



## Material Safety Data Sheet

# PRO SHALE SLIK-405

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	A

### 1. Product and Company Identification

<b>Material name</b>	<b>PRO SHALE SLIK-405</b>
<b>Patent Number</b>	Not available
<b>Revision date</b>	August-18-2011
<b>Version No.</b>	5
<b>CAS #</b>	Mixture
<b>Product use</b>	Friction Reducer
<b>Manufacturer information</b>	Clearwater™ International L.L.C. 100 Leetsdale Industrial Drive Leetsdale, PA 15056 US CHEMTREC 1-800-424-9300/703-527-3887
<b>Emergency</b>	CHEMTREC 1-800-424-9300/703-527-3887
<b>Supplier information</b>	Producers Service Corp. 109 South Graham St. Zanesville, OH 43701 US
<b>Supplier emergency telephone number(s)</b>	24hr customer Service 740-454-6253

### 2. Hazards Identification

<b>Emergency overview</b>	Irritating to skin. May cause eye irritation. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>OSHA regulatory status</b>	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
<b>Potential health effects</b>	
<b>Routes of exposure</b>	Skin contact.
<b>Eyes</b>	Contact with eyes may cause irritation. Avoid contact with eyes.
<b>Skin</b>	Irritating to skin. Avoid contact with the skin.
<b>Inhalation</b>	Avoid breathing vapors or mists of this product.
<b>Potential environmental effects</b>	May cause long-term adverse effects in the environment.

### 3. Composition / Information on Ingredients

Components	CAS #	Percent
Petroleum Distillates	64742-47-8	15 - 40



## 4. First Aid Measures

### First aid procedures

#### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops or persists.

#### Skin contact

Wash off immediately with soap and plenty of water. Remove and isolate contaminated clothing and shoes. Get medical attention if irritation develops or persists.

#### Inhalation

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

#### Ingestion

Rinse mouth. Do not induce vomiting without medical advice.

#### General advice

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire Fighting Measures

### Flammable properties

Burning may produce thick, irritating smoke.

### Extinguishing media

#### Suitable extinguishing media

Water. Water fog. Dry chemical, CO<sub>2</sub>, water spray or regular foam.

#### Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

### Protection of firefighters

#### Protective equipment and precautions for firefighters

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. ALWAYS stay away from tanks engulfed in flame. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Move containers from fire area if you can do it without risk. Do not scatter spilled material with high pressure water streams. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

## 6. Accidental Release Measures

### Personal precautions

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away. Stay upwind. Keep out of low areas.

### Methods for containment

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

### Methods for cleaning up

Should not be released into the environment.

Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. After removal flush contaminated area thoroughly with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

Never return spills in original containers for re-use.



## 7. Handling and Storage

<b>Handling</b>	Do not handle or store near an open flame, heat or other sources of ignition. Do not breathe vapors or spray mist. Avoid contact with skin. Avoid contact with eyes. Use only with adequate ventilation. Wear personal protective equipment. Avoid release to the environment. Wash thoroughly after handling.
<b>Storage</b>	Keep away from heat and sources of ignition (spark or flame). Keep container tightly closed. Keep in a well-ventilated place. Keep out of the reach of children. Use care in handling/storage.

## 8. Exposure Controls / Personal Protection

<b>Engineering controls</b>	Ensure adequate ventilation, especially in confined areas.
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	Avoid contact with eyes. Wear chemical goggles.
<b>Skin protection</b>	Avoid contact with the skin. Protective gloves. Impervious gloves. Wear appropriate chemical resistant clothing.
<b>Respiratory protection</b>	A NIOSH- approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.
<b>General hygiene considerations</b>	When using do not smoke. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical & Chemical Properties

<b>Appearance</b>	Opaque liquid.
<b>Color</b>	Milky. White
<b>Odor</b>	Oily.
<b>Odor threshold</b>	Not available
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>pH</b>	Not available
<b>Melting point</b>	Not available
<b>Freezing point</b>	< 14 °F (< -10 °C)
<b>Boiling point</b>	> 212 °F (> 100 °C)
<b>Flash point</b>	> 201 °F (> 93.9 °C)
<b>Evaporation rate</b>	Not available
<b>Flammability</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available
<b>Flammability limits in air, lower, % by volume</b>	Not available
<b>Vapor pressure</b>	Not available
<b>Vapor density</b>	Not available
<b>Specific gravity</b>	1.053 @25 C
<b>Relative density</b>	1.0529 g/cm <sup>3</sup> estimated



