



# Safety Data Sheet

## HiFlow 110

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### SECTION 1: Identification

#### 1.1 Product identifier

Product name HiFlow 110

Product number HF110

#### 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)

- Eye Damage, 1:H318

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

##### Pictogram



##### Signal word

**DANGER**

##### Hazard statement(s)

H318 Causes serious eye damage

##### Precautionary statement(s)

P264 Wash hands thoroughly after handling.  
P273 Avoid release into the environment  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water

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P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
Collect spillage

P337+P313  
P391

**Disposal:**  
P501

Dispose of contents/container in accordance with national regulations.

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

Slip hazard from spills

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## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Hazardous components	CAS-No	Concentration
distillates (petroleum) hydrotreated light	64742-47-8	< 25% (weight)
alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	< = 3% (weight)
amides, tall-oil fatty, N,N-bis(hydroxyethyl)	68155-20-4	< 1.5% (weight)
ammonium chloride	12125-02-9	< 2% (weight)

Distillates (petroleum) hydrotreated light.- Asp. Tox 1:H304: Does not result in classification of the mixture if the kinematic viscosity is greater than 20.5 mm<sup>2</sup>/s measured at 40 °C.

Alcohols, C11-14-iso-, C13-rich, ethoxylated - Acute Tox. 4:H302, Eye Dam. 1:H318

Amides, tall-oil, N,N-bis(hydroxyethyl) - Skin Irritation. 2:H315, Eye Dam, 1:H318

Ammonium Chloride - Acute Tox. 4:H302, Eye Irritation. 2B:H320

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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 attending doctor.  
Move out of the dangerous area.

If inhaled

Remove the person to fresh air and keep them comfortable for breathing. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

In case of skin contact,

Take off contaminated clothing and shoes immediately. Wash off with plenty of water. Consult a physician if necessary. Wash contaminated clothing before re-use.

In case of eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

If swallowed

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

Risk of serious damage to the eyes. Prolonged skin contact may cause skin irritation in susceptible persons.

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

None reasonably foreseeable. Treat symptomatically.

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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.

#### Unsuitable extinguishing media

None known

#### 5.2 Specific hazards arising from the chemical

Hazardous decomposition products: Carbon Oxides (COx). Nitrogen Oxides (Nox). Hydrogen chloride. Hydrogen cyanide. Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen-deficient atmosphere.

#### 5.3 Special protective actions for fire-fighters

Wear a self-contained breathing apparatus and a protective suit. Use NIOSH/MSHA-approved respiratory protection.

#### Further information

Use a 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

Where the exposure level is unknown, wear an approved, positive-pressure, self-contained respirator.

When the exposure level is known, wear an approved respirator appropriate for that level.

For personal protection, see section 8.

Chemical-resistant boots. Do not touch or walk through spilled material.

#### 6.2 Environmental precautions

Do not contaminate water.

#### 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. Soak up with inert absorbent material such as sand, silica gel, acid binder, universal binder, and sawdust. Shovel in suitable containers. Do not flush with water. Use detergent if needed.

Small spills: Do not flush with water. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Large spills: Do not flush with water. Dam up. Soak up with inert absorbent material. Clean up promptly with a scoop or a vacuum.

Residues: After cleaning, flush away traces with water.

#### Reference to other Sections

Section 8: Exposure controls/personal protection: Section 13: Disposal considerations: Section 7: Handling and storage.

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### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Surfaces are very slippery from this product. Handle in accordance with good industrial hygiene and safety practice.

Avoid contact with skin, eyes, and clothing. Do not breathe mist, vapors, or spray. Wash thoroughly after handling.

Do not eat, drink or smoke when using this product. See Section 8 for information on Personal Protective Equipment.

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

Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material. Incompatible with oxidizing agents.

