

HALLIBURTON

MATERIAL SAFETY DATA SHEET

Product Trade Name: FE-2

Revision Date: 27-Aug-2013

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: FE-2
Synonyms: None
Chemical Family: Organic acid
UN Number: None
Dangerous Goods Class: None
Subsidiary Risk: None
Hazchem Code: None Allocated
Poisons Schedule: None Allocated
Application: Iron Control Agent

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 NOHSC	New Zealand WES	ACGIH TLV-TWA
Citric acid	77-92-9	60 - 100%	Not applicable	Not applicable	Not applicable

Non-Hazardous Substance to Total of 100%

3. HAZARDS IDENTIFICATION

Hazard Overview	May cause eye, skin, and respiratory irritation. Airborne dust may be explosive.
Risk Phrases	R36 Irritating to eyes.
HSNO Classification	6.1E (Inhalation) Acutely Toxic Substances 6.3B Mildly irritating to the skin 8.3A Corrosive to ocular tissue

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	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 Decomposition in fire may produce toxic gases. Organic dust in the presence of an ignition source can be explosive in high concentrations. Good housekeeping practices are required to minimize this potential.

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. Avoid creating and breathing dust.

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

Procedure for Cleaning / Absorption Scoop up and remove.

7. HANDLING AND STORAGE

Handling Precautions Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust.

Storage Information

Store away from alkalis. Store away from oxidizers. Store in a cool, dry location.
Product has a shelf life of 60 months.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls	Use in a well ventilated area.
Respiratory Protection	Dust/mist respirator. (N95, P2/P3)
Hand Protection	Impervious rubber gloves. Nitrile gloves. Neoprene gloves. Polyvinyl alcohol gloves. Polyvinylchloride gloves.
Skin Protection	Normal work coveralls.
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:	Solid
Color:	White
Odor:	Odorless
pH:	2 - 2.2
Specific Gravity @ 20 C (Water=1):	1.665
Density @ 20 C (kg/l):	Not Determined
Bulk Density @ 20 C (kg/M3):	Not Determined
Boiling Point/Range (C):	Not Determined
Freezing Point/Range (C):	Not Determined
Pour Point/Range (C):	Not Determined
Flash Point/Range (C):	Not Determined
Flash Point Method:	Not Determined
Autoignition Temperature (C):	1000
Flammability Limits in Air - Lower (g/m³):	Not Determined
Flammability Limits in Air - Lower (%):	8
Flammability Limits in Air - Upper (g/m³):	Not Determined
Flammability Limits in Air - Upper (%):	65
Vapor Pressure @ 20 C (mmHg):	Not Determined
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	0
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):	192.13
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 alkalis. 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 severe eye irritation.

Skin Contact May cause skin irritation.

Ingestion Irritation of the mouth, throat, and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 1% are chronic health hazards.

LD50 Oral: 11700 mg/kg; (rat)

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Citric acid	77-92-9	3000 mg/kg (Rat)	No data available	No data available

Test species: Rat

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

Ecotoxicity Product

Acute Fish Toxicity: Not determined

Acute Crustaceans Toxicity: TLM96: 100-330 ppm (Crangon crangon)

Acute Algae Toxicity: Not determined

Ecotoxicity Substance

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Citric acid	77-92-9	No information available	LC50: 1516 mg/L (Lepomis macrochirus)	No information available	TLM96: 100-330 ppm (Crangon crangon)

Persistence and degradability

Biodegradable.

Bioaccumulative potential

Does not bioaccumulate

Mobility in soil

No information available

Results of PBT and vPvB assessment

No information available.

Other adverse effects

13. DISPOSAL CONSIDERATIONS

Disposal Method	Bury in a licensed landfill according to federal, state, and local regulations.
Contaminated Packaging	Follow all applicable national or local regulations. Contaminated packaging may be disposed of by: rendering packaging incapable of containing any substance, or treating packaging to remove residual contents, or treating packaging to make sure the residual contents are no longer hazardous, or by disposing of packaging into commercial waste collection.

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 Xi - Irritant.

Risk Phrases R36 Irritating to eyes.

Safety Phrases S24/25 Avoid contact with skin and eyes.

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*****