HALLIBURTON

MATERIAL SAFETY DATA SHEET

Product Trade Name: ENCORE BASE

Revision Date: 26-Dec-2012

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: ENCORE BASE

Synonyms:NoneChemical Family:OlefinUN Number:NoneDangerous Goods Class:NoneSubsidiary Risk:None

Hazchem Code:None AllocatedPoisons Schedule:None AllocatedApplication:Base Oil

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
Isomerized alpha olefins	Proprietary	60 - 100%	Not applicable	Not applicable	Not applicable

Non-Hazardous Substance to Total of 100%

HAZARDS IDENTIFICATION

Hazard Overview May cause lung damage if swallowed.

Risk Phrases R65 Harmful: may cause lung damage if swallowed.

HSNO Classification Not Determined

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 In case of contact, immediately flush eyes with plenty of water for at least 15 minutes

and get medical attention if irritation persists.

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

aspiration.

Notes to Physician Not Applicable

FIRE FIGHTING MEASURES

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

Extinguishing media which must None known.

not be used for safety reasons

Special Exposure Hazards Decomposition in fire may produce toxic gases.

Fire-Fighters

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

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.

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.

Store away from oxidizers. Store away from acids. Keep container closed when not **Storage Information**

in use. Product has a shelf life of 36 months.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering ControlsUse in a well ventilated area. Local exhaust ventilation should be used in areas

without good cross ventilation.

Respiratory ProtectionNot normally needed. But if significant exposures are possible then the following

respirator is recommended: Organic vapor respirator.

Hand Protection Impervious rubber gloves. Nitrile gloves. Use Viton or 4H 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: Colorless to Light yellow

Odor: Hydrocarbon PH: Not Determined

Specific Gravity @ 20 C (Water=1): 0.78 **Density @ 20 C (kg/l):** 0.78

Bulk Density @ 20 C (kg/m³): Not Determined

Boiling Point/Range (C): Not DeterminedMin: > 271

Freezing Point/Range (C): < -15

Pour Point/Range (C):

Not Determined

Flash Point/Range (C): 137
Flash Point Method: PMCC
Autoignition Temperature (C): 227

Flammability Limits in Air - Lower (g/m³): Not Determined

Flammability Limits in Air - Lower (%): 0.4

Flammability Limits in Air - Upper (g/m³): Not Determined

Flammability Limits in Air - Upper (%): 3.4

Vapor Pressure @ 20 C (mmHg): < 0.01 @100C

Vapor Density (Air=1):

Percent Volatiles:

Evaporation Rate (Butyl Acetate=1):

Solubility in Water (g/100ml):

Not Determined
Insoluble

Solubility in Solvents (g/100ml):

VOCs (g/l):

Viscosity, Dynamic @ 20 C (centipoise):

Viscosity, Kinematic @ 20 C (centistokes):

Partition Coefficient/n-Octanol/Water:

Molecular Weight (g/mole):

Decomposition Temperature (C):

Not Determined

Not Determined

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.

ENCORE BASE Page 3 of 6 **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

Inhalation Not a likely route of exposure.

Skin Contact May cause skin irritation.

Eye Contact May cause eye irritation.

Ingestion Aspiration into the lungs may cause chemical pneumonitis including coughing,

difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.

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: Not determined

Dermal Toxicity: This product was not a primary skin irritant and was not dermally toxic when tested

as described in 29 CFR 1910.1200, Appendix A (OSHA HCS).

Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity Not determined

Genotoxicity: Not determined

Reproductive /

Not determined

Developmental Toxicity:

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air) Not determined

Persistence/Degradability BOD(28 Day): 36-46% of COD

Inherently biodegradable

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

ENCORE BASE Page 4 of 6 Other Information Not applicable

13. DISPOSAL CONSIDERATIONS

Disposal MethodDisposal 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 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

All components listed on inventory or are exempt.

This product, and all its components, complies with EINECS

Classification Xn - Harmful.

Risk Phrases R65 Harmful: may cause lung damage if swallowed.

Safety Phrases 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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or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of

the user.

END OF MSDS