#### Recommended Storage Temperature

No data available

#### Materials to avoid

Strong oxidizing agents

Storage stability:

Storage Temperature: Store at room temperature to maintain product integrity.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydrotreated light	64742-47-8	(Vapour)	200 mg/m <sup>3</sup> (8 Hours)	Recommendations of the manufacturer
Ammonium chloride	12125-02-9	(Fumes)	10 ml/m <sup>3</sup>	ACGIH
		STEL (Fumes)	20 ml/m <sup>3</sup>	ACGIH
		STEL (Fumes)	20 ml/m <sup>3</sup>	NIOSH REL
		TWA (Fumes)	10 ml/m <sup>3</sup>	NIOSH REL
		TWA (Fumes)	10 mg/m <sup>3</sup>	ACGIH
		STEL (Fumes)	20 mg/m <sup>3</sup>	ACGIH
		TWA (Fumes)	10 mg/m <sup>3</sup>	NIOSH REL
		ST (Fumes)	20 mg/m <sup>3</sup>	NIOSH REL
		TWA (Fumes)	10 mg/m <sup>3</sup>	OSHA P0
		STEL (Fumes)	20 mg/m <sup>3</sup>	OSHA P0

### 8.2 Appropriate engineering controls

Ensure adequate ventilation. Dose and handle in the closed system if possible. Handle only in a place equipped with local exhaust (or other appropriate exhaust). Remove and wash contaminated clothing before re-use. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before breaks and immediately after handling the product.

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

#### Eye/face protection

Safety glasses. If splash hazard, wear face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Ensure that eyewash stations and/or safety showers are accessible

#### Skin protection

PVC or other plastic material gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it. Be aware that liquid may permeate gloves; frequent change is advised. Suitable gloves can be recommended by the glove supplier.

#### Body protection

Wear protective clothing. Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Avoid contact with skin.

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### Respiratory protection

No respiratory protection is required when exposures are below the established exposure limit. Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure.

### Hand Protection

Permeability tests are not available for this product.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

### Hygiene Measures

Wash hands before breaks and immediately after handling this product. Wash hands before eating, drinking, or smoking. Keep away from food and drink. Keep away from tobacco products.

### Thermal hazards

No data is available.

### Environmental exposure controls

Do not let the product enter drains or uncontrolled discharge of product into the environment.

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## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	White Liquid Emulsion
Odor	Aliphatic
Odor threshold	No data available.
pH	4.0 - 6.0 (5 g/L)
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	No data available.
Flash point	No data available.
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	Not applicable
Vapor density	No data available.
Relative density	1.05 - 1.15
Bulk density	8.9 typical
Solubility(ies)	Limited by viscosity
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	302 °F (150 °C)
Decomposition temperature	392 °F (200 °C)
Viscosity	Dynamic viscosity: 500 - 3,000 mPa.s (Brookfield) Kinematic viscosity; > 20.5 mm <sup>2</sup> /s (104°F / 40 °C)
Oxidizing properties	The substance or mixture is not classified as oxidizing
Charge	Cationic

### Other safety information

No data is available.

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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Stable under recommended storage conditions

### 10.2 Chemical stability

Stable under recommended storage conditions

### 10.3 Possibility of hazardous reactions

None known

### 10.4 Conditions to avoid

Avoid extremes of temperature

### 10.5 Incompatible materials

Strong oxidizing agents, strong alkaline materials and cationic polymer

### 10.6 Hazardous decomposition products

Thermal decomposition may produce: nitrogen oxides, carbon oxides, ammonia

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute Toxicity

##### Product As Supplied

##### Acute Oral Toxicity

Product:

Distillates, petroleum

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

Amides, tall-oil fatty, N,N-bis(hydroxyethyl)

Ammonium Chloride

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

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

LD50/oral/rat = 500-2000 mg/kg

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

LD50/oral/rat 1410 mg/kg

##### Acute Inhalation Toxicity

Product:

Distillates, petroleum

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

Amides, tall-oil fatty, N,N-bis(hydroxyethyl)

Ammonium Chloride

Not expected to be toxic in contact with the skin

LC50 Inhalation - Rat - 4951 mg/m<sup>3</sup> / (Vapors) / 4 h.

Based on the obtained tests from analogous products

Inhalation risk test (IRT): No mortality within 7 hours as shown in animal studies

The product is not expected to be toxic by inhalation

##### Acute Dermal Toxicity

Product:

Distillates, petroleum

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

Amides, tall-oil fatty, N,N-bis(hydroxyethyl)

Ammonium Chloride

Not expected to be toxic by inhalation

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

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

By analogy with similar products, this product is not expected to be toxic.

LD50/dermal/rat >2000 mg/kg (Based on tests obtained from analogous products)

##### Skin corrosion/irritation

Product:

Distillates (petroleum), hydrotreated light

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

Amides, tall-oil fatty, N,N-bis(hydroxyethyl)

Ammonium Chloride

May cause slight irritation

Repeated exposure may cause skin dryness or cracking

Not irritating (OECD 404)

Irritating to the skin.

