

Safety Data Sheet HiFlow 4

SECTION 1: Identification

1.1 Product identifier

Product name HiFlow 4

Product number HF4

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)

- Causes serious eye irritation, Cat. 2

2.2 GHS label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H319

Causes serious eye irritation

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Precautionary statement(s)

P264
P280

Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P310

Immediately call a POISON CENTER/doctor.

P332+P313

If skin irritation occurs: Get medical advice/attention.

P362+364

Take off contaminated clothing and wash it before reuse.

P501

Dispose of contents/container in accordance with national regulations.

2.3 Other hazards which do not result in classification

Slip hazard from spills

Potential Environmental Effects : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic, (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components	Concentration
Distillates, petroleum, hydrotreated light (CAS no.: 64742-47-8; EC no.: 265-149-8)	20 - 23 % (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). This is not intended to be a complete compositional disclosure.

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 at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.

Acute and delayed symptoms and effects: Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical

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burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of 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, sulfur oxides, hydrogen cyanide

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 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

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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. 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)

Storage Temperatures C/F

20 - 35C (68 - 95F)

Reason:

Integrity

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

CAS: 64742-47-8 (EC: 265-149-8)

Distillates, petroleum, hydrotreated light

ACGIH: 1200 mg/m³ TLV® inhalation

CAS: 79-06-1

Acrylamide

Cal/OSHA: 0.03 mg/m³ PEL inhalation; NIOSH: Ca, 0.03 mg/m³, See Appendix A REL inhalation; OSHA: 0.3 mg/m³ PEL 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 with side shields or goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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.

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SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Viscous Opaque Liquid
Odor	Mild Petroleum
Odor threshold	No data available.
pH	6 - 8
Melting point/freezing point	No data available.
Initial boiling point and boiling range	> 347°F Oil Phase : >212°F Aqueous Phase
Flash point	> 201 °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	No data available.
Vapor density	No data available.
Relative density	1.04 - 1.09 g/cm ³ (8.6 - 8.85 lbs/gal)
Solubility(ies)	Limited by viscosity
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	302°F
Decomposition temperature	> 392°F
Viscosity	1,000 - 2,200 mPa.s (Brookfield)
Explosive properties	No data available.
Oxidizing properties	Not expected to be oxidizing based on the chemical structure

Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable.

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

Carbon oxides, Ammonia, Nitrogen Oxides

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

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

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Acute Oral Toxicity

Information on the product as supplied:

Distillates/Petroleum, hydrotreated

LD50 Oral - Rat - > 5000 mg/kg (Estimated)

Acute Inhalation toxicity

Distillates, (petroleum) Hydrotreated

LC50/Rat/4 h/>15.2 mg/l

Skin corrosion/irritation

OECD Test Guideline 439/Read-across (Analogy).

Serious eye damage/irritation

Information on the product as supplied:

Calculated Method

No eye irritation

Respiratory or skin sensitization

Information on the product as supplied:

Not sensitizing

Distillates, petroleum, hydrotreated light

Irritating to skin

Germ cell mutagenicity

Distillates, petroleum, hydrotreated light

No known effect.

Carcinogenicity

Remarks : No known carcinogenic effects

Based on available data, the classification criteria are not met

Distillates, (petroleum) hydrotreated light:

Not classified by IARC or NTP

Reproductive toxicity

Information on the product as supplied:

Distillates, (petroleum), hydrotreated light:

Did not show teratogenic effects in animal experiments

SECTION 12: Ecological information

Aquatic Toxicity

LC50/96 h/Pimephales promelas (fathead minnow)/Acute Fish Toxicity/EPA Whole Effluent Toxicity Method

600/4-90/027F: 10.02 mg/l

LC50/48 h/Ceriodaphnia dubia (water flea)/EPA Whole Effluent Toxicity Method 600/4-90/027F: 11.31 mg/l

Persistence and degradability

Information on the product as supplied

The polymeric ingredient is not readily biodegradable.

Because of the high molecular weight of the polymer diffusion through biological membranes is very small. The polymeric ingredient is not readily biodegradable.

Bioaccumulative potential

Information on the product as supplied:

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Partial coefficient: n-octanol/water: Not Applicable

Mobility in soil

Vapor Pressure:	No data available
Water Solubility	Limited by viscosity
Surface Tension	No data available

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 classified as dangerous in the meaning of transport regulations.

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

Acute Health Hazard : YES
Eye Irritation, Cat 2

Massachusetts Right To Know Components

Distillates, petroleum, hydrotreated light
CAS-No. 64742-47-8

New Jersey Right To Know Components

Distillates, petroleum, hydrotreated light
CAS-No. 64742-47-8

Pennsylvania Right To Know Components

Distillates, petroleum, hydrotreated light
CAS-No. 64742-47-8

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California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Chemical name: Acrylamide

CAS number: 79-06-1 (< 0.1 %)

Chemical name: Ethylene Oxide

CAS number: 75-21-8 (< 0.2 ppm)

HMIS Rating

HMIS RATINGS (Hazardous Materials Identification System)	
HEALTH	2
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.