



Safety Data Sheet

DriFlow 14

SECTION 1: Identification

1.1 Product identifier

Product name	DriFlow 14
Product number	DF14

1.3 Recommended use of the chemical and restrictions on use

Friction Reducer

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)

Combustible Dust, Cat 1

2.2 GHS label elements, including precautionary statements

Pictogram



Signal word : WARNING

Hazard statement(s)

May form combustible dust concentrations in the air.

Precautionary statement(s)

Advice; Forms slippery/greasy layers with water.

2.3 Other hazards which do not result in classification

Safety Data Sheet

DriFlow 14

Slip hazard from spills

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Contains no reportable hazardous substances.
--

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 areas.
If inhaled	No hazards which require special first aid measures. Remove to fresh air.
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.
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.
If swallowed	Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have the 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.

4.2 Most important symptoms/effects, acute and delayed

None under normal use

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

None reasonably foreseeable

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide. Warning! Aqueous solutions or powders that become wet render surfaces extremely slippery.

5.2 Specific hazards arising from the chemical

Dust may form explosive mixtures in the air

5.3 Special protective actions for fire-fighters

Wear a self-contained breathing apparatus for firefighting. Use NIOSH/MSHA-approved respiratory protection.

Safety Data Sheet

DriFlow 14

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 dust. Avoid dust formation. Remove all sources of ignition. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection, see section 8.

6.2 Environmental precautions

Do not contaminate water. Do not allow contact with soil, surface, or groundwater. Prevent product from entering drains.

6.3 Methods and materials for containment and cleaning up

Stop the leak if you can do it without risk. Sweep up and shovel into suitable containers for disposal. No spark tools should be used.

Large and Small Spills: Do not flush with water. Clean up promptly by sweeping or vacuuming. Keep in suitable, closed containers for disposal.

Residue: Flush away with large quantities of water.

Reference to other sections

For disposal, see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid dust formation. Use explosion-proof equipment. Surfaces are very slippery from this product. Do not swallow. Do not breathe dust. Wash thoroughly after handling. 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

Keep in a dry, cool, and well-ventilated place. Keep the container closed when not in use. Keep away from heat and sources of ignition. Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard.

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

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated. Stable under recommended storage conditions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Use local exhaust if dusting occurs. Natural ventilation is adequate in the absence of dust. Ensure adequate ventilation, especially in confined areas. Use explosion-proof ventilation equipment.

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.

Safety Data Sheet

DriFlow 14

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).

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

Ventilated respirator with P3 filter cartridge if respirable dust (particle size < 10um) exceeds 0.05 mg/m³. Dust safety masks are recommended where the working powder concentration is more than 10 mg/m³.

Thermal hazards

No data available.

Environmental exposure controls

Do not let the product enter drains. Do not flush into surface water.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	White Granular Solid
Odor	Odorless
Odor threshold	
pH	5.0 - 9.0 (5 g/L)
Melting point/freezing point	> 150°C
Initial boiling point and boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	No data available.
Upper/lower flammability limits	No data available.
Upper/lower explosive limits	Not expected to create explosive atmospheres.
Vapor pressure	Not applicable
Vapor density	No data available.
Density	600 - 900 kg/m ³
Relative density	0.6 - 0.9
Solubility(ies)	Water Soluble
Partition coefficient: n-octanol/water	< 0
Auto-ignition temperature	Does not self-ignite based on the chemical structure.
Decomposition temperature	> 150°C
Viscosity	No data available.
Explosive properties	Not expected to be explosive based on the chemical structure. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.
Charge	Anionic

Safety Data Sheet

DriFlow 14

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

No dangerous reaction is known under conditions of normal use.

10.2 Chemical stability

Stable under normal storage conditions.

10.3 Possibility of hazardous reactions

Oxidizing agents may cause exothermic reactions. Powdered material may form explosive dust-air mixtures.

10.4 Conditions to avoid

Keep away from heat and the source of ignition.

10.5 Incompatible materials

Strong acids and oxidizing agents

10.6 Hazardous decomposition products

Thermal decomposition may produce: carbon oxides, ammonia, nitrogen oxides, sulfur oxides. Hydrogen cyanide (hydrocyanic acid)

SECTION 11: Toxicological information

Information on toxicological effects

Acute oral toxicity

LD50/oral/rat > 5000 mg/kg (estimated)

LD50/dermal/rat > 5000 mg/kg. (Estimated)

The product is not expected to be toxic by inhalation

Skin corrosion/irritation

Not irritating

Serious eye damage/irritation

Information on the product as supplied:

Not irritating

Respiratory or skin sensitization

Information on the product as supplied:

Not sensitizing

Germ cell mutagenicity

Not mutagenic

Carcinogenicity

Not carcinogenic

Not toxic for reproduction

STOT-Single Exposure

No known effects

Safety Data Sheet

DriFlow 14

STOT-Repeated Exposure

No known effects

Aspiration Hazard

No hazards resulting from the material as supplied

SECTION 12: Ecological information

Toxicity

LC50/96 h/Danio rerio/Acute toxicity/OECD Test Guideline 203: > 100 mg/l

LC50/96 h/Fathead Minnow/Immobilization/OECD Test Guideline 203: > 100 mg/l

EC50/Daphnia Magna/48 hours > 100 mg/L (OECD 202)

IC50/Scenedesmus subspicatus/72 hours > 100 mg/L (OECD 201)

Persistence and degradability

Biological degradability:

The polymeric ingredient is not readily biodegradable.

Does not hydrolyze.

Bioaccumulative potential

Partition coefficient: n-octanol/water: < 0

Bioconcentration Factor (BCF): ~0

Mobility in soil

Information on the product as supplied

None

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. It can be landfilled or incinerated when in compliance with local regulations.

Disposal of contaminated packaging

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

SECTION 14: Transport it as an

DOT (US)

Not classified

IMDG

Not classified

IATA

Not classified

SECTION 15: Regulatory information

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

SARA 302 Components

Safety Data Sheet

DriFlow 14

Not concerned

SARA 313 Components

Not concerned

SARA 311/312 Hazards

Not concerned

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

HMIS Rating

HMIS RATINGS (Hazardous Materials Identification System)	
HEALTH	0
FLAMMABILITY	1
REACTIVITY	1
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, concerning such information, and we assume no liability resulting from its use. Users should make their 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.