



# Safety Data Sheet

## DriFlow 4

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### SECTION 1: Identification

#### 1.1 Product identifier

Product name	DriFlow 4
Product number	DF4

#### 1.3 Recommended use of the chemical and restrictions on use

Friction Reducer

#### 1.4 Supplier's details

Name	Downhole Chemical Solutions
Address	7274 Elm Street 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)

The material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard's (29CFR 1910.1200) implementation of the Globally Harmonized System (GHS), i.e., the material is not a dangerous substance or mixture requiring GHS classification according to the US GHS regulations.

#### 2.2 GHS label elements, including precautionary statements

##### Pictogram



Pictogram used for Hazard Not Otherwise Classified

##### Signal word: NONE

**Hazard statement(s)**  
NONE

**Precautionary statement(s)**  
NONE

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### 2.3 Other hazards which do not result in classification

This product can create extremely slippery surfaces when wet  
May form dust during handling

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## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

<b>Hazardous components</b>
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No ingredients are hazardous according to OSHA criteria
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#### 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).

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## 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	No hazards which require special first aid measures. Remove to fresh air.
In case of skin contact	Wash with plenty of water and soap. Call a poison center or doctor if irritation develops or persists. Take off contaminated clothing and wash it before reuse.
In case of eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of persistent eye irritation, consult a physician.
If swallowed	Rinse mouth with water. Do NOT induce vomiting. Get medical attention if symptoms occur.

### 4.2 Most important symptoms/effects, acute and delayed

None

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

None reasonably foreseeable.

Aqueous solutions or powders that become wet render surfaces extremely slippery.

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## 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

May form dust during handling. Causes surfaces to become slippery when wet. Thermal decomposition may produce Nitrogen oxides, carbon oxides, sulfur oxides. Hydrogen cyanide may be produced in the event of combustion in an oxygen-deficient atmosphere.

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### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### Further information

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

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## 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. 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. Do not flush with water. After cleaning, flush traces away with water.

#### Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

No special precautions required. Aqueous solutions or powders that become wet render surfaces extremely slippery.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep in a dry place. Keep the container closed when not in use.

Unsuitable Materials: To avoid product degradation and equipment corrosion, do not use iron, copper, or aluminum containers or equipment. Avoid strong oxidizing agents and acids.

#### Specific end use(s)

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

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limits: None known.

### 8.2 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practices. Wash hands and face before breaks and immediately after handling the product. Avoid contact with skin and eyes. Do not breathe dust. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation.

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

Handle in accordance with good industrial hygiene and safety practices.

#### 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).

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### 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

No personal respiratory protective equipment is normally required. Dust safety masks are recommended where working powder concentrations is more than 10 mg/m<sup>3</sup>

### Thermal hazards

No data available.

### Environmental exposure controls

Do not let the 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.)	White Solid
Odor	Odorless
Odor threshold	
pH	5.0 - 9.0 (5 g/L)
Melting point/freezing point	Not applicable
Initial boiling point and boiling range	Not applicable
Flash point	
Evaporation rate	Not applicable
Flammability (solid, gas)	No data available.
Upper/lower flammability limits	No data available.
Upper/lower explosive limits	No data available.
Vapor pressure	Not applicable
Vapor density	No data available.
Density	600 - 900 kg/m <sup>3</sup>
Relative density	
Solubility(ies)	Water Soluble
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	Does not self ignite
Decomposition temperature	> 150°C
Viscosity	No data available.
Explosive properties	Not flammable to ignition sources of less than 2.5 KJ
Charge	Anionic
Oxidizing properties	The substance or mixture is not classified as oxidizing

### Other safety information

No data available.

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

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### 10.2 Chemical stability

Stable under normal storage conditions.

### 10.3 Possibility of hazardous reactions

Oxidizing agent may cause exothermic reactions

### 10.4 Conditions to avoid

None known

### 10.5 Incompatible materials

Strong oxidizing agent and strong acids

### 10.6 Hazardous decomposition products

Thermal decomposition may produce: carbon oxides, ammonia, nitrogen oxides, sulfur oxides, hydrogen cyanide

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## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute oral toxicity

LD50/oral/rat > 5,000 mg/kg

LD50/dermal/rat > 5,000 mg/kg

This product is not expected to be toxic by inhalation

#### Skin corrosion/irritation

Not irritating

#### Serious eye damage/irritation

Not irritating

#### Respiratory or skin sensitization

Not sensitizing

#### Germ cell mutagenicity

Not mutagenic

#### Carcinogenicity

Not carcinogenic

#### Reproductive toxicity

Not toxic for reproduction

#### STOT - Single Exposure

No known effects

#### STOT - Repeated Exposure

No known effectsd

#### Aspiration Hazard

No hazards resulting from the material as supplied

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## SECTION 12: Ecological information

### Toxicity

LC50/96 h/Danio Rerio/OECD Test Guideline 203: > 100 mg/l

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LC50/Fathead minnow/96 hours > 100 mg/L (OECD 203)  
EC50/48 h/Daphnia magna (Water flea)/Immobilization/OECD Test Guideline 202: > 100 mg/l  
IC50/72 h/Scenedesmus subspicatus/OECD Test Guideline 201: > 100 mg/l

### Persistence and degradability

Biological degradability:

The polymeric ingredient is not readily biodegradable.

Does not hydrolyse

### Bioaccumulative potential

Partition coefficient: n-octanol/water: < 0

Biococentration Factor (BCF): ~0

### Mobility in soil

Information on the product as supplied

No data available on the product

### Results of PBT and vPvB assessment

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

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## 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

Rinse empty containers with water and use the rinse water to prepare a working solution. If recycling is not practicable, dispose of it in compliance with local regulations. Can be filled or incinerated, when in compliance with local regulations.

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## SECTION 14: Transport information

### DOT (US)

Not classified

### IMDG

Not classified

### IATA

Not classified

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## SECTION 15: Regulatory information

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

#### SARA 302 Components

Not concerned

#### SARA 313 Components

Not concerned

#### SARA 311/312 Hazards

Not concerned

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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

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	0
FLAMMABILITY	1
REACTIVITY	0
PERSONAL PROTECTION	B

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## 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 the 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.

### Revision History

V3: Section 2 Hazard Identification

V4: Company address updated - no other content changes