DSC FRICTION REDUCER

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identificer

Trade name: DSC FRICTION REDUCER

1.2 Relevant identified uses of the substance or mixture and uses advised against

- no data available

1.3 Details of the supplier of the safety data sheet

Company	Deep South Chemical, Inc. 229 Millstone Road Broussard, LA 70518 Office 337-837-9931

1.4 Emergency Telephone

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT CONTACT: CHEMTREC 800-424-9300 within the United States and Canada, or 703-527-3887 for international collect calls.

SECTION 2: Hazard identification

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

2.1 Classification of the substance or mixture

HCS 2012 (29 CFR 1910.1200)

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2A	H319: Causes serious eye irritation.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways

2.2. Label elements

HCS 2012 (29 CFR 1910.1200)

Pictogram

Signal Word
Danger
Hazard Statements:

- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.

- H319 Causes serious eye irritation.

Precautionary Statements

Prevention

- P264 Wash skin thoroughly after handling.
- P280 Wear eye protection/ face protection.
- P280 Wear protective gloves.

Response

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P331 Do NOT induce vomiting.
- P332 + P313 If skin irritation occurs: Get medical advice/ attention.
- P337 + P313 If eye irritation persists: Get medical advice/ attention.
- P362 Take off contaminated clothing and wash before reuse.

Storage

- P405 Store locked up.

Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards which do not result in classification

H402: Toxic to aquatic life
H412: Harmful to aquatic life with long lasting effects
- Aspiration of the swallowed or vomited product can cause severe pulmonary complications.
- Does NOT present any particular fire hazard.
- Hazardous reactions may occur on contact with certain chemicals. (Refer to the list of incompatible materials section 10:
"Stability-Reactivity").

SECTION 3 Composition/information on ingredients

3.1 Substance

Not applicable, this product is a mixture

3.2 Mixture

Chemical nature Emulsion of petroleum distillate and aqueous solution.

Hazardous ingredients and Impurities

DSC FRICTION REDUCER

Chemical Name	Identification Number CAS-No.	Concentration [%]
Petroleum Distillate	64742-47-8	15 – 20
Ammonium chloride (N(NH4)CI)	12125-02-9	<2
Oleic Acid Diethanolamide	93-83-4	<2

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Non Hazardous Ingredients and Impurities

Chemical Name	Identification Number CAS-No.	Concentration [%]
Water	7732-18-5	50 – 60

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice Show this material safety data sheet to the doctor in attendance.
First responder needs to protect himself.
Place affected apparel in a sealed bag for subsequent decontamination

In case of inhalation
- Remove to fresh air.
- If breathing is difficult, give oxygen.
- If breathing has stopped, apply artificial respiration.
- Consult a physician if necessary.

In case of skin contact
- Wash off with soap and plenty of water.
- Remove contaminated clothing and shoes.
- Wash contaminated clothing before re-use.
- Call a physician if irritation develops or persists

In case of eye contact
- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Consult a physician if necessary.

In case of ingestion
- Do NOT induce vomiting.
- Do not give anything to drink.
- Seek medical advice.
- Do not leave the victim unattended.
- Vomiting may occur spontaneously
- Risk of product entering the lungs on vomiting after ingestion.
- Lay victim on side.

4.2 Most important symptoms and effects, both acute and delayed

Effects
- No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

SECTION 5: Firefighting measures

Flash point **> 200 °F (> 93 °C)**
Flammability class: Will burn

Autoignition temperature > 419 °F (> 215 °C)

Flammability / Explosive limit
Lower flammability/explosion limit : no data available

Upper flammability/explosion limit : no data available

5.1 Extinguishing media

Suitable extinguishing media
- Water mist
- Carbon dioxide (CO2)
- Alcohol-resistant foam
- Dry chemical

Unsuitable extinguishing media
- Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting
- Under fire conditions:
- Will burn
- (following evaporation of water)
- Harmful or toxic vapors are released.

Hazardous combustion products:
- Hazardous combustion products
- Carbon oxides
- Nitrogen oxides (NOx)
- Sulfur oxides

5.3 Advice for firefighters

Special protective equipment for fire-fighters
- Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
- Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

Specific fire fighting methods
- Cool closed containers exposed to fire with water spray.
- Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Avoid contact with the skin and the eyes.
- Wear suitable protective equipment.
- For personal protection see section 8.
- Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2 Environmental precautions

- Do not let product enter drains.

- Prevent product from entering sewage system.
- Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies

6.3 Methods and materials for containment and cleaning up

Recovery

- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
- Sweep up and shovel into suitable containers for disposal.
- Never return spills in original containers for re-use.

Decontamination / cleaning

- Clean contaminated surface thoroughly.
- Wash off with plenty of water.
- Recover the cleaning water for subsequent disposal.
- Decontaminate tools, equipment and personal protective equipment in a segregated area.

