

MATERIAL SAFETY DATA SHEET

Product Trade Name: DCA-19003

Revision Date: 22-Sep-2014

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.
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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: DCA-19003
Synonyms: None
Chemical Family: Blend
UN Number: UN1274
Dangerous Goods Class: 3
Subsidiary Risk: None
Hazchem Code: 2[S]E
Poisons Schedule: None Allocated
Application: Crosslinker

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

2. HAZARDS IDENTIFICATION

Hazard Overview May cause severe eye irritation. May be harmful if swallowed. May cause headache, dizziness, and other central nervous system effects. May cause lung damage if swallowed. May be absorbed through the skin. Flammable.

Classification	Xi - Irritant.
Risk Phrases	R10 Flammable. R41 Risk of serious damage to eyes. R67 Vapours may cause drowsiness and dizziness.
Safety Phrases	S2 Keep out of reach of children. S7 Keep container tightly closed. S16 Keep away from sources of ignition - No Smoking. S24 Avoid contact with skin. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S39 Wear eye and face protection.
HSNO Classification	3.1B Flammable Liquids - High hazard 6.1D (Oral) Acutely Toxic Substances 6.1E (Dermal) Acutely Toxic Substances 6.4A Irritating to the eye 9.3C Harmful to terrestrial vertebrates

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	Australia NOHSC	New Zealand WES	ACGIH TLV-TWA
Propanol	71-23-8	10 - 30%	TWA: 200 ppm TWA: 492 mg/m ³ STEL: 250 ppm STEL: 614 mg/m ³	STEL: 250 ppm STEL: 614 mg/m ³ TWA: 200 ppm TWA: 492 mg/m ³	TWA: 100 ppm

Non-Hazardous Substance to Total of 100%

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	In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.
Eyes	In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.
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	Activated charcoal or gastric lavage may be advisable for significant ingestion.

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 May be ignited by heat, sparks or flames. Fight fire from a safe distance and from a protected location. Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. 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. Remove ignition sources and work with non-sparking tools. 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. Wash hands after use. Launder contaminated clothing before reuse. Ground and bond containers when transferring from one container to another.

Storage Information Store away from oxidizers. Store away from acids. Keep from heat, sparks, and open flames. Keep container closed when not in use. Product has a shelf life of 12 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, 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.
Organic vapor respirator.

Hand Protection Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Nitrile gloves. (>= 0.35 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.

Skin Protection	Rubber apron.
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:	Yellow
Odor:	Alcohol
pH:	7-9
Specific Gravity @ 20 C (Water=1):	1.091
Density @ 20 C (kg/l):	1.09
Bulk Density @ 20 C (kg/M3):	Not Determined
Boiling Point/Range (C):	98
Freezing Point/Range (C):	Not Determined
Pour Point/Range (C):	Not Determined
Flash Point/Range (C):	28
Flash Point Method:	PMCC
Autoignition Temperature (C):	Not Determined
Flammability Limits in Air - Lower (g/m³):	Not Determined
Flammability Limits in Air - Lower (%):	Not Determined
Flammability Limits in Air - Upper (g/m³):	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):	Soluble
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	Keep away from heat, sparks and flame.
Incompatibility (Materials to Avoid)	Strong oxidizers. Strong acids.
Hazardous Decomposition Products	Olefins. Oxides of nitrogen. Other organic materials. Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation.
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Symptoms related to exposure

Acute Toxicity

Inhalation

May cause respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Eye Contact

May cause severe eye irritation.

Skin Contact

May cause skin irritation. May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion. May cause an allergic skin reaction.

Ingestion

Aspiration can be a hazard if this material is swallowed. May cause central nervous system depression including headache, dizziness, drowsiness, muscular weakness, incoordination, slowed reaction time, fatigue blurred vision, slurred speech, giddiness, tremors and convulsions.

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
Propanol	71-23-8	5400 mg/kg (Rat) 6500 mg/kg (Rat) 8000 mg/kg (Rat) 1870 mg/kg (Rat)	4032 mg/kg (Rabbit) 4055 mg/kg (Rabbit)	13548 ppm (Rat, 4h) > 9.8 mg/ml (Rat, 4h)

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

Ecotoxicity Product

Acute Fish Toxicity:	Not determined
Acute Crustaceans Toxicity:	Not determined
Acute Algae Toxicity:	Not determined

Ecotoxicity Substance

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Propanol	71-23-8	EC50(48h): 9170 mg/L (Pseudokirchnerella subcapitata)	LC50(96h): 4555 mg/L (Pimephales promelas) LC50(96h): 3800 mg/L (Alburnus alburnus)	IC50(3h): > 1000 mg/L (activated sludge, domestic) EC50(12h): 9600 mg/L (activated sludge)	EC50(48h): 1000 mg/L (Gammarus pulex) EC50(48h): 3644 mg/L (Daphnia magna) NOEC(21d): > 100 mg/L (Daphnia magna)

12.2. Persistence and degradability

No information available

Substances	CAS Number	Persistence and Degradability
Propanol	71-23-8	Readily biodegradable (76% @ 10d)

12.3. Bioaccumulative potential

No information available

Substances	CAS Number	Log Pow
Propanol	71-23-8	0.2 BCF: 0.88 (calculated)

12.4. Mobility in soil

No information available

12.5. Results of PBT and vPvB assessment

No information available.

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

Australia Dangerous Goods

UN Number:	UN1274
UN Proper Shipping Name:	n-Propanol Solution
Transport Hazard Class(es):	3
Packing Group:	III

IMDG/IMO

UN Number:	UN1274
UN Proper Shipping Name:	n-Propanol Solution
Transport Hazard Class(es):	3
Packing Group:	III
Environmental Hazards:	Not applicable
EMS:	EmS F-E, S-D

IATA/ICAO

UN Number:	UN1274
UN Proper Shipping Name:	n-Propanol Solution
Transport Hazard Class(es):	3
Packing Group:	III

Special Precautions for User: None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

15. REGULATORY INFORMATION

Chemical Inventories

Australian AICS Inventory	All components listed on inventory or are exempt.
New Zealand Inventory of Chemicals	All components listed on inventory or are exempt.
US TSCA Inventory	All components listed on inventory or are exempt.
EINECS Inventory	This product, and all its components, complies with EINECS

Classification Xi - Irritant.

Risk Phrases R10 Flammable.
R41 Risk of serious damage to eyes.
R67 Vapours may cause drowsiness and dizziness.

Safety Phrases

S2 Keep out of reach of children.
S7 Keep container tightly closed.
S16 Keep away from sources of ignition - No Smoking.
S24 Avoid contact with skin.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S39 Wear eye and face protection.

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*****