

MATERIAL SAFETY DATA SHEET

Product Trade Name: N-SOLATE 400 XLINK1

Revision Date: 04-Jan-2011

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: N-SOLATE 400 XLINK1
Synonyms: None
Chemical Family: Amine
Application: Crosslinker
Manufacturer/Supplier: Baroid Fluid Services
a Product Service Line of Halliburton Energy Services, Inc.
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Houston, TX 77251
Telephone: (281) 871-4000
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Prepared By: Chemical Compliance
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT	ACGIH TLV-TWA	OSHA PEL-TWA
Hexamethylenetetramine	100-97-0	60 - 100%	Not applicable	Not applicable

3. HAZARDS IDENTIFICATION

Hazard Overview Flammable. May cause allergic skin and respiratory reaction. May be harmful if swallowed. May cause eye, skin, and respiratory irritation. May be absorbed through the skin.

4. FIRST AID MEASURES

Inhalation If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

Skin Remove contaminated clothing and launder before reuse. Get medical attention if irritation persists. Wash with soap and water.

Eyes In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Notes to Physician Not Applicable

5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	482
Flash Point/Range (C):	250
Flash Point Method:	Not Determined
Autoignition Temperature (F):	Not Determined
Autoignition Temperature (C):	Not Determined
Flammability Limits in Air - Lower (%):	Not Determined
Flammability Limits in Air - Upper (%):	Not Determined

Fire Extinguishing Media Water fog, carbon dioxide, foam, dry chemical.

Special Exposure Hazards Decomposition in fire may produce toxic gases. Organic dust in the presence of an ignition source can be explosive in high concentrations. Good housekeeping practices are required to minimize this potential.

Special Protective Equipment for Fire-Fighters Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

NFPA Ratings: Health 1, Flammability 1, Reactivity 0
HMS Ratings: Health 1, Flammability 1, Physical Hazard 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures Prevent from entering sewers, waterways, or low areas.

Procedure for Cleaning / Absorption Scoop up and remove.

7. HANDLING AND STORAGE

Handling Precautions Avoid contact with eyes, skin, or clothing. Wash hands after use. Avoid creating or inhaling dust.

Storage Information Store in a dry location. Store in a cool well ventilated area. Keep from heat, sparks, and open flames. Keep container closed when not in use. Product has a shelf life of 6 months.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

Respiratory Protection If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional.

Dust/mist respirator. (95%)

Hand Protection Nitrile gloves.

Skin Protection Normal work coveralls.

Eye Protection Wear safety glasses or goggles to protect against exposure.

Other Precautions

None known.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Color:	White
Odor:	Mild amine
pH:	8
Specific Gravity @ 20 C (Water=1):	1.33
Density @ 20 C (lbs./gallon):	Not Determined
Bulk Density @ 20 C (lbs/ft3):	46
Boiling Point/Range (F):	Not Determined
Boiling Point/Range (C):	Not Determined
Freezing Point/Range (F):	Not Determined
Freezing Point/Range (C):	Not Determined
Vapor Pressure @ 20 C (mmHg):	2.63
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	Not Determined
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	81
Solubility in Solvents (g/100ml):	Not Determined
VOCs (lbs./gallon):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	Not Determined
Viscosity, Kinematic @ 20 C (centistokes):	Not Determined
Partition Coefficient/n-Octanol/Water:	Not Determined
Molecular Weight (g/mole):	140.16

10. STABILITY AND REACTIVITY

Stability Data:	Stable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid	Keep away from heat, sparks and flame.
Incompatibility (Materials to Avoid)	Strong oxidizers. Strong acids. Anhydrides. Isocyanates. Acrylates. Ketones. Aldehydes. Alcohols. Amphoteric metals such as aluminum, magnesium, lead, tin, or zinc.
Hazardous Decomposition Products	Toxic fumes. Ammonia. Hydrocarbons. Hydrogen cyanide. Phenol. Aldehydes. Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation.
Inhalation	May cause respiratory irritation. May cause allergic respiratory reaction.
Skin Contact	May cause skin irritation. May be absorbed through the skin and contribute to the symptoms listed under ingestion. May cause an allergic skin reaction.
Eye Contact	May cause eye irritation.
Ingestion	May cause abdominal pain, vomiting, nausea, and diarrhea. Irritation of the mouth, throat, and stomach.
Aggravated Medical Conditions	Skin disorders.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 1% are chronic health hazards.

Other Information None known.

Toxicity Tests

Oral Toxicity: LD50: 9200 mg/kg (Rat)

Dermal Toxicity: Not determined

Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity Not determined

Genotoxicity: Not determined

**Reproductive /
Developmental Toxicity:** Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air) Not determined

Persistence/Degradability Not applicable

Bio-accumulation Not determined

Ecotoxicological Information

Acute Fish Toxicity: TLM96: 49800 mg/l (Pimephales promelas)

Acute Crustaceans Toxicity: TLM48: 3600 mg/l (Daphnia magna)

Acute Algae Toxicity: Not determined

Chemical Fate Information Not determined

Other Information Not applicable

13. DISPOSAL CONSIDERATIONS

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

Contaminated Packaging Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

Land Transportation

DOT

UN1328, Hexamethylenetetramine, 4.1, III
NAERG 133

Canadian TDG

Hexamethylenetetramine, 4.1, UN1328, III

ADR

UN1328,Hexamethylenetetramine, 4.1, III

Air Transportation

ICAO/IATA

UN1328,Hexamethylenetetramine, 4.1, III

Sea Transportation

IMDG

UN1328,Hexamethylenetetramine, 4.1, III

EmS F-A, S-G

Other Shipping Information

Labels: Flammable Solid

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 Fire Hazard
Acute Health Hazard

EPA SARA (313) Chemicals This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).

EPA CERCLA/Superfund Reportable Spill Quantity Not applicable.

EPA RCRA Hazardous Waste Classification If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of:

Ignitability D001

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

MA Right-to-Know Law Does not apply.

NJ Right-to-Know Law One or more components listed.

PA Right-to-Know Law Does not apply.

Canadian Regulations

Canadian DSL Inventory All components listed on inventory.

16. OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS

Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Chemical Compliance at 1-580-251-4335.

Disclaimer Statement

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*****END OF MSDS*****