

Safety Data Sheet

Bore-Commander

SDS Revision Date: 02/22/2018

1. Identification

1.1. Product identifier

Product Identity Bore-Commander
Alternate Names Anionic Liquid PHPA

1.2. Relevant identified uses of the substance or mixture and application method

Intended use Viscosifier/Shale-Clay Encapsulator
Application Method See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name NorthStar Fluids Solutions
P.O. Box 271036
Louisville, Colorado 80027, USA

Emergency

CHEMTREC (USA) (800) 424-9300
24 hour Emergency Telephone No. International +1-703-527-3887
Customer Service: NorthStar Fluid Solutions (303) 495-3130

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Skin corrosion/irritation	Category 2
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2.2. Label elements

Hazard Pictograms



Signal Word Warning
Hazard Statements H315 Causes skin irritation.

Precautionary Statements

[Prevention]:

P280 Wear protective gloves.
P264 Wash with plenty of water and soap thoroughly after handling.

[Response]:

P302 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing.

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[Storage]: None

[Disposal]:

P501

Dispose of contents/container as special waste in compliance with all regulations

2.3 Hazards not otherwise classified

Caution – Solutions extremely slippery when spilled

Causes skin irritation

May cause eye irritation

May cause gastrointestinal irritation, nausea, vomiting, and diarrhea

Avoid inhalation of mists/vapours.

3. Composition/information on ingredients

Substances	CAS Number	Concentration [%]	GHS Classification - US
Distillates (petroleum), hydrotreated light	64742-47-8	23 - 25%	Danger
Alcohols, C12-16, ethoxylated	68551-12-2	0 - 5%	Danger
Alcohols, C10-16, ethoxylated	68002-97-1	0 - 5%	Danger
Alcohols, C12-14, ethoxylated	68439-50-9	0 - 5%	Danger

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

Inhalation

Move to fresh air. Consult a physician if necessary.

Eyes

Rinse immediately with plenty of water for at least 15 minutes with eyelids held open. Obtain medical attention.

Skin

Take off contaminated clothing and shoes immediately. Wash off with soap and water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.

Ingestion

Immediately rinse mouth with water. Do NOT induce vomiting. Obtain immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

May cause eye and skin irritation.

5. Fire-fighting measures

5.1. Extinguishing media

Water spray, Carbon dioxide (CO₂), Dry chemical
Alcohol-resistant foam

5.2. Special hazards arising from the substance or mixture

No information available.

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5.3. Advice for fire-fighters

Full protective clothing and approved self-contained breathing apparatus required for firefighting personnel. In the event of fire, cool tanks with water spray.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Where the exposure level is not known, wear approved, positive pressure, self-contained respirator. Where the exposure level is known, wear approved respirator suitable for the level of exposure.

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Danger for slipping. Soak up with inert absorbent material. Take up mechanically and collect into suitable containers for disposal. Flush with water. Use detergent if needed.

7. Handling and storage

7.1. Precautions for safe handling

Ensure adequate ventilation. For personal protection see section 8.

7.2. Conditions for safe storage, including any incompatibilities

Flashpoint determination was performed using a Pensky Martens type closed cup method. The method indicates a flash point greater than 93,3° C (200° F). Although there was no flashpoint detected below 93,3° C (200° F) some flammable vapours were evolved during the test as evidenced by the enlargement of the flame. Therefore caution should be exercised during storage and handling.

Materials for packaging

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

8. Exposure controls and personal protection

8.1. Occupational Exposure Limits

Substance	ACGIH TLV-TWA	
Distillates (petroleum), hydrotreated light		TWA value 200 mg/m ³ Non-aerosol (total hydrocarbon vapor); Application restricted to conditions in which there are negligible aerosol exposures. Skin Designation Non-aerosol (total hydrocarbon vapor); The substance can be absorbed through the skin.