Not irritating

##### Serious Eye Damage/Eye Irritation

Product:

Distillates (petroleum), hydrotreated light

Causes serious eye damage

Not irritating.

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Alcohols, C11-14-iso-, C13=rich, ethoxylated  
Amides, tall-oil fatty, N,N-bis(hydroxyethyl)  
Ammonium Chloride

Risk of serious damage to eyes. (OECD 405)  
Risk of serious damage to eyes. (OECD 405)  
Not irritating to the eyes.

### Respiratory or Skin Sensitizations

Product:

Distillates (petroleum), hydrotreated light

Not expected to be sensitizing

By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)

Alcohols, C11-14-iso-, C13=rich, ethoxylated  
Amides, tall-oil fatty, N,N-bis(hydroxyethyl)  
Ammonium Chloride

The product is not expected to be sensitizing

The product is not expected to be sensitizing

Not sensitizing (EPA 540/9-82-025)

### Mutagenicity

Product:

Distillates (petroleum), hydrotreated light

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

Not expected to be mutagenic

Not mutagenic. (OECD 471, 473, 474, 476, 478, 479)

By analogy with similar products, this product is not expected to be mutagenic

Amides, tall-oil fatty, N,N-bis(hydroxyethyl)

By analogy with similar products, this product is not expected to be mutagenic

Ammonium Chloride

Negative in the AMES test. (OECD 471). Negative in the In Vitro Mammalian Cell Gene Mutation Test (OECD 476)

### Carcinogenicity

Product:

Distillates (petroleum), hydrotreated light

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

No known carcinogenic effects

Based on available data, the classification criteria are not met

Carcinogenicity study in rats (OECD 451): Negative

By analogy with similar products, this product is not expected to be carcinogenic

Amides, tall-oil fatty, N,N-bis(hydroxyethyl)

By analogy with similar products, this product is not expected to be carcinogenic

Ammonium Chloride

Based on available data, product is not expected to be carcinogenic. Carcinogenicity study in rat (OECD 451): NOAEL > 1104.6 mg/kg/day

### Reproductive Toxicity

Product:

Distillates (petroleum), hydrotreated light

Not expected to be toxic for reproduction

By analogy with similar substances, this substance is not expected to be toxic for reproduction.

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

No known effects.

Amides, tall-oil fatty, N,N-bis(hydroxyethyl)

By analogy with similar substances, this substance is not expected to be toxic for reproduction.

Ammonium Chloride

Based on available data, product is not expected to be toxic for reproduction. NOAEL/rat= 1500 mg/kg/day

### STOT - Single Exposure

Product:

Distillates (petroleum), hydrotreated light

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

Amides, tall-oil fatty, N,N-bis(hydroxyethyl)

Ammonium Chloride

No known effects

No known effects

No known effects.

No known effects.

No known effects.

### STOT - Repeated Exposure

Product:

Distillates (petroleum), hydrotreated light

No known effects

Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/Oral/Rat= 300 ppm. (OECD 421)

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

No known effects.

Amides, tall-oil fatty, N,N-bis(hydroxyethyl)

By analogy with similar substances, this substance is not expected to be to demonstrate chronic toxic effects.

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Ammonium Chloride

Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/90 days = 1695.7 mg/kg/day (OECD 408) NOAEL/oral/rat/28 days= 2214.5 mg/kg/day (OECD 407)

### Aspiration Hazard

Product  
Distillates (petroleum), hydrotreated light  
Alcohols, C11-14-iso-, C13-rich, ethoxylated  
Amides, tall-oil fatty, N,N-bis(hydroxyethyl)  
Ammonium Chloride

No hazards resulting from the material as supplied  
May be fatal if swallowed and enters airways  
No known effects.  
No known effects.  
No known effects.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product as Supplied:

<b>Acute toxicity to fish:</b>	LC50/Fish/96 hours = 10-100 mg/L (Estimated)
<b>Acute toxicity to invertebrates:</b>	EC50/Daphnia magna/48 hours = 10 - 100 mg/L (Estimated)
<b>Acute toxicity to algae:</b>	IC50/Algae/72 hours = 10- 100 mg/L (Estimated)
<b>Chronic toxicity to fish:</b>	No data available.
<b>Chronic toxicity to invertebrates:</b>	No data available.
<b>Toxicity to microorganisms:</b>	No data available.
<b>Effects on terrestrial organisms:</b>	No data available.
<b>Sediment toxicity:</b>	No data available.

