

MATERIAL SAFETY DATA SHEET

Product Trade Name: HZ-20

Revision Date: 24-Apr-2013

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Statement of Hazardous Nature Hazardous according to the criteria of NOHSC, Dangerous Goods according to the criteria of ADG.

Manufacturer/Supplier Halliburton Australia Pty. Ltd.
15 Marriott Road
Jandakot
WA 6164
Australia

ACN Number: 009 000 775
Telephone Number: 61 (08) 9455 8300
Fax Number: 61 (08) 9455 5300

Product Emergency Telephone

Australia: 08-64244950
Papua New Guinea: 05 1 281 575 5000
NewZealand: 06-7559274

Fire, Police & Ambulance - Emergency Telephone

Australia: 000
Papua New Guinea: 000
New Zealand: 111

Identification of Substances or Preparation

Product Trade Name: HZ-20
Synonyms: None
Chemical Family: Polymer
UN Number: , UN3082
Dangerous Goods Class: 9
Subsidiary Risk: None
Hazchem Code: None Allocated
Poisons Schedule: None Allocated
Application: Additive

Prepared By Chemical Compliance
Telephone: 1-580-251-4335
e-mail: fdunexchem@halliburton.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Substances | CAS Number | PERCENT | Australia NOHSC | New Zealand WES | ACGIH TLV-TWA |
|------------|-------------|----------|--------------------|--------------------|----------------|
| Polyamine | Proprietary | 30 - 60% | Not applicable | Not applicable | Not applicable |

Non-Hazardous Substance to Total of 100%

3. HAZARDS IDENTIFICATION

| | |
|----------------------------|--|
| Hazard Overview | May cause eye irritation. |
| Risk Phrases | R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| HSNO Classification | 9.1B Ecotoxic in the aquatic environment |

4. FIRST AID MEASURES

| | |
|---------------------------|---|
| Inhalation | If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult. |
| Skin | 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 | Under normal conditions, first aid procedures are not required. |
| Notes to Physician | Not Applicable |

5. FIRE FIGHTING MEASURES

| | |
|--|--|
| Suitable Extinguishing Media | Water fog, carbon dioxide, foam, dry chemical. |
| Extinguishing media which must not be used for safety reasons | None known. |
| Special Exposure Hazards | Decomposition in fire may produce toxic gases. |
| Special Protective Equipment for Fire-Fighters | Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|---|--|
| Personal Precautionary Measures | Use appropriate protective equipment. |
| Environmental Precautionary Measures | Prevent from entering sewers, waterways, or low areas. |
| Procedure for Cleaning / Absorption | Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove. |

7. HANDLING AND STORAGE

| | |
|-----------------------------|--|
| Handling Precautions | Avoid contact with eyes, skin, or clothing. |
| Storage Information | Store in a dry location. Store in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 24 months. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| | |
|------------------------|--|
| Engineering Controls | Use in a well ventilated area. |
| Respiratory Protection | Not normally needed. But if significant exposures are possible then the following respirator is recommended: Dust/mist respirator. (N95, P2/P3) |
| Hand Protection | Impervious rubber 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: | Liquid |
| Color: | Yellow |
| Odor: | Mild amine |
| pH: | 12 |
| Specific Gravity @ 20 C (Water=1): | 1.05 |
| Density @ 20 C (kg/l): | 1.05 |
| Bulk Density @ 20 C (kg/m ³): | Not Determined |
| Boiling Point/Range (C): | 100 |
| Freezing Point/Range (C): | -15 |
| Pour Point/Range (C): | Not Determined |
| Flash Point/Range (C): | Not DeterminedMin: > 100 |
| Flash Point Method: | Not Determined |
| Autoignition Temperature (C): | Not Determined |
| Flammability Limits in Air - Lower (g/m ³): | Not Determined |
| Flammability Limits in Air - Lower (%): | Not Determined |
| Flammability Limits in Air - Upper (g/m ³): | Not Determined |
| Flammability Limits in Air - Upper (%): | Not Determined |
| Vapor Pressure @ 20 C (mmHg): | Not Determined |
| Vapor Density (Air=1): | Not Determined |
| Percent Volatiles: | Not Determined |
| Evaporation Rate (Butyl Acetate=1): | Not Determined |
| Solubility in Water (g/100ml): | Miscible |
| Solubility in Solvents (g/100ml): | Not Determined |
| VOCs (g/l): | 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): | Not Determined |
| Decomposition Temperature (C): | Not Determined |

10. STABILITY AND REACTIVITY

| | |
|--------------------------------------|---|
| Stability Data: | Stable |
| Hazardous Polymerization: | Will Not Occur |
| Conditions to Avoid | None anticipated |
| Incompatibility (Materials to Avoid) | Strong oxidizers. |
| Hazardous Decomposition Products | Oxides of nitrogen. Carbon monoxide and carbon dioxide. |

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure Eye or skin contact, inhalation.

Symptoms related to exposure

Inhalation May cause mild respiratory irritation.

Skin Contact May cause skin irritation.

Eye Contact None known. May cause eye irritation.

Ingestion None known

Aggravated Medical Conditions None known.

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: > 2000 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 COD: 20-70%

Bio-accumulation Not determined

Ecotoxicological Information

Acute Fish Toxicity: Not determined

Acute Crustaceans Toxicity: Not determined

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.

14. TRANSPORT INFORMATION**Land Transportation****ADR**

UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Polyethyleneimine), 9, III, Marine Pollutant

Air Transportation**ICAO/IATA**

UN3082, Environmentally Hazardous Substance, Liquid, N.O.S., 9, III
(Contains Polyethyleneimine), Marine Pollutant

Sea Transportation**IMDG**

UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Polyethyleneimine), 9, III, Marine Pollutant
EmS F-A, S-F

Other Transportation Information

Labels: Miscellaneous - Class 9
Marine Pollutant

15. REGULATORY INFORMATION**Chemical Inventories****Australian AICS Inventory
New Zealand Inventory of
Chemicals**

All components listed on inventory or are exempt.
This product does not comply with NZIOC

**US TSCA Inventory
EINECS Inventory**

All components listed on inventory or are exempt.
This product does not comply with EINECS

Classification

N - Dangerous For The Environment.

Risk Phrases

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases

S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

16. OTHER INFORMATION

The following sections have been revised since the last issue of this SDS
Not applicable

Contact

Australian Poisons Information Centre

24 Hour Service: - 13 11 26

Police or Fire Brigade: - 000 (exchange): - 1100

New Zealand National Poisons Centre

0800 764 766

Additional Information

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

For questions about the 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*****