<b>Solubility (water)</b>	Not available
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Auto-ignition temperature</b>	> 419 °F (> 215 °C)
<b>Decomposition temperature</b>	Not available
<b>VOC</b>	50 %

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Stable at normal conditions.
<b>Conditions to avoid</b>	Heat, flames and sparks. Avoid temperature extremes.
<b>Incompatible materials</b>	Oxidizing agents.
<b>Hazardous decomposition products</b>	Carbon oxides. Nitrogen oxides (NO <sub>x</sub> ).
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

<b>Acute effects</b>	Acute LD50: 12199 mg/kg estimated, Rat, Oral Acute LD50: 9524 mg/kg estimated, Rat, Dermal Acute LC50: 26 mg/l/4h estimated, Rat, Inhalation
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### Component analysis - LD50

#### Toxicology Data - Selected LD50s and LC50s

Petroleum Distillates	64742-47-8	Inhalation LC50 Rat: >5.2 mg/L/4H; Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg
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<b>Sensitization</b>	May cause sensitization of susceptible persons. Not expected to be hazardous by OSHA criteria.
<b>Local effects</b>	Irritating to skin. Harmful if swallowed.
<b>Chronic effects</b>	Not expected to be hazardous by OSHA criteria.
<b>Carcinogenicity</b>	Not expected to be hazardous by OSHA criteria.
<b>Neurological effects</b>	Excessive exposure may cause central nervous system effects such as dizziness, drowsiness or headaches. Not expected to be hazardous by OSHA criteria.

## 12. Ecological Information

<b>Ecotoxicity</b>	Components of this product have been identified as having potential environmental concerns.
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#### Ecotoxicity - Freshwater Fish Species Data

Petroleum Distillates	64742-47-8	96 Hr LC50 Pimephales promelas: 45 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 1740 mg/L [static]
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#### Ecotoxicity - Water Flea Data

Petroleum Distillates	64742-47-8	96 Hr LC50 Den-dronereides heteropoda: 4720 mg/L
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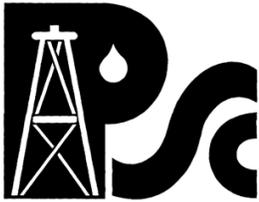
### Environmental effects

#### Ecotoxicity - Freshwater Fish Species Data

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#### Ecotoxicity - Water Flea Data

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### 13. Disposal Considerations

#### Disposal instructions

Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.20-24). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations. Dispose of contents/container in accordance with local/regional/national/international regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

### 14. Transport Information

#### Department of Transportation (DOT) Requirements

Not regulated as hazardous goods.

#### Department of Transportation (DOT) Requirements

##### Bulk

Not regulated as hazardous goods.

#### Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

#### Canadian Transportation of Dangerous Goods (TDG) Requirements

Not regulated as hazardous goods.

#### IMDG

Not regulated as hazardous goods.

#### IATA

Not regulated as hazardous goods.

### 15. Regulatory Information

#### Labelling

##### Contains

Petroleum Distillates

#### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

#### Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

#### CERCLA (Superfund) reportable quantity

Ammonium chloride: 5000.0000

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

##### Hazard categories

Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No



**Section 302 extremely hazardous substance** No  
**Section 311 hazardous chemical** Yes

**Inventory status**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**State regulations** WARNING: This product contains chemicals known to the State of California to cause cancer. Acrylamide (500ppm)

**U.S. - Texas - Effects Screening Levels - Long Term**

Petroleum Distillates 64742-47-8 350 µg/m3 ESL

**U.S. - Texas - Effects Screening Levels - Short Term**

Petroleum Distillates 64742-47-8 3500 µg/m3 ESL

**16. Other Information**

**HMIS® ratings**

Health: 1  
Flammability: 1  
Physical hazard: 0  
Personal protection: A

**NFPA ratings**

Health: 1  
Flammability: 1  
Instability: 0

**Prepared by**

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**Issue date**

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**MSDS sections updated**

This document has undergone significant changes and should be reviewed in its entirety.