Disposal

- Dispose of in accordance with local regulations.

Additional advice

- Material can create slippery conditions.

6.4 Reference to other sections

- no data available

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Avoid inhalation, ingestion and contact with skin and eyes.
- Handle in accordance with good industrial hygiene and safety practice.

Hygiene measures

- Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials:
- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
- Keep in a dry, cool and well-ventilated place.
- Keep container tightly closed.
- Do not freeze.
- Keep away from open flames, hot surfaces and sources of ignition.
- Keep away from incompatible materials to be indicated by the manufacturer

7.3 Specific end use(s)

- no data available

SECTION 8: Exposure Controls/Personal Protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers

8.1 Control parameters

Components with workplace occupational exposure limits

Ingredients	Value type	Value	Basis
Petroleum Distillate	TWA Danger of cutaneous absorption Expressed as :total hydrocarbon vapor	200 mg/m3	American Conference of Governmental Industrial Hygienists
Petroleum Distillate	TWA The value in mg/m3 is approximate.	500 ppm 2,000 mg/m3	Occupational Safety and Health Administration - Table Z-1 Limits for Air Contaminants
Ammonium chloride ((NH4)Cl)	TWA Form of exposure : Fumes	10 mg/m3	American Conference of Governmental Industrial Hygienists
Ammonium chloride ((NH4)Cl)	STEL Form of exposure : Fumes	20 mg/m3	American Conference of Governmental Industrial Hygienists
Ammonium chloride ((NH4)Cl)	TWA Form of exposure : Fumes	10 mg/m3	National Institute for Occupational Safety and Health
Ammonium chloride ((NH4)Cl)	ST Form of exposure : Fumes	20 mg/m3	National Institute for Occupational Safety and Health

8.2 Exposure controls

Control measures

Engineering measures

- Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures :
- Effective exhaust ventilation system

Individual protection measures

Respiratory protection

- When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.
- Use a respirator with an approved filter if a risk assessment indicates this is necessary.

Hand protection

- Where there is a risk of contact with hands, use appropriate gloves
- 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 must be inspected prior to use.
- Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection

- Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.
- Eye contact should be prevented through the use of:
- Safety glasses with side-shields

Skin and body protection

- Remove and wash contaminated clothing before re-use.
- Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Protective suit
- Boots

Hygiene measures

- Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials:
- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.

- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.

Protective measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- The protective equipment must be selected in accordance with current local standards and in cooperation with the supplier of the protective equipment.
- Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Color:	opaque white
Odor	oily
Odor Threshold	no data available
pH	6.0 - 7.0
Freezing point	< 50 °F (< 10 °C)
Boiling point/boiling range	> 212 °F (> 100 °C)
Flash point	> 200 °F (> 93 °C)
Flammability class:	Will burn
Evaporation rate (Butylacetate = 1)	no data available
Flammability (solid, gas)	no data available
Flammability (liquids)	no data available
Flammability / Explosive limit	Lower flammability/explosion limit: no data available Upper flammability/explosion limit: no data available
Autoignition temperature	> 419 °F (> 215 °C)
Vapor pressure	no data available
Vapor density	no data available
Density	1.0185 - 1.0988 g/cm3 (68 °F (20 °C))
Relative density:	1.02 - 1.10
Solubility	Water solubility : soluble, An emulsion is formed
Partition coefficient: n-octanol/water	no data available
Thermal decomposition	no data available
Viscosity	no data available
Explosive properties	no data available
Oxidizing properties	no data available

9.2 Other information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity
- no data available
10.2 Chemical stability
- Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
Polymerization
- Hazardous polymerization does not occur.
10.4 Conditions to avoid
- Heat, flames and sparks.
10.5 Incompatible materials
- Strong oxidizing agents
10.6 Hazardous decomposition products
- On combustion or on thermal decomposition (following the evaporation of water) releases:
- Nitrogen oxides (NOx)
- Sulfur oxides
- Carbon oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity
Acute oral toxicity Not classified as harmful if swallowed
According to the data on the components
According to the classification criteria for mixtures.
Acute inhalation toxicity no data available
Acute dermal toxicity no data available
Acute toxicity (other routes of administration)
no data available

Skin corrosion/irritation Irritating to skin.
According to the data on the components

Serious eye damage/eye irritation Irritating to eyes.
According to the data on the components

Respiratory or skin sensitization Does not cause skin sensitization.
According to the data on the components

Mutagenicity
Genotoxicity in vitro Product is not considered to be genotoxic
According to the data on the components
Genotoxicity in vivo Product is not considered to be genotoxic
According to the data on the components

Carcinogenicity
Petroleum Distillate Animal studies have shown tumor promotion effects
Weak local carcinogen
Published data
Unpublished reports
category approach

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This product does not contain any ingredient designated as probable or suspected human carcinogens by:

NTP
IARC
OSHA

Ingredients	CAS-No.	Rating	Basis
Petroleum Distillate	64742-47-8	Confirmed animal carcinogen with unknown relevance to humans	ACGIH

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Toxicity for reproduction and development
Toxicity to reproduction / fertility no data available
Developmental Toxicity/Teratogenicity no data available

STOT

STOT-single exposure The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT-repeated exposure The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
no data available
Neurological effects
Petroleum Distillate Information given is based on data obtained from similar substances.,
Published data, Rat, No neurotoxic effects observed.