8.2. Exposure controls

Respiratory

When there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

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Eyes	Tightly fitting safety goggles
Hands	Impervious 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.
Skin	Protective clothing
Engineering Controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing. Do not breathe vapor. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation.
Other Work Practices	If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	White, viscous liquid
Odor	Hydrocarbon-like
Odor threshold	No data available
pH	5 - 8 @ 5 g/L
Melting point / freezing point	No data available
Initial boiling point and boiling range	175 °C / 347 °F
Flash Point	> 201 °F (Pensky-Martens)
Evaporation rate (Ether = 1)	< 1
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapor pressure (Pa)	No data available
Vapor Density	No data available
Specific Gravity	No data available
Solubility in Water	Soluble in water
Partition coefficient n-octanol/water (Log Kow)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	> 20.5 mm ² /s @ 40°C
Density	Approximately 1.1 g/cm ³

9.2. Other information

No data available

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10. Stability and reactivity

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Protect from frost, heat and sunlight.

10.5. Incompatible materials

Incompatible with oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition may produce: nitrogen oxides (NO_x), carbon oxides (CO_x). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

11. Toxicological information

11.1 Information on likely routes of exposure

Principle Route of Exposure Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Acute Toxicity

Eye Contact	May cause mild eye irritation.
Skin Contact	May cause mild skin irritation.
Aspiration	May cause mild respiratory irritation.
Ingestion	May cause mild gastric distress.

Chronic Toxicity/Effects

No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrotreated light petroleum distillate	64742-47-8	> 5000 mg/kg (Rat) (similar substance)	> 2000 mg/kg (Rabbit) (similar substance)	> 5.28 mg/L (Rat) 4h (similar substance)
Ethoxylated alcohol	Proprietary	1700 mg/kg (Rat) 1650 mg/kg (Dog) 1100 mg/kg (Rat) (similar substance) 2850 mg/kg (Rat)	> 2000 mg/kg (Rabbit) (similar substance)	> saturated concentration (similar substance)

Substances	CAS Number	Skin corrosion/irritation
Hydrotreated light petroleum distillate	64742-47-8	Non-irritating to the skin (similar substances)
Ethoxylated alcohol	Proprietary	Causes moderate skin irritation. (Rabbit) (similar substances)

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Substances	CAS Number	Eye damage/irritation
Hydrotreated light petroleum distillate	64742-47-8	Non-irritating to the eye (Rabbit)
Ethoxylated alcohol	Proprietary	Causes severe eye irritation which may damage tissue. (Rabbit) (similar substances)

Substances	CAS Number	Skin Sensitization
Hydrotreated light petroleum distillate	64742-47-8	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)
Ethoxylated alcohol	Proprietary	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)

Substances	CAS Number	Respiratory Sensitization
Hydrotreated light petroleum distillate	64742-47-8	No information available
Ethoxylated alcohol	Proprietary	No information available

Substances	CAS Number	Mutagenic Effects
Hydrotreated light petroleum distillate	64742-47-8	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)
Ethoxylated alcohol	Proprietary	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Hydrotreated light petroleum distillate	64742-47-8	Did not show carcinogenic effects in animal experiments
Ethoxylated alcohol	Proprietary	Did not show carcinogenic or teratogenic effects in animal experiments (similar substances)

Substances	CAS Number	Reproductive toxicity
Hydrotreated light petroleum distillate	64742-47-8	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)
Ethoxylated alcohol	Proprietary	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)

Substances	CAS Number	STOT - single exposure
Hydrotreated light petroleum distillate	64742-47-8	May cause disorder and damage to the Central Nervous System (CNS) (similar substances)
Ethoxylated alcohol	Proprietary	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	STOT - repeated exposure
Hydrotreated light petroleum distillate	64742-47-8	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Ethoxylated alcohol	Proprietary	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	Aspiration hazard
Hydrotreated light petroleum distillate	64742-47-8	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Ethoxylated alcohol	Proprietary	Not applicable

