

Ref. /US/EN

Revision Date: 08/28/2019

Previous date: 11/16/2015

Print Date:01/28/2020

1. IDENTIFICATION

Product information

Product name
DriFlow 4

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture

Stimulation / Cementing Additive.

Recommended restrictions on use

-

Supplier's details

Downhole Chemical Solutions, LLC
1 Cowboy Way #572
Frisco, TX 75034
Telephone 469-466-1101

www.stimchems.com

Emergency telephone number

CHEMTREC: 1-800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification

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., material is not a dangerous substance or mixture requiring GHS classification according to the US GHS regulations.

GHS-Labeling



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Product is not hazardous under US GHS.

Hazard(s) not otherwise classified (HNOC) or not covered/classified by GHS

Advice; Forms slippery/greasy layers with water.

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances /Mixtures

No ingredients are hazardous according to OSHA criteria.

4. FIRST AID MEASURES

Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

Inhalation

No hazards which require special first aid measures. Remove to fresh air.

Skin contact

Wash off with soap and water.

Eye contact

Rinse thoroughly with plenty of water, also under the eyelids. If possible use lukewarm water.

Ingestion

No hazards which require special first aid measures. Rinse mouth with water. Call a physician if symptoms occur. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Symptoms : No symptoms known or expected.

Hazards : Product is not toxic.

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Water spray

Dry chemical

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Carbon dioxide (CO₂)

Unsuitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special hazards arising from the substance or mixture

Dust may form explosive mixture in air.

Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

Use NIOSH/MSHA approved respiratory protection.

Further information

Forms slippery/greasy layers with water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For personal protection see section 8.

Environmental precautions

Should not be released into the environment.

Methods and materials for containment and cleaning up

Product becomes slippery when it is wet. Take up mechanically and collect into suitable containers for disposal. After cleaning, flush away traces with water.

Additional advice

For personal protection see section 8.

7. HANDLING AND STORAGE

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. The product is hygroscopic. Protect from moisture.

Conditions for safe storage, including any incompatibilities

Store in original container.

Materials for packaging

Unsuitable material: To avoid product degradation and equipment corrosion, do not use iron, copper or aluminium containers or equipment.

Materials to avoid:

Strong oxidizing agents

Storage stability:

Storage temperature 40 - 90 °F

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Other data

Stable under recommended storage conditions.
Reason:
integrity

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. 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.

Individual protection measures, such as personal protective equipment Industrial Hygiene

Handle in accordance with good industrial hygiene and safety practice.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. (filter P2)

Hand protection

Glove material: Nitrile rubber, Permeability tests are not available for this product.

Skin and body protection

Protective clothing.

Eye protection

Safety glasses with side-shields

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	solid
Form	powder
Colour	white

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Odour	odourless
Odour Threshold	Not relevant
pH	6 - 8 (0.5 g/l) (0,5 % solution)
Freezing point/Melting point :	Not applicable
Initial boiling point and boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	No data available
Explosive properties:	
Lower explosion limit	No data available
Upper explosion limit	No data available
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Vapour pressure	Not applicable
Relative vapour density	Not applicable
Relative density	
Bulk density	600 - 900 kg/m ³
Solubility(ies):	
Water solubility	Limited by viscosity.
Partition coefficient: n-octanol/water	Not applicable
Auto-ignition temperature	> 150 °C
Decomposition temperature	> 302 °F
Viscosity:	
Viscosity, dynamic	Not applicable
Viscosity, kinematic	
Oxidizing potential	The substance or mixture is not classified as oxidizing.
Saturation in air (% vol.)	Not applicable
Surface tension	Not applicable

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10. STABILITY AND REACTIVITY

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerisation does not occur.

Conditions to avoid

Avoid contact with alkaline materials which will degrade the polymer.
Avoid moisture.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.
Ammonia

> 302 °F

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute oral toxicity

Conclusion: The acute toxicological results displayed may not be the results of actual testing of this material but based on a similar tested material.

