

SAFETY DATA SHEET

MSA-III US

Revision Date: 22-Jun-2015

Revision Number: 12

1. Product Identifier & Identity for the Chemical

Statement of Hazardous Nature Hazardous according to the criteria of the 3rd Revised Edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), Dangerous Goods according to the criteria of ADG.

1.1. Product Identifier

Product Name MSA-III US

Other means of Identification

Synonyms: None
Product Code: HM005253

Recommended use of the chemical and restrictions on use

Recommended Use Corrosion Inhibitor
Uses Advised Against No information available

Supplier's name, address and phone number

Manufacturer/Supplier Halliburton Australia Pty. Ltd.
15 Marriott Road
Jandakot
WA 6164
Australia

ACN Number: 009 000 775
Telephone Number: + 61 1 800 686 951
Fax Number: 61 (08) 9455 5300
E-Mail address: fdunexchem@halliburton.com

Emergency phone number

+ 61 1 800 686 951

Australian Poisons Information Centre

24 Hour Service: - 13 11 26
Police or Fire Brigade: - 000 (exchange): - 1100

2. Hazard Identification

Statement of Hazardous Nature Hazardous according to the criteria of the 3rd Revised Edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), Dangerous Goods according to the criteria of ADG.

Classification of the hazardous chemical

Acute Oral Toxicity	Category 4 - H302
Skin Corrosion / irritation	Category 1 - H314
Serious Eye Damage / Eye Irritation	Category 1 - H318
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H336
Acute Aquatic Toxicity	Category 3 - H402
Chronic Aquatic Toxicity	Category 3 - H412
Flammable liquids.	Category 2 - H225

Label elements, including precautionary statements**Hazard Pictograms****Signal Word**

Danger

Hazard Statements

H225 - Highly flammable liquid and vapor
 H302 - Harmful if swallowed
 H314 - Causes severe skin burns and eye damage
 H318 - Causes serious eye damage
 H336 - May cause drowsiness or dizziness
 H402 - Harmful to aquatic life
 H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements**Prevention**

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P233 - Keep container tightly closed
 P240 - Ground/Bond container and receiving equipment
 P241 - Use explosion-proof electrical/ventilating/lighting/equipment
 P242 - Use only non-sparking tools
 P243 - Take precautionary measures against static discharge
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P271 - Use only outdoors or in a well-ventilated area
 P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response

P301+ P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 P330 - Rinse mouth
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P363 - Wash contaminated clothing before reuse
 P312 - Call a POISON CENTER or doctor/physician if you feel unwell
 P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
 P310 - Immediately call a POISON CENTER or doctor/physician
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P370 + P378 - In case of fire: Use water spray for extinction

Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
 P403 + P235 - Store in a well-ventilated place. Keep cool
 P405 - Store locked up

Disposal

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

Contains**Substances**

Isopropanol
Rosin amines
Thioglycolic acid
Ethoxylated alkyl amines

CAS Number

67-63-0
61790-47-4
68-11-1
Proprietary

Other hazards which do not result in classification

None known

Australia Classification

For the full text of the H-phrases mentioned in this Section, see Section 16

Classification

T - Toxic.
C - Corrosive.
F - Highly Flammable.

Risk Phrases

R11 Highly flammable.
R22 Harmful if swallowed.
R34 Causes burns.
R67 Vapours may cause drowsiness and dizziness.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Australia
Isopropanol	67-63-0	30 - 60%	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)
Rosin amines	61790-47-4	10 - 30%	Acute Tox. 4 (H302) Skin Corr. 1C (H314) Eye Corr. 1 (H318)
Thioglycolic acid	68-11-1	10 - 30%	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 4 (H332) Skin Corr. 1B (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Aquatic Acute 3 (H402)
Ethoxylated alkyl amines	Proprietary	5 - 10%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)

4. First aid measures

Description of necessary first aid measures**Inhalation**

If inhaled, move victim to fresh air and seek medical attention.

