



MATERIAL SAFETY DATA SHEET

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DISTILLATE 822

SECTION I: IDENTIFICATION OF PRODUCT

Product Name: DISTILLATE 822
Chemical Family: Organic Hydrocarbon
WHMIS Classification: D2A
Workplace Hazard: Combustible liquid; skin and eye irritant. Harmful if inhaled

Product Use: Drilling Fluid Additive
TDG Classification: Not regulated
Packaging Group: Not applicable
PIN: Not applicable

SECTION II: HAZARDOUS INGREDIENTS

Ingredients	Percent	CAS Number	LD ₅₀ (Mouse/iv)	LC ₅₀ (Rat/Inh)
Gas, oil (C10:-C27)	100	64741-44-2	517 mg/kg	Not available
Undecane	1-3	1120-21-4		
Dodecane	1-5	112-40-3		
Tridecane	3-7	629-50-5	1161 mg/kg	Not available
Hexadecane	10-15	544-76-3	Not available	Not available

Gas oil is defined as petroleum distillates, straight middle run. The listed components are provided as guidance based on the available knowledge of the commingled stream

SECTION III: TOXICOLOGICAL PROPERTIES

Route of entry: Skin Eye Contact Inhalation Ingestion

Potential Health Effects:

- **Eye Contact:** May cause eye irritation.
- **Skin Contact:** May cause irritation and repeated or prolonged contact may defat the skin leading to dermatitis. Prolonged skin contact with petroleum products is associated with skin cancer.
- **Ingestion:** Ingestion may lead to vomiting and diarrhea. Vomiting may cause aspiration of liquid into the lungs and may result in chemical pneumonia, severe lung damage and respiratory failure.
- **Inhalation:** Inhalation of vapours may cause headaches, loss of appetite and drowsiness. Inhalation of vapours may also affect the Central Nervous System, liver and kidneys

Effects of acute exposure: This product may cause irritation to the eyes and skin. Inhalation may cause headaches, loss of appetite, drowsiness and may also affect the Central Nervous System, liver and kidneys. Ingestion may cause vomiting and diarrhea as well as aspiration of liquid into the lungs resulting in severe lung damage.

Effects of chronic exposure: Prolonged or repeated exposure to the skin can defat the skin and lead to dermatitis. Inhalation may cause headaches, loss of appetite, drowsiness and may also affect the Central Nervous System, liver and kidneys.

Exposure limits:

Oil Mist: CAS (various) : ACGIH TLV-TWA =5 mg/m³; ACGIH TLV-STEL = 10 mg/m³



Irritancy of product: Skin and eye irritant

Sensitization to product: No information available

Carcinogenicity: No information available. Not listed as a carcinogen by IARC, NTP OR ACGIH

Reproductive toxicity: No information available

Teratogenicity: No information available

Mutagenicity: No information available

Name of toxicological synergistic products: No information available

SECTION IV: FIRST AID MEASURES

Skin contact: Remove contaminated clothing and wash contaminated areas thoroughly with soap and water (use waterless hand cleaner if water is not available). Obtain medical attention if irritation or redness develops.

Eye contact: In case of contact with eyes, immediately flush with water for at least 15 minutes. Hold eyelids open to ensure adequate flushing. Seek medical attention

Inhalation: Ensure your own safety and use the appropriate respiratory protection to immediately remove the victim to an area free of contamination. Give CPR or artificial respiration as needed and give oxygen if breathing is difficult. Keep victim at rest and get immediate medical attention

Ingestion: DO NOT induce vomiting as aspiration of fluid into lungs may cause chemical pneumonia, severe lung damage and respiratory failure. Obtain immediate medical attention.

SECTION V: PHYSICAL DATA

Physical state: Liquid

Appearance and odour: Clear colourless oily liquid. Hydrocarbon odour.

Odour threshold: Not available

Density: 0.85-0.95 (Water=1) Varies with source

Vapor pressure (kPa): <1

Vapor density (Air=1): 4.5 (heavier than air)

Evaporation rate: Not applicable

Boiling point (°C): 204-371 (399 - 700 °F)

Freeze/Melting point (°C): Not available

pH: Not applicable

Co-efficient of water/oil distribution: Insoluble in water



SECTION VI: FIRE AND EXPLOSION DATA

Conditions of flammability: Hydrocarbon liquid with a flashpoint above the combustible range.

Means of extinguishing:

- **Small Fires:** Dry chemical, CO₂, or foam.
- **Large Fires:** Water spray, fog or foam can be used according to the manufacturer's recommended application techniques. Move containers from fire area if without risk.

Flash point: 106°C

Upper flammable limit: 6%

Lower flammable limit: 0.7%

Auto-ignition temperature: 203°C (Dodecane)

Hazardous combustion products: This product burns with very smoky flame. Combustion produces carbon monoxide, carbon dioxide and irritating products associated with incomplete combustion.

