



Safety Data Sheet

HiFlow 25

SECTION 1: Identification

1.1 Product identifier

Product name HiFlow 25
Product number HF25

1.3 Recommended use of the chemical and restrictions on use

Friction reducing.

1.4 Supplier's details

Name Downhole Chemical Solutions
Address 1 Cowboys Way #572
Frisco, Texas 75034

Telephone 469-466-1100

1.5 Emergency phone number(s)

1-888-255-3924 US (ChemTel)
1-813-248-0585 International (ChemTel)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)

Not a hazardous substance or mixture.

2.2 GHS label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Other hazards which do not result in classification

Slip hazard from spills

SECTION 3: Composition/information on ingredients

3.2 Mixtures

| Hazardous components | CAS-No | Concentration |
|---|------------|-------------------|
| distillates (petroleum) hydrotreated light. | 64742-47-8 | < 20 % (weight) * |

Trade secret statement (OSHA 1910.1200(i))

*The specific chemical identities and/or actual concentrations or actual concentration ranges for one or more listed components are being withheld as trade secrets under the US regulation 29 CFR 1910.1200(i).

Further Information :

Due to viscosity, this product does not present an aspiration hazard.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

| | |
|-------------------------|---|
| General advice | Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. |
| If inhaled | Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. |
| In case of skin contact | Wash with plenty of water for at least 15 minutes. Call a poison center or doctor if irritation develops or persists. Take off contaminated clothing and wash it before reuse. Acute and delayed symptoms and effects: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching. |
| In case of eye contact | Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center or doctor if you feel unwell. Acute and delayed symptoms and effects: May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. |
| If swallowed | Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. |

4.2 Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary

No data available.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical

Nitrogen oxides, carbon oxides

5.3 Special protective actions for fire-fighters

Avoid any skin contact. Effects of contact or inhalation may be delayed. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective

Safety Data Sheet

HiFlow 25

clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Further information

Use water spray to cool unopened containers. Spills produce extremely slippery surfaces.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Warning: Do not touch or walk through spilled material. Spills can create very slippery surfaces. Wear respiratory protection if necessary. Avoid breathing gas, mist, vapors, or spray. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 Environmental precautions

Do not contaminate water.

6.3 Methods and materials for containment and cleaning up

Stop leak if you can do it without risk. Sweep up and shovel into suitable containers for disposal.

Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Surfaces are very slippery from this product. Do not swallow. Do not breathe mist, vapors, or spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. See Section 8 for information on Personal Protective Equipment.

7.2 Conditions for safe storage, including any incompatibilities

Freezing will adversely affect the quality of the product. Product should be stored in temperatures from 50-90F. Store locked up. Keep away from heat and sources of ignition. Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

CAS: (64742-47-8)

Distillates (petroleum) hydrotreated light

ACGIH: 197ppm 1200 mg/m³ (Non-aerosol -as total hydrocarbon vapor) TLV® inhalation

8.2 Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Safety glasses. If splash hazard, wear faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Ensure that eyewash stations and/or safety showers are accessible

Safety Data Sheet

HiFlow 25

Skin protection

Wear protective gloves, such as PVC or other plastic material. Consult manufacturer specifications for further information.

Body protection

Wear protective clothing. Clothing with full length sleeves and pants should be worn. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Thermal hazards

No data available.

Environmental exposure controls

Do not let product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| | |
|---|---|
| Appearance/form (physical state, color, etc.) | Milky emulsion |
| Odor | Slight petroleum |
| Odor threshold | No data available. |
| pH | 6.0-8.0 |
| Melting point/freezing point | < 20 F |
| Initial boiling point and boiling range | No data available. |
| Flash point | > 200 F |
| Evaporation rate | < 1 (n-butyl acetate = 1) |
| Flammability (solid, gas) | No data available. |
| Upper/lower flammability limits | No data available. |
| Upper/lower explosive limits | No data available. |
| Vapor pressure | 10 (< 77 F) |
| Vapor density | No data available. |
| Relative density | 1.06 - 1.09 (@ 77F) |
| Bulk density | 8.9 - 9.1 lb/gal |
| Solubility(ies) | No data available. |
| Partition coefficient: n-octanol/water | No data available. |
| Auto-ignition temperature | No data available. |
| Decomposition temperature | No data available. |
| Viscosity | Dynamic viscosity: 100-600 cps |
| Explosive properties | No data available. |
| Oxidizing properties | The substance or mixture is not classified as oxidizing |
| Charge | Anionic |

Other safety information

No data available.

Safety Data Sheet

HiFlow 25

SECTION 10: Stability and reactivity

10.1 Reactivity

Contact with incompatible materials. Sources of ignition. Exposure to heat.

10.2 Chemical stability

Stable under normal storage conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Heat, flames and sparks. Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Thermal decomposition may produce: nitrogen oxides, carbon oxides

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Information on the product as supplied:

ATEmix (oral) - 5000 mg/kg (calculated)

Components:

Distillates (petroleum), hydrotreated light

LD50 Oral - Rat - > 5000 mg/kg

LD50 Skin - Rabbit - > 2,000 mg/kg

LC50 Inhalation - No data available

Symptoms (including delayed and immediate effects):

Inhalation: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Skin corrosion/irritation

Ammonium Chloride : Rabbit : No Skin Irritation

Serious eye damage/irritation

May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

Safety Data Sheet

HiFlow 25

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

Distillates (petroleum), hydrotreated light

Conclusion : Did not show teratogenic effects in animal experiments

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

SECTION 12: Ecological information

Aquatic Toxicity

Information on the product as supplied:

Harmful to aquatic life

LC50/96 h/Pimephales promelas (fathed minnow)/Acute Fish toxicity/EPA Whole Effluent Toxicity Method 600/4-90/027F: 10.02mg/l

LC50/48 h/Ceriodaphnia dubia (Water Flea)/EPA Whole Effluetn Toxicity Method 600/4-90/027F: 11.31mg/l

Persistence and degradability

No data available.

Bioaccumulative potential

Ammonium Chloride : The method for determining biodegradability are not applicable to inorganic substances.

Because of the high molecular weight of the polymer diffusion through the biological membranes is ver small.

Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water: Not applicable.

Mobility in soil

Vapour Pressure : 10(<77F)

Water Solubility: dispersible

Surface Tension: No data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

SECTION 13: Disposal considerations

Disposal of the product

Disposal should be in accordance with applicable Federal, State and local laws and regulations. Local regulations may be more stringent than State or Federal requirements.

Disposal of contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

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.

SARA 311/312 Hazards

No SARA hazards.

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

New Jersey Right To Know Components

No components are subject to the New Jersey Right to Know Act.

Pennsylvania Right To Know Components

No components are subject to the Pennsylvania Right To Know Act.

California Prop. 65 Components

Acrylamide (79-06-1) < 0.1%

Remarks: WARNING: This product contains a chemical(s) known to the State of California to cause cancer, birth defects or other reproductive harm.

Safety Data Sheet
HiFlow 25

HMIS Rating

| HMIS RATINGS (Hazardous Materials Identification System) | |
|--|----------|
| HEALTH | 1 |
| FLAMMABILITY | 1 |
| REACTIVITY | 0 |
| PERSONAL PROTECTION | B |

SECTION 16: Other information

16.1 Further information/disclaimer

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall Downhole Chemical Solutions be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if Downhole Chemical Solutions has been advised of the possibility of such damages.