogen sulfide (CAS 7783-06-4)	Ceiling	10 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
Hydrogen sulfide (CAS 7783-06-4)	STEL	5 ppm
	TWA	1 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Hydrogen sulfide (CAS 7783-06-4)	STEL	15 ppm
	TWA	10 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Hydrogen sulfide (CAS 7783-06-4)	STEL	21 mg/m3
		15 ppm
	TWA	14 mg/m3
		10 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Hydrogen sulfide (CAS 7783-06-4)	Ceiling	20 ppm

Engineering controls Ventilate confined space before entry. Provide local exhaust where appropriate to minimize fugitive vapors or mists. Provide adequate general ventilation to dilute vapor concentrations within buildings.

Personal protective equipment

Eye / face protection Wear approved chemical safety goggles.

Skin protection Neoprene or nitrile gloves are recommended. Standard work boots or rubber boots as required. Remove and change footwear if contaminated.

Respiratory protection In case of inadequate ventilation or dusty conditions wear Respiratory Equipment with NIOSH approved particulate filter and/or organic vapor cartridges. Wear air supplied equipment if exposure levels are not known or there is potential for an uncontrolled release in confined areas or any other circumstances where air-purifying respirators may not provide adequate protection. Seek advice from local supervisor.

9. Physical & Chemical Properties

Appearance

Physical state Liquid.

Form Cloudy liquid.

Color Yellow.

Odor Not available.

Odor threshold Not available.

pH Not applicable.

Vapor pressure Not available.

Vapor density Not available.

Boiling point Approximately 180 °C to 450 °C (ASTM D2887 5% to 95%)

Melting point/Freezing point Not available.

Solubility (water) Water insoluble.

Specific gravity 0.91@15°C

Flash point	Pensky-Martens Closed Cup 40 °C
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.
Evaporation rate	Not available.
Partition coefficient (n-octanol/water)	Not available.
Other data	
Partition coefficient (oil/water)	Water insoluble, Oil soluble

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Sulfur oxides. Soot.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Hydrogen sulfide (CAS 7783-06-4)		
Acute		
Inhalation		
LC50	Rat	> 0.38 mg/l, 960 Minutes

* Estimates for product may be based on additional component data not shown.

Acute effects	May cause mild central nervous system effects when ingested repeatedly.
Sensitization	Not classified.
Chronic effects	Not expected to be hazardous by WHMIS criteria.
Carcinogenicity	Not classified.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/irritation	Direct contact with eyes may cause temporary irritation.
Mutagenicity	Not classified.
Reproductive effects	Not classified.
Teratogenicity	Not classified.
Synergistic materials	No data available.

12. Ecological Information

Ecotoxicological data

Components		Species	Test Results
Hydrogen sulfide (CAS 7783-06-4)			
Aquatic			
Fish	LC50	Lake whitefish (Coregonus clupeaformis)	0.002 mg/l, 96 hours

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Aquatic toxicity	Not classified.
Persistence and degradability	No data is available on the degradability of this product.

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

TDG

UN number	UN1268
UN proper shipping name	PETROLEUM DISTILLATES, N.O.S.
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	D
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA

UN number	UN1268
UN proper shipping name	Petroleum products, n.o.s.
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	3H
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IMDG

UN number	UN1268
UN proper shipping name	PETROLEUM DISTILLATES, N.O.S.
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

15. Regulatory Information

Canadian regulations	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.
WHMIS status	Controlled
WHMIS classification	B3 - Combustible Liquids

WHMIS labeling

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

HMIS® ratings

Health: 1
Flammability: 2
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 2
Instability: 0

Disclaimer

Syncrude Canada Ltd. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Prepared by

Not available.