

CONSOLIDATED CHEMICALS & SOLVENTS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product Trade Name : **Ferrofluid**
Chemical Name : Proprietary Product
Chemical Formula : Mixture
Chemical Family : Colloidal Dispersion
Relevant Identified Use : Educational/Research/Artistic Applications
Uses Advised Against : Loudspeaker Applications and any app. that requires long fluid life

Manufacturer's Name : **CCS LLC**
: **Consolidated Chemicals & Solvents LLC 405 Bussiness Park Lane**
Allentown PA 18951 UNITED STATES

Emergency Tel. Number : **+1 (800)424-9300 (CHEMTREC – US only)**
+1 (703)527-3887 (CHEMTREC – International)

[SECTION 2]: HAZARD IDENTIFICATION

Skin Corrosion / Irritation: Category 2
Severe Eye Damage / Irritation: Category 2
Target Organs : Not Established
Aspiration Toxicant: Category 1

GHS Label Elements, including precautionary statements -

Pictogram:



Signal word: **Danger**

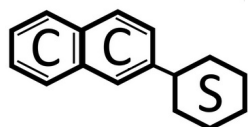
Hazard statement(s):

H315 Cause skin irritation
H319 Cause serious eye irritation
H304 May be fatal if swallowed and enters airways

Precautionary statement(s):

-Prevention

P264 Wash thoroughly after handling



P273 Avoid release to the environment

P280 Wear protective gloves / protective clothing / eye protection / face protection.

-Response

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P302+P352 If on skin: Wash with plenty of soap and water

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if possible and easy to do. Continue rinsing.

P331: Do NOT induce vomiting

P332+P313: IF skin irritation occurs: Get medical advice/attention.

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

P362 Take off contaminated clothing and wash before reuse.

P391 Collect spillage

P501: Dispose of contents and container in accordance with local regulations

Contains: DISTILLATES (PETROLEUM), HYDROTREATED LIGHT

Hazards not otherwise classified or identified during classification process: GHS Class 4 Combustible

% of mixture consisting of ingredient(s) of unknown toxicity: Not Applicable (to be indicated henceforth as N/A)

HMIS Classification

Health hazard: 1

Chronic Health Hazard: N/A

Flammability: 1

Physical hazards: 0

NFPA Rating

Health hazard: 1

Fire: 1

Reactivity Hazard: 0

Potential Health Effects

Inhalation: Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Skin: Potential skin irritant

Eyes: Potential eye irritant

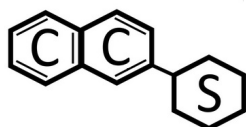
Ingestion: No significant health hazard, however aspiration during ingestion can cause severe respiratory effects, including death.

[SECTION 3]: COMPOSITION / INGREDIENT INFORMATION

Synonyms: N/A

The precise composition of this mixture is proprietary information.

A more complete disclosure will be provided to a physician or a nurse in the event of a medical emergency. All components are registered in Chemical Abstracts Service (CAS).



| Composition | | Proportion % (by volume) | Exposure Limit | Toxicity Data |
|-------------|---|-----------------------------|----------------|---------------|
| A | Iron Oxide (magnetite) | 3 - 15 | No Data | No Data |
| B | Oil Soluble Dispersant | 6 - 30 | No Data | No Data |
| C | Distillates (Petroleum) Hydrotreated Light | 55 - 91 | No Data | No Data |

[SECTION 4]: FIRST AID MEASURES

Necessary measures to be taken according to route(s) of exposure -

Ingestion: This material has minimal toxicity, but fluid aspirated into lungs during ingestion could cause severe pulmonary injury or death. Do not induce vomiting; seek immediate medical attention.

Eye contact: Check for contact lenses and remove. Flush with water for at least 15 minutes and consult a physician for treatment.

Skin Contact: Wash with soap and water.

Inhalation of smoke or mist: Move to fresh air and refer to a physician for treatment. If difficulty in breathing is observed, supply oxygen. If inhaled, there are possibilities of dizziness or asphyxiation without special symptoms.

