



Safety Data Sheet

HiFlow 18

SECTION 1: Identification

1.1 Product identifier

Product name HiFlow 18

Product number HF18

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)

1-800-255-3924 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)

- Serious eye damage/eye irritation, Cat. 1
- Skin corrosion/irritation, Cat. 2
- Specific target organ toxicity following single exposure, Cat. 3

2.2 GHS label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H315

H318

H336

Causes skin irritation

Causes serious eye damage

May cause drowsiness or dizziness

Precautionary statement(s)

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P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
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/...
P312	Call a POISON CENTER or doctor if you feel unwell.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with national regulations.

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

Component	Concentration
Distillates, petroleum, hydrotreated light (CAS no.: 64742-47-8; EC no.: 265-149-8)	10 - 30 % (weight) *
Alcohols, c11-14-iso-, c13-rich, ethoxylated (CAS no.: 78330-21-9; EC no.: 934-084-3)	< 5 % (weight) *
Acrylamide (CAS no.: 79-06-1; EC no.: 201-173-7; Index no.: 616-003-00-0)	< 0.1 % (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).

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.

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

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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. 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 (EC: 265-149-8)

Distillates, petroleum, hydrotreated light
ACGIH: 200 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.)	Light tan emulsion
Odor	Mild
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	No data available.
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
Density	8.3 ppg
Relative density	0.995
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	>20.5 mm ² /s @ 40 C
Explosive properties	No data available.
Oxidizing properties	No data available.
Charge	Anionic

Other safety information

No data available.

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, sulfur oxides, hydrogen cyanide

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

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

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Information on the product as supplied:

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

LD50 Skin - Rabbit - > 5000 mg/kg (Estimated)

LC50 Inhalation - The product is not expected to be toxic by inhalation

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated

LD50 Oral - Rat - >2,000 mg/kg

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

Distillates, petroleum, hydrotreated light:

LD50 Oral - Rat - > 5000 mg/kg

LD50 Skin - Rabbit - > 5,000 mg/kg

LC0 Inhalation - Rat - 4951 mg/m³ - 4 h. Result: Based on results obtained from tests on analogous products

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

Information on the product as supplied:

Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Components:

Distillates, petroleum, hydrotreated light

Irritating

Serious eye damage/irritation

Information on the product as supplied:

Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated

Risk of serious damage to the eyes

Distillates, petroleum, hydrotreated light

Not irritating to eyes

Respiratory or skin sensitization

Information on the product as supplied:

Not sensitizing

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated

The product is not expected to be sensitizing.

Distillates, petroleum, hydrotreated light

The product is not expected to be sensitizing

Germ cell mutagenicity

Information on the product as supplied:

Not mutagenic.

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Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated
Negative in the Ames Test

Distillates, petroleum, hydrotreated light
Not mutagenic.

Carcinogenicity

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

Information on the product as supplied:
Not toxic for reproduction

STOT-single exposure

Information on the product as supplied:
May cause dizziness or drowsiness

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated
No data available

Distillates, petroleum, hydrotreated light
May cause drowsiness or dizziness. - Central nervous system

STOT-repeated exposure

Information on the product as supplied:
No known effects

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated
No data available

Distillates, petroleum, hydrotreated light
No data available

Aspiration hazard

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SECTION 12: Ecological information

Toxicity

Information on the product as supplied:

LC50 - *Oncorhynchus mykiss* (rainbow trout) - 10-100 mg/l - 96 h (Estimated)

EC50 - *Daphnia magna* (water flea) - 10-100 mg/l - 48 h (Estimated)

IC50 - Algae - >20 mg/l - 72 h (Estimated)

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated

LC50 - Fish - 1-10 mg/l - 96 h (Estimated)

EC50 - *Daphnia magna* (water flea) - 1-10 mg/l - 48 h (Estimated)

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IC50 - Algae - 1-10 mg/l - 72 h (Estimated)

Chronic toxicity to Invertebrates: Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment

Chronic toxicity to Fish: Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment

Distillates, petroleum, hydrotreated light

LC0 - Oncorhynchus mykiss (rainbow trout) - >1000 mg/l - 96 h

EC0 - Daphnia magna (water flea) - >1000 mg/l - 48 h

IC0 - Pseudokirchneriella subcapitata (green algae) - >1000 mg/l - 72 h

NOEC - Oncorhynchus mykiss (rainbow trout) - >1000 mg/l - 28 d

EC50 - Tetrahymena pyriformis - >1000 mg/l - 48 h

NOEC - Daphnia magna (water flea) - >1000 mg/l - 21 d

Persistence and degradability

Information on the product as supplied

Not readily biodegradable. Does not hydrolyze.

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated

Readily biodegradable. > 70% - 28 days

Distillates, petroleum, hydrotreated light

Readily biodegradable. Does not hydrolyze

Bioaccumulative potential

Information on the product as supplied:

No data available on product

Components:

Distillates, petroleum, hydrotreated light

Bioconcentration factor (BCF): no data available. Partition co-efficient (Log Pow): 3-6

Mobility in soil

Information on the product as supplied

No data available on product

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

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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

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

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

WARNING! This product contains a chemical known to the State of California to cause cancer.

Chemical name: Acrylamide

CAS number: 79-06-1

HMIS Rating

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

SECTION 16: Other information

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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.