Acute toxicity estimate/> 5,000 mg/kg

Acute inhalation toxicity

Acute toxicity estimate/4 h/> 20 mg/l

Acute dermal toxicity

Acute toxicity estimate/> 5,000 mg/kg

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Skin corrosion/irritation	Conclusion: Not classified as irritating for skin.
Serious eye damage/eye irritation	Conclusion: Not classified as irritating for eyes.
Respiratory or skin sensitisation	
Skin sensitisation	Conclusion: Based on available data, the classification criteria are not met.
Germ cell mutagenicity	
Genotoxicity in vivo	Conclusion: Based on available data, the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	
Toxicity for reproduction	Conclusion: Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure	/The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ toxicity - repeated exposure	/The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration hazard	
Aspiration toxicity	No aspiration toxicity classification

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity

Remarks: Ecotoxicological information provided is based on a structurally or compositionally similar product.
LC50/96 h/Oncorhynchus mykiss (rainbow trout)/Acute toxicity/OECD Test Guideline 203: > 100 mg/l

Remarks: fresh water

Remarks: Ecotoxicological information provided is based on a structurally or compositionally similar product.
EC50/48 h/Daphnia magna (Water flea)/Immobilization/OECD Test Guideline 202: > 100 mg/l
EC50/10 d/Corophium volutator (amphipoda)/Immobilization/OECD Test Guideline 202: 1,415 mg/l

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EC50/48 h/Acartia tonsa (copepod)/Immobilization/OECD Test Guideline 202: 342 mg/l

Remarks: Ecotoxicological information provided is based on a structurally or compositionally similar product.

IC50/72 h/Green algae (Selenastrum capricornutum)/Growth inhibition/OECD Test Guideline 201: > 100 mg/l

Toxicity to other organisms

No data available

Persistence and degradability

Biological degradability:

CO2 Evolution Test/OECD Test Guideline 301B/28 d: < 70 %

Closed Bottle test/OECD Test Guideline 301 D/28 d: < 70 %

The polymeric ingredient is not readily biodegradable.

Bioaccumulative potential

Partition coefficient: n-octanol/water: Not applicable

Mobility in soil

Water solubility: Limited by viscosity.

Surface tension: Not applicable

Other adverse effects

Additional ecological information: Ecotoxicological information provided is based on a structurally or compositionally similar product. This material is not classified as dangerous for the environment.

13. DISPOSAL CONSIDERATIONS

Product

Recycling, recovery and reuse of materials is recommended if permitted by regulations. If recycling is not practicable, dispose of in compliance with local regulations.

Where possible recycling is preferred to disposal or incineration.

Contaminated packaging

Must be disposed of in accordance with local and national regulations.



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14. TRANSPORT INFORMATION

Land transport

Not classified as dangerous in the meaning of transport regulations.

Sea transport

Not classified as dangerous in the meaning of transport regulations.

Air transport

Not classified as dangerous in the meaning of transport regulations.

Special precautions for user

None known.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Title III Section 311 Categories

No SARA Hazards

SARA 302 Extremely Hazardous Substances

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

SARA 313 - Specific Toxic Chemical Listings

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.

CERCLA Hazardous substance (Reportable Quantities)

Chemical name	CAS-No.	Reportable quantity
None Present		0 kg

California Proposition 65

Remarks: WARNING: This product contains a chemical(s) known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Acrylamide (79-06-1) <= 0.05 %

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- Other regulations** : This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
- Notification status**
- USA : All components of this product are included in the United States TSCA Chemical Inventory or are not required to be listed on the United States TSCA Chemical Inventory.
- Canada : All components of this product are included in the Canada Domestic Substance List (DSL) or are not required to be listed on the Canada Domestic Substance List (DSL).
- European Union : All components of this product are included in the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.
- Australia : All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on the Australian Inventory of Chemical Substances (AICS).
- China : All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.
- Japan : All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese (ENCS) inventory.
- South Korea : All components of this product are included in the Korean (ECL) inventory or are not required to be listed on the Korean (ECL) inventory.
- Philippines : All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine (PICCS) inventory.
- New Zealand : All components of this product are included in the New Zealand inventory (NZIoC) or are not required to be listed on the New Zealand inventory(NZIoC).
- Taiwan : All components of this product are included on the Taiwan Toxic Chemical Substances Control Act Inventory.

16. OTHER INFORMATION

HMIS Rating

Health: 0

Flammability: 1

Reactivity: 0

NFPA Rating

Health: 0

Fire: 1

Reactivity: 0



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Training advice

Read the safety data sheet before using the product.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Sources of key data used to compile the Safety Data Sheet

Regulations, databases, literature, own tests.

Additions, Deletions, Revisions

Relevant changes have been marked with vertical lines.

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