

MATERIAL SAFETY DATA SHEET

Product Trade Name: N-FLOW™ 325

Revision Date: 08-Apr-2014

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

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

Manufacturer/Supplier Halliburton Australia Pty. Ltd.
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WA 6164
Australia

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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: N-FLOW™ 325
Synonyms: None
Chemical Family: Ester
UN Number: , UN3265
Dangerous Goods Class: None
Subsidiary Risk: None
Hazchem Code: None Allocated
Poisons Schedule: None Allocated
Application: Breaker

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

2. HAZARDS IDENTIFICATION

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

Hazard Overview Causes severe eye burns Causes severe skin burns. May be harmful if swallowed.

Classification	Xn - Harmful. C - Corrosive.
Risk Phrases	R22 Harmful if swallowed. R34 Causes burns. R52 Harmful to aquatic organisms.
Safety Phrases	S25 Avoid contact with eyes. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S39 Wear eye and face protection. S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.
HSNO Classification	8.2C Corrosive to dermal tissue if exposed for greater than 1 hour 8.3A Corrosive to ocular tissue 6.1D Acutely Toxic Substances 9.1C Harmful in the aquatic environment

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	Australia NOHSC	New Zealand WES	ACGIH TLV-TWA
Diethylene Glycol Diformate	120570-77-6	60 - 100%	Not applicable	Not applicable	Not applicable

Non-Hazardous Substance to Total of 100%

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. Get medical attention if irritation persists.
Eyes	Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.
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

Suitable Extinguishing Media

Carbon dioxide, dry chemical, foam.

Extinguishing media which must not be used for safety reasons

None known.

Special Exposure Hazards	Decomposition in fire may produce toxic gases. Avoid spraying water directly into storage containers due to danger of boilover. Use water spray to cool fire exposed surfaces.
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 contamination of soil. 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. Avoid breathing vapors.
Storage Information	Store away from oxidizers. Store in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 60 months.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls	Use in a well ventilated area.
Personal Protective Equipment	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.
Respiratory Protection	Not normally necessary. 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, AS/NZS 1715:2009, 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.
Hand Protection	Impervious rubber gloves. Polyvinylchloride gloves.
Skin Protection	Rubber apron. Rubber boots.
Eye Protection	Chemical goggles; also wear a face shield if splashing hazard exists.
Other Precautions	Eyewash fountains and safety showers must be easily accessible.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Clear colorless to pale yellow
Odor:	Characteristic
pH:	2.8

Specific Gravity @ 20 C (Water=1):	1.19
Density @ 20 C (kg/l):	1.2
Bulk Density @ 20 C (kg/M3):	Not Determined
Boiling Point/Range (C):	238
Freezing Point/Range (C):	Not Determined
Pour Point/Range (C):	Not Determined
Flash Point/Range (C):	100
Flash Point Method:	Not Determined
Autoignition Temperature (C):	335
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):	15
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	Not Determined
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	Soluble
Solubility in Solvents (g/100ml):	Not Determined
VOCs (g/l):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	9 mPas
Viscosity, Kinematic @ 20 C (centistokes):	Not Determined
Partition Coefficient/n-Octanol/Water:	-0.96
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	Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation.
Symptoms related to exposure	
Acute Toxicity	
Inhalation	May cause respiratory irritation.
Eye Contact	May cause eye burns.
Skin Contact	May cause skin burns.
Ingestion	May be harmful if swallowed.
Chronic Effects/Carcinogenicity	No data available to indicate product or components present at greater than 1% are chronic health hazards.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diethylene Glycol Diformate	120570-77-6	390 mg/kg 1510 mg/kg (Rat) (similar substance – ethylene glycol diformate) 390 mg/kg (Guinea pig) (similar substance – ethylene glycol diformate)	No data available	> 5.05 mg/L (Rat) 4h (similar substance – ethylene glycol diformate)

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

Ecotoxicity Product

Acute Fish Toxicity:	LC50: 421.7 mg/l (Scophthalmus maximus)
Acute Crustaceans Toxicity:	LC50: 55.7 mg/l (Acartia tonsa)
Acute Algae Toxicity:	EC50: 316 mg/l (Skeletonema costatum)

Ecotoxicity Substance

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Diethylene Glycol Diformate	120570-77-6	EC50: 316 mg/l (Skeletonema costatum) EC50(72h): 207.8 mg/L (growth rate) (Skeletonema costatum)	LC50: 421.7 mg/l (Scophthalmus maximus) LC50(96h): >33.1 mg/L (Scophthalmus maximus)	EC50(3h): 940 mg/L (respiration rate) (Activated sludge)	LC50: 55.7 mg/l (Acartia tonsa) EC50(48h): 33.1 mg/L (Acartia tonsa)

12.2 Persistence and degradability

Readily biodegradable

12.3 Bioaccumulative potential

Does not bioaccumulate

Substances	Log Pow
Diethylene Glycol Diformate	-0.96

12.4 Mobility in soil

No information available

12.5 Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

12.6 Other adverse effects

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

ADR

UN3265, Corrosive Liquid, Acidic, Organic, N.O.S (Contains Diethylene Glycol Diformate) , 8 , III

Air Transportation

ICAO/IATA

UN3265, Corrosive Liquid, Acidic, Organic, N.O.S , 8 , III (Contains Diethylene Glycol Diformate)

Sea Transportation

IMDG

UN3265, Corrosive Liquid, Acidic, Organic, N.O.S (Contains Diethylene Glycol Diformate) , 8 , III
EmS F-A, S-B

Other Transportation Information

Labels: Corrosive

15. REGULATORY INFORMATION

Chemical Inventories

Australian AICS Inventory
New Zealand Inventory of Chemicals
US TSCA Inventory
EINECS Inventory

Product contains one or more components not listed on inventory.
This product does not comply with NZIOC

Product contains one or more components not listed on the inventory.
This product, and all its components, complies with EINECS

Classification

Xn - Harmful.

C - Corrosive.

Risk Phrases

R22 Harmful if swallowed.

R34 Causes burns.

R52 Harmful to aquatic organisms.

Safety Phrases

S25 Avoid contact with eyes.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S39 Wear eye and face protection.

S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

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*****