Eyes

In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Seek immediate medical attention/advice. Suitable emergency eye wash facility should be immediately available

Skin

Remove contaminated clothing and launder before reuse. Remove contaminated shoes and discard. In case of contact, immediately flush skin with plenty of soap and water for at least 30 minutes and remove contaminated clothing, shoes and leather goods immediately. Get medical attention immediately.

Ingestion Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

Symptoms caused by exposure

Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction. May be harmful if swallowed. May cause headache, dizziness, and other central nervous system effects.

Medical Attention and Special Treatment

Notes to Physician Treat symptomatically

5. Fire Fighting Measures

Suitable extinguishing equipment

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

Specific hazards arising from the chemical

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 harmful gases. Fight fire from a safe distance and from a protected location.

Special protective equipment and precautions for fire fighters

Special Protective Equipment for Fire-Fighters

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

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate all persons from the area. Use only competent persons for cleanup. Use appropriate protective equipment.

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas. Prevent contamination of soil.

6.3. Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Remove ignition sources and work with non-sparking tools. Neutralize to pH of 6-8. Contain spill with sand or other inert materials. Scoop up and remove.

7. Handling and storage

7.1. Precautions for Safe Handling

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.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Store away from oxidizers. Store away from alkalis. Keep from heat, sparks, and open flames. Keep container closed when not in use.

Other Guidelines

No information available

8. Exposure Controls/Personal Protection

Control parameters - exposure standards, biological monitoring

Exposure Limits

Substances	CAS Number	Australia NOHSC	ACGIH TLV-TWA
Isopropanol	67-63-0	TWA: 400 ppm TWA: 983 mg/m ³ STEL: 500 ppm STEL: 1230 mg/m ³	TWA: 200 ppm STEL: 400 ppm
Rosin amines	61790-47-4	Not applicable	Not applicable
Thioglycolic acid	68-11-1	TWA: 1 ppm TWA: 3.8 mg/m ³	TWA: 1 ppm
Ethoxylated alkyl amines	Proprietary	Not applicable	Not applicable

Appropriate engineering controls**Engineering Controls**

Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

Personal protective equipment (PPE)**Personal Protective Equipment**

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection

Organic vapor/acid gas respirator. Positive pressure self-contained breathing apparatus in enclosed areas.

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.

Environmental Exposure Controls

No information available

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid

Color: Light amber

Odor: Strong

Odor Threshold: No information available

PropertyValues

Remarks/ - Method

pH:

2.1-2.3

Freezing Point/Range

No data available

Melting Point/Range

No data available

Boiling Point/Range

No data available

Flash Point

6 °C / 43 °F Tag Closed Cup (TCC)

Evaporation rate

> 1

Vapor Pressure

83.8 - 102.4 mm Hg

Vapor Density

> 1

Specific Gravity

0.934 - 0.946

Water Solubility

Dispersible

Solubility in other solvents

No data available

Partition coefficient: n-octanol/water

No data available

Autoignition Temperature

No data available

Decomposition Temperature

No data available

Viscosity

No data available

Explosive Properties

No information available

Oxidizing Properties

No information available

9.2. Other information

VOC Content (%)

No data available

10. Stability and Reactivity

10.1. Reactivity

Not expected to be reactive.

10.2. Chemical Stability

Stable

10.3. Possibility of Hazardous Reactions

Will Not Occur

10.4. Conditions to Avoid

Keep away from heat, sparks and flame.

10.5. Incompatible Materials

Strong oxidizers. Strong alkalis.

10.6. Hazardous Decomposition Products

Oxides of nitrogen. Oxides of sulfur. Hydrogen chloride. Carbon monoxide and carbon dioxide.

11. Toxicological Information**Information on routes of exposure****Principle Route of Exposure** Eye or skin contact, inhalation.**Symptoms related to exposure****Most Important Symptoms/Effects**

Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction. May be harmful if swallowed. May cause headache, dizziness, and other central nervous system effects.