CMR effects
Carcinogenicity
Petroleum Distillate Not classifiable as a human carcinogen.
Aspiration toxicity May be fatal if swallowed and enters airways.

Section 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish	LC50 - 96 h : 14.5 mg/l - Fish
Acute toxicity to daphnia and other aquatic invertebrates.	The product itself has not been tested.
Toxicity to aquatic plants	The product itself has not been tested.

12.2 Persistence and degradability no data available
12.3 Bioaccumulative potential
Bioconcentration factor (BCF) Conclusion is not possible due to incomplete or heterogeneous data on the components
12.4 Mobility in soil no data available
12.5 Results of PBT and vPvB assessment 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.
12.6 Other adverse effects no data available
Ecotoxicity assessment
Acute aquatic toxicity According to the data on the components
Toxic to aquatic life.
According to the classification criteria for mixtures.
Chronic aquatic toxicity According to the data on the components
Harmful to aquatic life with long lasting effects.
According to the classification criteria for mixtures.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product Disposal

- Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local

requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material

Waste Code
- Environmental Protection Agency
- Hazardous Waste – NO

Advice on cleaning and disposal of packaging
Completely empty the packaging prior to decontamination.
- Rinse with an appropriate solvent.
- Dispose of in accordance with local regulations.

Measure for waste avoidance or recovery
- Do not dispose of the product at a dump.

SECTION 14: Transport information

DOT
not regulated
TDG
not regulated
NOM
not regulate
IMDG
not regulated
IATA
not regulate

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory Information

15.1 Notification status

Inventory Information	Status
United States TSCA Inventory	On TSCA Inventory
Canadian Domestic Substances List (DSL)	All components of this product are on the Canadian DSL.
Australia Inventory of Chemical Substances (AICS)	On the inventory, or in compliance with the inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	On the inventory, or in compliance with the inventory
Korea. Korean Existing Chemicals Inventory (KECI)	On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	On the inventory, or in compliance with the inventory

15.2 Federal Regulations

US. EPA EPCRA SARA Title III

SARA Hazard Designation Sections 311/312 (40 CFR 370)

Fire Hazard	No
Reactivity Hazard	No
Sudden Release of Pressure Hazard	No
Acute Health Hazard	Yes
Chronic Health Hazard	No

Section 313 Toxic Chemicals (40 CFR 372.65)
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.
Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355) No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)

Ingredients	CAS-No	Reportable quantity
Ethylene Oxide	75-21-8	10 lb
Formaldehyde	50-00-0	100 lb

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)

Ingredients	CAS-No	Reportable quantity
Ethylene Oxide	75-21-8	10 lb
Formaldehyde	50-00-0	100 lb

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Ingredients	CAS-No	Reportable quantity
Diethanolamine	111-42-2	100 lb
Ammonium chloride ((NH4)Cl)	12125-02-9	5000 lb
Ethylene Oxide	75-21-8	10 lb

1,4-Dioxane	123-91-1	100 lb
Formaldehyde	50-00-0	100 lb
Methanol	67-56-1	5000 lb
Acetaldehyde	75-07-0	1000 lb

15.3 State Regulations

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

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

Ingredients	CAS-No
Diethanolamine	111-42-2
1,4-Dioxane	123-91-1
Acetaldehyde	75-07-0
Ethylene Oxide	75-21-8
Formaldehyde	50-00-0

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Ingredients	CAS-No
Methanol	67-56-1
Ethylene Oxide	73-21-8

SECTION 16: Other Information

NFPA (National Fire Protection Association) - Classification

Health	2 moderate
Flammability	1 slight
Instability or Reactivity	0 minimal

HMIS (Hazardous Materials Identification System (Paint & Coating)) – Classification

Health	2 moderate
Flammability	1 slight
Reactivity	0 minimal
PPE	Determined by User; dependent on local conditions

Further information

- Product evaluated under the US GHS format.

Date Prepared: 05/16/2015

Key or legend to abbreviations and acronyms used in the safety data sheet

- ST STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
- STEL Short-term exposure limit
- TWA 8-hour, time-weighted average
- ACGIH American Conference of Governmental Industrial Hygienists
- OSHA Occupational Safety and Health Administration
- NTP National Toxicology Program
- IARC International Agency for Research on Cancer
- NIOSH National Institute for Occupational Safety and Health

DSC FRICTION REDUCER

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. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.