HALLIBURTON

MATERIAL SAFETY DATA SHEET

Product Trade Name: **PARAGON 100 E+**

Revision Date: 06-Feb-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.
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:	PARAGON 100 E+
Synonyms:	None
Chemical Family:	Aromatic hydrocarbon
UN Number:	None
Dangerous Goods Class:	None
Subsidiary Risk:	None
Hazchem Code:	3[Y]
Poisons Schedule:	S6
Application:	Solvent

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

May cause eye, skin, and respiratory irritation. May cause headache, dizziness, and other central nervous system effects. May be harmful if swallowed. Potential carcinogen. May cause lung damage if swallowed. Combustible

Classification

Xn - Harmful.

Risk Phrases

R65 Harmful: may cause lung damage if swallowed.
R40 Limited evidence of a carcinogenic effect.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases

S2 Keep out of reach of children.

S23 Do not breathe gas, fumes, vapour or spray.

S24 Avoid contact with skin.

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

HSNO Classification

3.1D Flammable Liquids - Low hazard
6.1D (Oral) Acutely Toxic Substances
6.3B Mildly irritating to the skin
6.4A Irritating to the eye
6.7B Suspected human carcinogens
6.9B Harmful to human target organs or systems
9.1A Very ecotoxic in the aquatic environment

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	Australia NOHSC	New Zealand WES	ACGIH TLV-TWA
Heavy aromatic petroleum naphtha	64742-94-5	60 - 100%	Not applicable	Not applicable	Not applicable
Naphthalene	91-20-3	5 - 10%	TWA: 10 ppm TWA: 52 mg/m^3 STEL: 15 ppm STEL: 79 mg/m^3	STEL: 15 ppm STEL: 79 mg/m^3 TWA: 10 ppm TWA: 52 mg/m^3	TWA: 10 ppm STEL: 15 ppm
1,2,4 Trimethylbenzene	95-63-6	1 - 5%	TWA: 25 ppm TWA: 123 mg/m^3	TWA: 25 ppm TWA: 123 mg/m^3	25 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

Wash with soap and water. Get medical attention if irritation persists. 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

Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration.

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
Avoid spraying water directly into storage containers due to danger of boilover.

Special Exposure Hazards Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Avoid spraying water directly into storage containers due to danger of boilover. Decomposition in fire may produce toxic gases. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations.

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. Wear self-contained breathing apparatus in enclosed areas.

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

Procedure for Cleaning / Absorption Remove ignition sources and work with non-sparking tools. 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. Wash hands after use. Launder contaminated clothing before reuse. Ground and bond containers when transferring from one container to another. Avoid breathing mist. Material is slippery underfoot. Open container slowly to release pressure.

Storage Information Store away from oxidizers. Keep from heat, sparks, and open flames. Store in a cool well ventilated area. Keep container closed when not in use. Store locked up. Product has a shelf life of 36 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.

Organic vapor respirator.

Hand Protection Impervious rubber gloves.

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:	Clear
Odor:	Sweet aromatic
pH:	7
Specific Gravity @ 20 C (Water=1):	0.897
Density @ 20 C (kg/l):	0.897
Bulk Density @ 20 C (kg/M3):	898
Boiling Point/Range (C):	167
Freezing Point/Range (C):	Not Determined
Pour Point/Range (C):	Not Determined
Flash Point/Range (C):	66
Flash Point Method:	TCC
Autoignition Temperature (C):	545
Flammability Limits in Air - Lower (g/m^3):	Not Determined
Flammability Limits in Air - Lower (%):	0.8
Flammability Limits in Air - Upper (g/m^3):	Not Determined
Flammability Limits in Air - Upper (%):	5.9
Vapor Pressure @ 20 C (mmHg):	0.56
Vapor Density (Air=1):	4.7
Percent Volatiles:	Not Determined
Evaporation Rate (Butyl Acetate=1):	< 0.1
Solubility in Water (g/100ml):	Insoluble
Solubility in Solvents (g/100ml):	Not Determined
VOCs (g/l):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	Not Determined
Viscosity, Kinematic @ 20 C (centistokes):	.99
Partition Coefficient/n-Octanol/Water:	Not Determined
Molecular Weight (g/mole):	Not Determined
Decomposition Temperature (C):	> 210

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.
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation.

Sympotoms 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 eye irritation

Skin Contact May cause skin irritation.

Ingestion Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal. 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

The International Agency for Research on Cancer (IARC) has evaluated naphthalene and determined it to be a possible carcinogen to humans (Group 2B, based on sufficient evidence in experimental animals and inadequate evidence in humans).

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Heavy aromatic petroleum naphtha	64742-94-5	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	590 mg/m³ (Rat) 4 h
Naphthalene	91-20-3	490 mg/kg (Rat)	2500 mg/kg (Rat) 20 g/kg (Rabbit) 1120 mg/kg (Rabbit)	340 mg/m³ (Rat) 1 h
1,2,4 Trimethylbenzene	95-63-6	3400 mg/kg (Rat) 8970 mg/kg (Rat)	3160 mg/kg (Rabbit) > 3440 mg/kg (Rat)	18 g/m³ (Rat) 4 h

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

Ecotoxicity Product

Acute Fish Toxicity: Not determined

Acute Crustaceans Toxicity: TLM48: 12 mg/l (Acartia tonsa)

Acute Algae Toxicity: EC50: < 1 mg/l (Skeletonema costatum)

Ecotoxicity Substance

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Heavy aromatic petroleum naphtha	64742-94-5	EC50: < 1 mg/l (Skeletonema costatum)	LC50: 2.34 mg/L (Oncorhynchus mykiss) LC50: 41 mg/L (Pimephales promelas) LC50: 0.84 mg/L (Oncorhynchus mykiss)	No information available	EC50(48h): 0.95 mg/L (Daphnia magna) EC50(48H): 0.55 mg/L (Daphnia magna)
Naphthalene	91-20-3	EC50(72h): 0.4 mg/L (Skeletonema costatum)	LC50(96h) 6.08 mg/L (Pimephales promelas) LC50(96h): 1.2 mg/L (Oncorhynchus gorbuscha) LC50(96h): 1.6 mg/L (Oncorhynchus mykiss) NOEC(40d): 0.37 mg/L (Oncorhynchus kisutch) NOEC(30d): < 0.85 mg/L Pimephales promelas)	No information available	EC50(48h): 2.16 mg/L (Daphnia magna)

1,2,4 Trimethylbenzene	95-63-6	No information available	LC50: 7.19-8.28 mg/L (Pimephales promelas)	No information available	EC50: 6.14 mg/L (Daphnia magna) LC50(48h): 3.6 mg/L (Daphnia magna) LC50(96h): 2.16 mg/L (Mysidopsis bahia)

12.2 Persistence and degradability

Substances	Persistence and Degradability
Naphthalene	Readily biodegradable (100% @ 7d)
1,2,4 Trimethylbenzene	Readily biodegradable

12.3 Bioaccumulative potential

Substances	Log Pow
Heavy aromatic petroleum naphtha	2.9 - 6.1
Naphthalene	3.28
1,2,4 Trimethylbenzene	3.42

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

Land Transportation

ADR
Not restricted

Air Transportation

ICAO/IATA
Not restricted

Sea Transportation

IMDG
Not restricted

Other Transportation Information

Labels: None

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	Xn - Harmful.
Risk Phrases	R65 Harmful: may cause lung damage if swallowed. R40 Limited evidence of a carcinogenic effect. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Phrases	S2 Keep out of reach of children. S23 Do not breathe gas, fumes, vapour or spray. S24 Avoid contact with skin. 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.
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*****END OF MSDS*****