Fire and Explosion Hazards : Product vapours are heavier than air and may travel considerable distances to a source of ignition and flash back. Vapours may spread along the ground and enter sewers, basements and other confined spaces. **UNUSUAL FIRE & EXPLOSION HAZARDS:** Product floats on water and is capable of creating a fire hazard along path of runoff.

SECTION VII: REACTIVITY DATA

Chemically unstable (conditions): Stable.

Product incompatible with: Keep away from strong oxidizers and sources of heat or ignition.

Conditions of reactivity: Material is stable under normal conditions. Avoid high temperatures, open flames, sparks, welding, smoking and other ignitions sources.

Hazardous decomposition products: Irritating or toxic substances may be emitted upon decomposition. Decomposition products include carbon dioxide, carbon monoxide and sulphur dioxide.



SECTION VIII: PREVENTATIVE MEASURES

Personal protective equipment:

- **Eye/Face Protection:** Safety glasses with side shields are required or use a face shield or chemical splash goggles if there is an elevated possibility of splashing or spraying.
- **Skin Protection:** Avoid skin contact and wear gloves constructed of nitrile, neoprene, or PVC. Fire retardant coveralls are required and chemical protective clothing such as of poly-coated or an equivalent may be recommended based on the degree of exposure. **Note:** The resistance of specific materials may vary from product to product as well as degree of exposure. If the product is sensed inside the glove, the glove could be damaged or the glove material is incorrect for this product.
- **Respiratory Protection:** Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are unknown, or any other circumstance exist where an air-purifying respirator may not provide adequate protection. When assessing the proper type of respiratory protection, also consider the occupational exposure limits applicable to individual ingredients. Refer to CSA Standard “Selection, Use and Care of Respirators” (Z94.4-02) and NIOSH Respirator Decision Logic for additional guidance on respiratory protection.
A NIOSH/MSHA APPROVED AIR-PURIFYING RESPIRATOR WITH ORGANIC VAPOUR CARTRIDGES MAY BE ACCEPTABLE IF AIRBORNE CONCENTRATIONS ARE EXPECTED TO EXCEED EXPOSURE LIMITS. PROTECTION PROVIDED BY AIR-PURIFYING RESPIRATORS IS LIMITED. PRODUCT ODOUR OR TASTE SENSED INSIDE THE RESPIRATOR INDICATES THE RESPIRATOR IS NOT FUNCTIONING PROPERLY.

Specific engineering controls: Emergency eye wash station should be available in the vicinity of any potential splash exposure. Electrical equipment should be approved for classified area. Ensure adequate explosion proof lighting and local exhaust ventilation to keep vapour and mist concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Procedures for leak/spills: Use appropriate safety equipment and personnel protective equipment. Evacuate nonessential personnel. Eliminate ignition sources. Stop leak if possible to do so without risk. For large spills, dike to prevent spread. Collect spilled material by vacuum if possible. Soak up remainder and small spills with absorbent material. Collect contaminated material and absorbents in approved containers for disposal. Large pools may be covered with foam to prevent vapour evolution. Comply with federal, provincial and local requirements for spill notification.

Waste disposal: Preferred waste management priorities are recycle, reprocess or incineration with heat recovery. Ensure disposal or reprocessing is in compliance with government regulations and local disposal regulations.

Handling procedures and equipment: Handle as a combustible liquid. Keep away from heat, sparks, and open flame. No smoking or open flame in storage, use or handling areas. Keep containers closed and clearly labelled. Ground all drums and transfer vessels when handling. Empty product containers or vessels may contain explosive vapours. Do not cut, heat, weld or expose product to sources of ignition. Use only with adequate ventilation. Avoid breathing vapours. Wash thoroughly after handling.

Use good personal hygiene practices. DO NOT siphon by mouth. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not eat, drink or smoke in areas of use or storage. Waterless hand cleansers may be used if water is not readily available. Promptly remove contaminated clothing and launder before reuse. Discard contaminated leather shoes and gloves.

Storage requirements: Store in a well ventilated area. This storage area should comply with NFPA 30. Avoid storage near incompatible materials.

Special shipping information: Not applicable



SECTION IX: PREPARATION

Date updated: June 20, 2009

Prepared by: Product Safety Committee

All the recommendations and suggestions herein concerning this product are based upon tests and data believed to be reliable, however it is the user's responsibility to determine the safety, toxicity and sustainability for their own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Q'Max Solutions Inc. as to the effects of such use, the results to be obtained, or the safety and toxicity of the product nor does Q'Max Solutions Inc. assume any liability arising out of use by others. Nor is the information herein to be considered as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.