Most important symptoms/effects

Acute: Not established

Delayed: Not established

Indication of immediate medical attention and special treatment needed, if necessary: This product should not cause any significant health issues. Take appropriate action for signs of allergic or sensitivity reaction.

Notes to physicians: This product contains a fatty acid dispersant and Distillates (Petroleum), Hydrotreated Light. If breathing has stopped, try artificial respiration.

[SECTION 5]: FIRE FIGHTING MEASURES

Suitable extinguishing media: CO₂, Foam, dry chemical, water spray (water spray may cause frothing)

Unsuitable extinguishing media: N/A

Specific hazards arising from chemical combustion products: Burning may produce carbon monoxide and nitrogen oxides. Vapor mixed with air at temperatures above flash point may be explosive. Vapor is heavier than air.

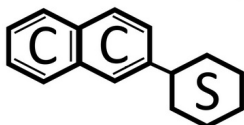
Special protective equipment and precautions for fire-fighters: Respirators, if smoke or vapor is present.

[SECTION 6]: ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled

Personal precautions: Remove clothing that may have become contaminated, wash skin thoroughly with soap and lots of water.

Environmental Precautions: Remove free liquid. Add absorbent (sand, earth, sawdust) to spill area. After removing absorbent, wash surface with soap and water to reduce possible slipping hazard. If contamination of ground water is a concern, build a dike to contain spilled fluid, then clean as indicated. Prevent spilled fluid from



entering sewers, water courses or low areas.

Methods and materials for containment and cleanup: Consult federal state and local regulations applicable to disposal of waste oil products.

[SECTION 7]: HANDLING AND STORAGE

Precautions for safe handling: Ordinary care in handling chemicals. Wash hands after handling.

Conditions for safe storage: Keep in a cool, dark area. If large quantities are stored, ground the storage container to prevent static buildup.

Other precautions: Avoid contamination of food or tobacco products. Users should be aware that a very small percentage of the population may display unexpected allergic skin reactions to otherwise innocuous industrial chemicals and raw materials.

[SECTION 8]: EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA permissible exposure limit (PEL): Not established

ACGIH Threshold Limit Value (TLV): Not established

Any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available: No data

Appropriate engineering controls: Supply adequate ventilation

Personal Protective Measures/Equipment:

Respiratory protection: Not required unless smoke, mists or vapors are produced.

Ventilation: No special ventilation required.

Hand protection: Rubber or plastic gloves to prevent prolonged or repeated contact with skin.

Eye protection: Safety glasses recommended if splash is possible.

Other protective equipment: Apron recommended but not required.

[SECTION 9]: PHYSICAL AND CHEMICAL PROPERTIES

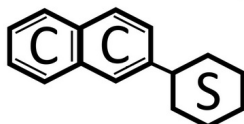
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|---|--|
| Appearance: Black/brown fluid | Lower /Upper Explosion Limits: Not established |
| Odor: Mild, faint | Vapor Pressure (kPa @ 20°C): 0.1 |
| Odor Threshold: Not established | Vapor Density (Air = 1): 6.4 |
| pH: N/A | Density: 1.21 – 1.42 g/cc |
| Melting/Freezing Point (°C): Not established | Water Solubility: Insoluble |
| Boiling Point (°C): 223 | Partition Coefficient: n-octanol/water: No data |
| Flash Point (°C): 95 | Auto-ignition Temperature: 215°C |
| Evaporation Rate: < 0.01 | Decomposition Temp.: No data |
| Flammability (solid/gas): No data | Viscosity: 6 - <12 cP |

[SECTION 10]: STABILITY AND REACTIVITY

Reactivity: No data

Chemical stability: Stable under recommended storage conditions

Possibility of hazardous reactions: No data



Conditions to avoid (e.g. static discharge, shock or vibration): Will evaporate if left open to air. Avoid flame, spark and other ignition sources. Keep away from sewers and bodies of water.