Numerical measures of toxicity**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Isopropanol	67-63-0	4396 mg/kg (Rat) 5840 mg/kg (Rat) 3600 mg/kg (Mouse)	12,800 mg/kg (Rat) 12,870 mg/kg (Rabbit) 6280 mg/kg (Rabbit)	72.6 mg/L (Rat) 4h > 10,000 mg/L (Rat) 6h
Rosin amines	61790-47-4	2500 mg/kg (Rat) (similar substance) 700 mg/kg (guinea pig) (similar substance)	No data available	No data available
Thioglycolic acid	68-11-1	73 mg/kg (Rat)	848 mg/kg (Rabbit)	0.21 mg/L (Rat) 4h 1.388 mg/L (Rat) 4h
Ethoxylated alkyl amines	Proprietary	750 mg/kg (Rat) 1200 mg/kg (Rat) (similar substance)	> 1260 mg/kg (Rabbit) (similar substance)	No data available

Immediate, delayed and chronic health effects from exposure**Inhalation**

Massive inhalation immediately dangerous to life and health. Causes severe respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Eye Contact

Causes severe eye burns.

Skin Contact

Causes severe burns. 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

Harmful if swallowed. 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.**Exposure Levels**

No data available

Interactive effects

Skin disorders. Lung disorders.

Data limitations

No data available

Substances	CAS Number	Skin corrosion/irritation
Isopropanol	67-63-0	Non-irritating to the skin (Rabbit)
Rosin amines	61790-47-4	Skin, rabbit: Causes burns
Thioglycolic acid	68-11-1	Corrosive to skin
Ethoxylated alkyl amines		Causes moderate skin irritation. (similar substances)

Substances	CAS Number	Eye damage/irritation
Isopropanol	67-63-0	Causes severe eye irritation. (Rabbit)
Rosin amines	61790-47-4	Causes eye burns.
Thioglycolic acid	68-11-1	Corrosive to eyes
Ethoxylated alkyl amines		Causes severe eye irritation. Will damage tissue. (similar substances)

Substances	CAS Number	Skin Sensitization
Isopropanol	67-63-0	Did not cause sensitization on laboratory animals (guinea pig)
Rosin amines	61790-47-4	May cause sensitization by skin contact
Thioglycolic acid	68-11-1	Not regarded as a sensitizer.
Ethoxylated alkyl amines		No information available

Substances	CAS Number	Respiratory Sensitization
Isopropanol	67-63-0	No information available
Rosin amines	61790-47-4	No information available
Thioglycolic acid	68-11-1	No information available
Ethoxylated alkyl amines		No information available

Substances	CAS Number	Mutagenic Effects
Isopropanol	67-63-0	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Rosin amines	61790-47-4	No information available
Thioglycolic acid	68-11-1	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Ethoxylated alkyl amines		In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Isopropanol	67-63-0	Did not show carcinogenic effects in animal experiments
Rosin amines	61790-47-4	No information available.
Thioglycolic acid	68-11-1	Did not show carcinogenic effects in animal experiments
Ethoxylated alkyl amines		No information available.

Substances	CAS Number	Reproductive toxicity
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification.
Rosin amines	61790-47-4	No information available
Thioglycolic acid	68-11-1	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Ethoxylated alkyl amines		No data of sufficient quality are available.

Substances	CAS Number	STOT - single exposure
Isopropanol	67-63-0	May cause headache, dizziness, and other central nervous system effects.
Rosin amines	61790-47-4	May cause respiratory irritation.
Thioglycolic acid	68-11-1	May cause respiratory irritation.
Ethoxylated alkyl amines		No information available

Substances	CAS Number	STOT - repeated exposure
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Rosin amines	61790-47-4	No information available
Thioglycolic acid	68-11-1	Not applicable due to corrosivity of the substance.
Ethoxylated alkyl amines		No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Isopropanol	67-63-0	Not applicable
Rosin amines	61790-47-4	No information available
Thioglycolic acid	68-11-1	Not applicable
Ethoxylated alkyl amines		No information available

