

HALLIBURTON

MATERIAL SAFETY DATA SHEET

Product Trade Name: **MO-76 ACTIVATOR**

Revision Date: 26-Sep-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: MO-76 ACTIVATOR
Synonyms: None
Chemical Family: Blend
UN Number: , UN2924
Dangerous Goods Class: 3
Subsidiary Risk: 8
Hazchem Code: 2[Y]E
Poisons Schedule: None Allocated
Application: Activator

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

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	Australia	New Zealand	ACGIH TLV-TWA
			NOHSC	WES	
Aluminum chloride, anhydrous	7446-70-0	10 - 30%	TWA: 2 mg/m ³	TWA: 2 mg/m ³	Not applicable

Tall oil, diethylenetriamine imidazoline	68442-97-7	10 - 30%	Not applicable	Not applicable	Not applicable
Isopropanol	67-63-0	10 - 30%	TWA: 400 ppm TWA: 983 mg/m ³ STEL: 500 ppm STEL: 1230 mg/m ³	STEL: 500 ppm STEL: 1230 mg/m ³ TWA: 400 ppm TWA: 983 mg/m ³	TWA: 200 ppm STEL: 400 ppm

Non-Hazardous Substance to Total of 100%

3. HAZARDS IDENTIFICATION

Hazard Overview May cause eye and skin burns. May cause headache, dizziness, and other central nervous system effects. May be harmful if swallowed. Flammable.

Risk Phrases
R11 Highly flammable.
R34 Causes burns.
R67 Vapours may cause drowsiness and dizziness.

HSNO Classification
3.1C Flammable Liquids - Medium hazard
8.1A Corrosive to metals
8.2B Corrosive to dermal tissue if exposed for greater than 3 mins
8.3A Corrosive to ocular tissue
9.3B Ecotoxic to terrestrial invertebrates

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 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 May be ignited by heat, sparks or flames. 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. Wear self-contained breathing apparatus in enclosed areas.
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. Neutralize to pH of 6-8. 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.
Storage Information	Store away from oxidizers. Keep from heat, sparks, and open flames. 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. Local exhaust ventilation should be used in areas without good cross ventilation.
Respiratory Protection	Organic vapor respirator with a dust/mist filter. (A2P2/P3) In high concentrations, supplied air respirator or a self-contained breathing apparatus.
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 brown
Odor:	Alcohol
pH:	3-4
Specific Gravity @ 20 C (Water=1):	1.1
Density @ 20 C (kg/l):	1.098
Bulk Density @ 20 C (kg/M3):	Not Determined
Boiling Point/Range (C):	96
Freezing Point/Range (C):	-23
Pour Point/Range (C):	Not Determined
Flash Point/Range (C):	24
Flash Point Method:	Not Determined
Autoignition Temperature (C):	Not Determined
Flammability Limits in Air - Lower (g/m³):	Not Determined
Flammability Limits in Air - Lower (%):	2
Flammability Limits in Air - Upper (g/m³):	Not Determined
Flammability Limits in Air - Upper (%):	12.7
Vapor Pressure @ 20 C (mmHg):	Not Determined
Vapor Density (Air=1):	Not Determined

Percent Volatiles:	14
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	Disperses
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.
Hazardous Decomposition Products	Oxides of nitrogen. 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 central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness. Causes severe respiratory irritation.

Eye Contact

May cause severe eye irritation. May cause eye burns.

Skin Contact

Causes burns. May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion.

Ingestion

Causes burns of the mouth, throat and stomach. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation and central nervous system depression.

Chronic Effects/Carcinogenicity Repeated overexposure may cause liver and kidney effects.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Aluminum chloride, anhydrous	7446-70-0	380 mg/kg (Rat)	2 g/kg (Rabbit)	No data available
Tall oil, diethylenetriamine imidazoline	68442-97-7	No data available	No data available	No data available
Isopropanol	67-63-0	4396 mg/kg (Rat) 3600 mg/kg (mouse)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h

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	Daphnia Magna (Water Flea)
Aluminum chloride, anhydrous	7446-70-0	No information available	No information available	No information available	No information available
Tall oil, diethylenetriamine imidazoline	68442-97-7	No information available	No information available	No information available	No information available
Isopropanol	67-63-0	EC50: > 1000 mg/l(Desmodesmus subspicatus)	LC50: 9640 mg/l (Pimephales promelas)	No information available	EC50: 13299 mg/l (Daphnia magna)

12.2 Persistence and degradability

No information available

12.3 Bioaccumulative potential

No information available

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

UN2924, Flammable Liquid, Corrosive, N.O.S (Contains Isopropanol, Aluminum Chloride) , 3 , (8) , III

Air Transportation

ICAO/IATA

UN2924, Flammable Liquid, Corrosive, N.O.S , 3 , (8) , III (Contains Isopropanol, Aluminum Chloride)

Sea Transportation

IMDG

UN2924, Flammable Liquid, Corrosive, N.O.S (Contains Isopropanol, Aluminum Chloride) , 3 , (8) , III , (24 C)
EmS F-E, S-C

Other Transportation Information

Labels: Flammable Liquid
Corrosive

15. REGULATORY INFORMATION

Chemical Inventories

Australian AICS Inventory All components listed on inventory or are exempt.
New Zealand Inventory of Chemicals This product does not comply with NZIOC
US TSCA Inventory All components listed on inventory or are exempt.
EINECS Inventory This product, and all its components, complies with EINECS

Classification F - Highly Flammable.
C - Corrosive.

Risk Phrases R11 Highly flammable.
R34 Causes burns.
R67 Vapours may cause drowsiness and dizziness.

Safety Phrases S28 After contact with skin, wash immediately with plenty of water
S45 In case of accident or if you feel unwell, seek medical advice immediately.
S1/2 Keep locked up and out of reach of children.
S7/8 Keep container tightly closed and dry.

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

This information is furnished without warranty, expressed or implied, as to accuracy 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*****