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12. Ecological information

12.1. Toxicity

Aquatic Ecotoxicity

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Hydrotreated light petroleum distillate	64742-47-8	EC50 (72h) > 1,000 mg/L (Skeletonema costatum) ErL50 (72h) > 1000 mg/L (Pseudokirchneriella subcapitata) EbL50 (72h) > 1000 mg/L (Pseudokirchneriella subcapitata) NOELR (72h) 1000 mg/L (Pseudokirchneriella subcapitata)	LC50 (96h) > 10,000 mg/L (Scophthalmus maximus) LL50 (96h) > 1000 mg/L (Oncorhynchus mykiss)	No information available	LC50 (48h) > 10,000 mg/L (Acartia tonsa) EC50 (48h) 1100 mg/L (Daphnia pulex) LC50 (48h) 0.12 mg/L (Daphnia magna) EL50 (48h) > 1000 mg/L (Daphnia magna)
Ethoxylated alcohol	Proprietary	EC50 (48h) 2-4 mg/L (Selenastrum capricornutum) (similar substance) ErC50 (72h) 0.282 mg/L (Selenastrum capricornutum) (similar substance) ErC10 0.137 mg/L (Scenedesmus subspicatus) (similar substance)	2.6 mg/L (Brachydanio rerio) (similar substance) LC50 (96h) 1.1 mg/L (Salmo gairdneri) (similar substance) NOEC 0.88 mg/L (reproduction) (Lepomis macrochirus) (similar substance)	No information available	EC50 (48h) 1.2 mg/L (Daphnia magna) (Similar substance) EC50 (48h) 0.6 mg/L (Daphnia magna) (Similar substance) NOEC (21d) 0.77 mg/L (reproduction) (Daphnia magna) (Similar substance)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Hydrotreated light petroleum distillate	64742-47-8	Readily biodegradable (40% @ 28d)
Ethoxylated alcohol	Proprietary	Readily biodegradable (40% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Hydrotreated light petroleum distillate	64742-47-8	No information available
Ethoxylated alcohol	Proprietary	5.17

12.4. Mobility in soil

Substances	CAS Number	Mobility
Hydrotreated light petroleum distillate	64742-47-8	No information available
Ethoxylated alcohol	Proprietary	Kd = 3.07 L/kg Kd = 3.09 L/kg

12.5. Results of PBT and vPvB assessment

No information available

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12.6. Other adverse effects

No information available

13. Disposal considerations

13.1. Waste treatment methods

Disposal Method

Disposal should be made in accordance with federal, state, and local regulations.

Container disposal

Follow all applicable national or local regulations.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not restricted	Not restricted	Not restricted
14.2. UN proper shipping name	Not restricted	Not restricted	Not restricted
14.3. Transport hazard class(es)	DOT Hazard Class: Not applicable	IMDG: Not applicable Sub Class: Not applicable	Air Class: Not applicable
14.4. Packing group	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
IMDG	Not applicable		
14.6. Special precautions for user	None		

15. Regulatory information

US Regulations

US TSCA Inventory All components listed on inventory or are exempt.

EPA SARA Title III Extremely Hazardous Substances Not applicable

EPA SARA (311,312) Hazard Class Not determined

California Proposition 65 Regulation. All components listed do not apply to the California Proposition 65

MA Right-to-Know Law Does not apply.

NJ Right-to-Know Law Does not apply.

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PA Right-to-Know Law

Does not apply.

**Canadian Regulations
Canadian DSL Inventory**

All components listed on inventory or are exempt.

16. Other information

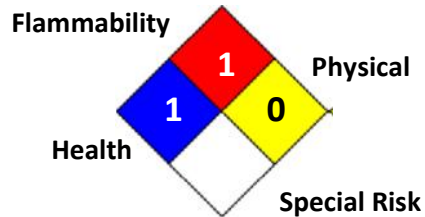
This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

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Emergency Overview:

Risk Classification System:

HEALTH	1
FLAMMABILITY	1
PHYSICAL	0
PPE	C



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