Relevant information on the hazardous components:

#### Distillates, Petroleum (hydrotreated light)

<b>Acute toxicity to fish:</b>	LCO/Oncorhynchus mykiss/96 hours > 1000 mg/L (OECD 203)
<b>Acute toxicity to invertebrates:</b>	ECO/Daphnia magna/48 hours > 1000 mg/L (OECD 202)
<b>Acute toxicity to algae:</b>	ICO/Pseudokirchneriella subcapitata/72 hours > 1000 mg/L (OECD 201)
<b>Chronic toxicity to fish:</b>	NOEC/Oncorhynchus mykiss/28 days > 1000 mg/L
<b>Chronic toxicity to invertebrates:</b>	NOEC/Daphnia magna/21 days > 1000 mg/L
<b>Toxicity to microorganisms:</b>	ECS0/Tetrahymena pyriformis/ 48h > 1000 mg/L.
<b>Effects on terrestrial organisms:</b>	No data available.
<b>Sediment toxicity:</b>	No data available. Readily biodegradable

#### Alcohols,C11-14-iso- Cl-rich, ethoxylated

<b>Acute toxicity to fish:</b>	LC50Leuciscus idus/96 hours =1 - 10 mg/L
<b>Acute toxicity to invertebrates:</b>	EC50/Daphnia magna/48 hours = 1 - 10 mg/L
<b>Acute toxicity to algae:</b>	IC50/Algae 2 hours= 1- 10mg/L
<b>Chronic toxicity to fish:</b>	NOEC/Fish/30 days =0.1 - 1 mg/L
<b>Chronic toxicity to invertebrates:</b>	NOEC/Daphnia magna/21 days =0.1 -1 mg/L
<b>Toxicity to microorganisms:</b>	EC10/Pseudomonasputida / 17 h> 10000 mg/L (DIN 38412-8)
<b>Effects on terrestrial organisms:</b>	No data available.
<b>Sediment toxicity:</b>	No data available.

#### Alcohols,C11-14-iso- Cl-rich, ethoxylated

<b>Acute toxicity to fish:</b>	LC50/Fish/96 hours : > 1 - 10 mg/L (Based on results obtained from tests of analogous products)
<b>Acute toxicity to invertebrates:</b>	No data available.

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Acute toxicity to algae:	No data available.
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	No data available.
Toxicity to microorganisms:	No data available.
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

### Amides, tall-oil fatty, N,N-bis(hydroxyethyl)

Acute toxicity to fish:	LC50/Fish/96 hours > 1 – 10 mg/L (based on tests on analogous products)
Acute toxicity to invertebrates:	No data available.
Acute toxicity to algae:	No data available.
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	No data available.
Toxicity to microorganisms:	No data available.
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

### Ammonium Chloride

Acute toxicity to fish:	LC50/Cyprinus carpio/96 hours = 209 mg/L LC50/Oncorhynchus mykiss/96 hours = 209 mg/L (OECD 203)
Acute toxicity to invertebrates:	EC50/Daphnia magna/48 hours = 136.6mg/L (OECD 202)
Acute toxicity to algae:	IC50/Algae/240 hours = 90.4 mg/L.
Chronic toxicity to fish:	LC10/Lepomis macrochirus/30 days = 4,28 mg/L NOEC/ Pimephalespromelas/28days = 11.8 mg/L
Chronic toxicity to invertebrates:	NOEC/Daphnia magna/21 days = 14.6 mg/L
Toxicity to microorganisms:	EC50/activated sludge/0.5 hours = 1618 mg/L (OECD 209)
Effects on terrestrial organisms:	LCSO/Eisenia fetida/14 days = 163 mg/kg (EPA/600/3-88/029)
Sediment toxicity:	No data available.

## 12.2 Persistence and Degradability

### Information on the product as supplied:

Degradation:	Readily biodegradable.
Hydrolysis:	No data available.
Photolysis:	No data available.

### Relevant information on the hazardous components:

#### Distillates(petroleum),hydrotreatedlight:

Degradation:	Readily biodegradable. 67.6% / 28 days (OECD 301 F); 68.8% / 28 days (OECD) 306);61.2%/61 days (OECD 304 A)
Hydrolysis:	Does not hydrolyse.
Photolysis:	No data available.