12. Ecological Information

Ecotoxicity

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Isopropanol	67-63-0	EC50 (72h) > 1000 mg/L (Desmodesmus subspicatus) EC50 (7d) 1800 mg/L (Scenedesmus quadricauda)	LC50 (96h) 9640 mg/L (Pimephales promelas) LC50 (7d) 7060 mg/L (Poecilia reticulata)	TT (16h) 1050 mg/L (Pseudomonas putida)	EC50 (48h) 13,299 mg/L (Daphnia magna) EC50 (24h) > 10,000 mg/L (Daphnia magna)
Rosin amines	61790-47-4	No information available	No information available	No information available	No information available
Thioglycolic acid	68-11-1	EC50 (72h) > 100 mg/L (Scenedesmus subspicatus) (similar substance)	LC50 (96h) > 100 mg/L (Oncorhynchus mykiss)	EC50 (3h) 530 mg/L (Activated sludge) (similar substance)	EC50 (48h) 38 mg/L (Daphnia magna)
Ethoxylated alkyl amines	Proprietary	No information available	LC50 (96h) 4.31 mg/L (Danio rerio)	No information available	LC50 (48h) 12.1 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Isopropanol	67-63-0	Readily biodegradable (53% @ 5d)
Rosin amines	61790-47-4	No information available
Thioglycolic acid	68-11-1	(67% @ 28d)
Ethoxylated alkyl amines	Proprietary	(27% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Isopropanol	67-63-0	0.05
Rosin amines	61790-47-4	Log Kow = 6.29
Thioglycolic acid	68-11-1	-2.99
Ethoxylated alkyl amines	Proprietary	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Isopropanol	67-63-0	KOC = 1.5
Rosin amines	61790-47-4	No information available
Thioglycolic acid	68-11-1	No information available
Ethoxylated alkyl amines	Proprietary	No information available

12.6. Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. Disposal Considerations

Safe handling and disposal methods

Disposal should be made in accordance with federal, state, and local regulations.

Disposal of any contaminated packaging

Follow all applicable national or local regulations.

Environmental regulations

Not applicable

14. Transport Information

Transportation Information

UN Number: UN2924
UN Proper Shipping Name: Flammable Liquid, Corrosive, N.O.S. (Contains Isopropanol, Thioglycolic Acid)
Transport Hazard Class(es): 3 (8)
Packing Group: II
Environmental Hazards: Not applicable

Special precautions during transport

None

HazChem Code

2[Y]E

15. Regulatory Information

Safety, health and environmental regulations specific for the product

International 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.

EINECS Inventory This product, and all its components, complies with EINECS

US TSCA Inventory All components listed on inventory or are exempt.

Canadian DSL Inventory All components listed on inventory or are exempt.

Poisons Schedule number

None Allocated

16. Other information

Date of preparation or review

Revision Date: 22-Jun-2015

Revision Note Revision Note

SDS sections updated: 2

Full text of R-phrases referred to under Sections 2 and 3

R11 Highly flammable.

R22 Harmful if swallowed.

R23/24/25 Toxic by inhalation, by contact with skin, and if swallowed.

R34 Causes burns.

R35 Causes severe burns.

R36 - Irritating to eyes

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

R53 May cause long-term adverse effects in the aquatic environment.

R67 Vapours may cause drowsiness and dizziness.

Full text of H-Statements referred to under sections 2 and 3

H225 - Highly flammable liquid and vapor

H301 - Toxic if swallowed

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H319 - Causes serious eye irritation

H331 - Toxic if inhaled

H336 - May cause drowsiness or dizziness

H401 - Toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

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 Stewardship at 1-580-251-4335.

Key abbreviations or acronyms used

bw – body weight CAS – Chemical Abstracts Service EC50 – Effective Concentration 50% LC50 – Lethal Concentration 50% LD50 – Lethal Dose 50% LL50 – Lethal Loading 50% mg/kg – milligram/kilogram mg/L – milligram/liter NOEC – No Observed Effect Concentration OEL – Occupational Exposure Limit PBT – Persistent Bioaccumulative and Toxic ppm – parts per million STEL – Short Term Exposure Limit TWA – Time-Weighted Average vPvB – very Persistent and very Bioaccumulative h - hour mg/m³ - milligram/cubic meter mm - millimeter mmHg - millimeter mercury w/w - weight/weight d - day

Key literature references and sources for data

www.ChemADVISOR.com/

OSHA

ECHA C&L

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End of Safety Data Sheet