Incompatible materials: Strong oxidizing agents

Hazardous decomposition products: In the event of fire, see section 5.

[SECTION 11]: TOXICOLOGICAL INFORMATION

Acute Toxicity

Oral LD50

LD50 Oral – No data

Inhalation LC50

LC50 Inhalation – No data

Dermal LD50

LD50 Dermal – No data

Other information on acute toxicity

Skin corrosion/irritation: May cause skin irritation

Serious eye damage/eye irritation: May cause irritation to eyes and/or membranes

Respiratory or skin sensitization: May cause respiratory irritation,

Aspiration: May be fatal if swallowed and enters airways. Based on physic-chemical properties of the material

Germ cell mutagenicity: No data

Carcinogenicity: No data

IARC: No data

NTP: No data

OSHA: No data

Reproductive Toxicity: No data

Teratogenicity: No data

Specific target organ toxicity – single exposure (Globally Harmonized System): No data

Specific target organ toxicity – repeated exposure (Globally Harmonized System): No data

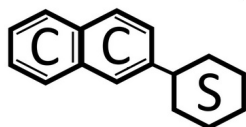
Potential health effects

Inhalation: Slight irritation

Ingestion: May cause death if aspirated during swallowing

Skin: Slight irritation

Eyes: Slight irritation



Signs and Symptoms of Exposure: Symptoms, if present, vary with individual. Watch for signs of allergic reaction, rash or respiratory distress.

Synergistic effects: No data

Additional Information: N/A

[SECTION 12]: ECOLOGICAL INFORMATION

Ecotoxicity (Aquatic and Terrestrial toxicity): Variable data, not expected to be harmful to aquatic organisms

Persistence and biodegradability: Expected to be inherently biodegradable

Bioaccumulative potential: No data

Mobility in soil: No data

Other adverse effects: No data

[SECTION 13]: DISPOSAL CONSIDERATION

Product: Comply with all federal, state and local regulations for disposal of waste oils. High temperature incineration is recommended.

Do not dump this product into sewers, on the ground or into any body of water.

Contaminated packaging: Dispose of as unused product, high temperature incineration.

[SECTION 14]: TRANSPORT INFORMATION

DOT (US)

Hazard class: Not Regulated for Land Transport

UN No: N/A

Packing Group: N/A

Proper bulk shipping description: Hydrocarbons, Liquid, N.O.S.

Proper non-bulk shipping description: Not restricted

Reportable Quantity: None

Marine Pollutant: No Reference

Poison Inhalation Hazard: N/A

IMDG

Hazard class: Not Regulated for Land Transport

UN No: N/A

Packing Group: N/A

Proper bulk shipping description: Not restricted

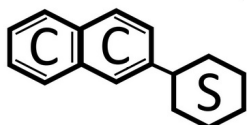
Proper non-bulk shipping description: Not restricted

ICAO shipping description: Not restricted

ADR/RID hazard class: Not restricted

IATA

Hazard class: Not Regulated for Air Transport



UN No: N/A
Packing Group: N/A
Proper bulk shipping description: Not restricted
Proper non-bulk shipping description: Not restricted

[SECTION 15]: REGULATORY INFORMATION

OSHA Hazards: N/A

DSL Status: N/A

SARA 302 Components: N/A

SARA 313 Components: N/A

| Composition | CAS No. | TSCA | EINECS | OSHA |
|---|-------------|------------|------------|------------|
| A Magnetite (Fe ₃ O ₄) | 1309-38-2 | Registered | Registered | Registered |
| B Oil Soluble Dispersant | Proprietary | Registered | Registered | Registered |
| C Distillates (Petroleum) Hydrotreated Light | 64742-47-8 | Registered | Registered | Registered |

These components do not contain any chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act (SARA) of 1986 and 40 CFR part 372.

[SECTION 16]: OTHER INFORMATION

Further information

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. Consolidated Chemical & Solvents LLC, and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