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

Degradation:	Readily biodegradable. >> 70% / 28 days (OECD 301 B)
Hydrolysis:	No data available.
Photolysis:	No data available.

#### Amides, tal-oil fatty,N,N-bis(hydroxyethyl):

Degradation:	Readily biodegradable.
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Hydrolysis: No data available.  
Photolysis: No data available.

### Ammonium chloride:

Degradation: Not relevant (inorganic).  
Hydrolysis: No data available.  
Photolysis: No data available.

## 12.2 Bioaccumulative Potential

### Information on the product as supplied:

Partition co-efficient (Log Pow): No data available.  
Bioconcentration factor (BCF): No data available.

### Relevant information on the hazardous components:

#### Distillates(petroleum),hydrotreatedlight:

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

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

Partition co-efficient (Log Pow): Not applicable.  
Bioconcentration factor (BCF): No data available.

#### Amides, tal-oil fatty,N,N-bis(hydroxyethyl):

Partition co-efficient (Log Pow): No data available.  
Bioconcentration factor (BCF): No data available.

#### Ammonium chloride:

Partition co-efficient (Log Pow): Not applicable.  
Bioconcentration factor (BCF): No data available.

## 12.4 Mobility in soil

### Information on the product as supplied:

Exposure to soil is not to be expected.

Koc: No data available.

### Relevant information on the hazardous components:

#### Distillates(petroleum),hydrotreatedlight:

Koc: No data available.

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

Koc: No data available.

#### Amides, tal-oil fatty,N,N-bis(hydroxyethyl):

Koc: No data available.

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### Ammonium chloride:

Koc: No data available.

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## SECTION 13: Disposal Considerations

### Disposal of the product

Recycling, recovery, and reuse of materials is recommended if permitted by regulations. If recycling is not practicable, dispose of it in compliance with local regulations. Dispose of in accordance with local and national regulations. Can be landfilled or incinerated, when in compliance with local regulations.

### Disposal of contaminated packaging

Packages that cannot be cleaned must be disposed of the same way as the unused product. Must be disposed of in accordance with local and national regulations.

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## SECTION 14: Transport information

### DOT (US)

Not classified as dangerous in the meaning of transport regulations

### IMDG

Not classified as dangerous in the meaning of transport regulations

### IATA

Not classified as dangerous in the meaning of transport regulations

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## SECTION 15: Regulatory information

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

#### SARA 302 Components

This material does not contain any components with a section 302 EHS TPQ.

#### SARA 313 Components

While this product does not contain any component CAS numbers directly listed under SARA 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), it does contain ammonia chemical(s) that may be sources per EPA of aqueous ammonia, a reportable chemical. For our customer's use evaluation for reporting purposes, we have listed these source chemical(s) below with their quantities when present at >1%. Please refer to EPA Guidance for Reporting Aqueous Ammonia, EPA 745-R-00-005.

Ammonium Chloride	CAS 12125-02-9	>= 1 - <= 5 %
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#### SARA 311/312 Hazards

Immediate (Acute) Health Effects: Yes

#### 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

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### Pennsylvania Right To Know Components

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

### California Prop. 65 Components

WARNING: WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm: Diethanolamine, Acrylamide, 1,4-Dioxane, Ethylene oxide, Acetaldehyde, Ethylene glycol (ingested)

### Ammonium Chloride

**SARA Title III Sections:** 1.0%  
Section 313 (De minimis concentration)

### Clean Water Act

Section 311 Hazardous Substances (40 CFR 117.3)- Reportable Quantity: 5000 lbs

### CERCLA

Hazardous Substances List (40 CFR 302.4)- Reportable Quantity: 5000 lbs

**DOT RQ (lbs):**

5000 lbs

### The components of this product are reported in the following inventories:

TSCA: All components of this product are included in the United States TSCA Chemical Inventory with Active Status or are not required to be listed on the United States TSCA Chemical Inventory.

DSL: All components of this product are NOT included on the Canada Domestic Substances List (DSL) inventory.

### HMIS Rating

HMIS RATINGS (Hazardous Materials Identification System)	
<b>HEALTH</b>	<b>3</b>
<b>FLAMMABILITY</b>	<b>1</b>
<b>REACTIVITY</b>	<b>0</b>
<b>PERSONAL PROTECTION</b>	<b>D</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 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

Version 1