

SAFETY DATA SHEET**PEN-5M**

Revision Date: 01-Jun-2015

Revision Number: 17

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 PEN-5M

Other means of Identification

Synonyms: None
Product Code: HM001174

Recommended use of the chemical and restrictions on use

Recommended Use Cleaner
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

| | |
|--|-------------------|
| Skin Corrosion / irritation | Category 2 - H315 |
| Serious Eye Damage / Eye Irritation | Category 1 - H318 |
| Specific Target Organ Toxicity - (Single Exposure) | Category 3 - H336 |
| Acute Aquatic Toxicity | Acute 1 - H400 |
| Flammable liquids. | Category 3 - H226 |

Label elements, including precautionary statements

Hazard Pictograms**Signal Word**

Danger

Hazard Statements

H226 - Flammable liquid and vapor
H315 - Causes skin irritation
H318 - Causes serious eye damage
H336 - May cause drowsiness or dizziness
H400 - Very toxic to aquatic life

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
P273 - Avoid release to the environment
P280 - Wear protective gloves/eye protection/face protection

Response

P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P370 + P378 - In case of fire: Use water spray for extinction
P391 - Collect spillage

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

Ethoxylated alcohols
Isopropanol

CAS Number

Proprietary
67-63-0

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

Xi - Irritant.

Risk Phrases

R10 Flammable.
 R38 Irritating to skin.
 R41 Risk of serious damage to eyes.
 R67 Vapours may cause drowsiness and dizziness.
 R50 Very toxic to aquatic organisms.

3. Composition/information on Ingredients

| Substances | CAS Number | PERCENT (w/w) | GHS Classification - Australia |
|----------------------|-------------|---------------|---|
| Ethoxylated alcohols | Proprietary | 30 - 60% | Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Acute 1 (H400) |
| Isopropanol | 67-63-0 | 10 - 30% | Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225) |

4. First aid measures

Description of necessary first aid measures**Inhalation**

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

Eyes

Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt 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.

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 skin irritation. 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.

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

Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas.

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

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. 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.

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. Keep from heat, sparks, and open flames. Keep container closed when not in use. Store between 40.5 F (4.7 C) and 120.5 F (49 C). Product has a shelf life of 24 months.

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 |
|----------------------|-------------|---|-------------------------------|
| Ethoxylated alcohols | Proprietary | Not applicable | Not applicable |
| 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 |

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)**Respiratory Protection**

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.

Environmental Exposure Controls

No information available

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid
Odor: Alcohol

Color: Colorless to Amber
Odor Threshold: No information available

PropertyValuesRemarks/ - Method**pH:**

6.5 - 7.5

Freezing Point/Range

No data available

Melting Point/Range

No data available

Boiling Point/Range

80 °C / 176 °F

Flash Point

25 °C / 77 °F PMCC

Evaporation rate

No data available

Vapor Pressure

33 mmHg @ 20 C

Vapor Density

No data available

Specific Gravity

0.96

Water Solubility

Miscible with water

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.

10.6. Hazardous Decomposition Products

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 skin irritation. 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 |
|----------------------|-------------|------------------|--|--------------------|
| Ethoxylated alcohols | Proprietary | 1400 mg/kg (Rat) | 2000 - 5000 mg/kg (Rabbit) (similar substances) 1.78 mL/kg (Rabbit) 2.14 mL/kg (1990 mg/kg) (Rabbit) | No data available |
| Isopropanol | 67-63-0 | 4396 mg/kg (Rat) | 12,800 mg/kg (Rat) | 72.6 mg/L (Rat) 4h |

| | | | | |
|--|--|--|--|------------------------|
| | | 5840 mg/kg (Rat) 3600 mg/kg (Mouse) | 12,870 mg/kg (Rabbit) 6280 mg/kg (Rabbit) | > 10,000 mg/L (Rat) 6h |
|--|--|--|--|------------------------|

Immediate, delayed and chronic health effects from exposure

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 Causes severe eye irritation which may damage tissue.

Skin Contact Causes moderate skin irritation.

Ingestion Irritation of the mouth, throat, and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation and central nervous system depression.

Chronic Effects/Carcinogenicity May contain ethylene oxide in the headspace of the drum. Ethylene oxide is a cancer and reproductive hazard.

Exposure Levels

No data available

Interactive effects

Skin disorders. Eye ailments.

Data limitations

No data available

| Substances | CAS Number | Skin corrosion/irritation |
|----------------------|------------|---|
| Ethoxylated alcohols | | Irritating to skin. (Rabbit) (similar substances) |
| Isopropanol | 67-63-0 | Non-irritating to the skin (Rabbit) |

| Substances | CAS Number | Eye damage/irritation |
|----------------------|------------|---|
| Ethoxylated alcohols | | Severe eye irritant (Rabbit) (similar substances) |
| Isopropanol | 67-63-0 | Causes severe eye irritation. (Rabbit) |

| Substances | CAS Number | Skin Sensitization |
|----------------------|------------|---|
| Ethoxylated alcohols | | Did not cause sensitization on laboratory animals (guinea pig) (similar substances) |
| Isopropanol | 67-63-0 | Did not cause sensitization on laboratory animals (guinea pig) |

| Substances | CAS Number | Respiratory Sensitization |
|----------------------|------------|---------------------------|
| Ethoxylated alcohols | | No information available |
| Isopropanol | 67-63-0 | No information available |

| Substances | CAS Number | Mutagenic Effects |
|----------------------|------------|---|
| Ethoxylated alcohols | | In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (similar substances) |
| Isopropanol | 67-63-0 | In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. |

| Substances | CAS Number | Carcinogenic Effects |
|----------------------|------------|--|
| Ethoxylated alcohols | | Did not show carcinogenic effects in animal experiments (similar substances) |
| Isopropanol | 67-63-0 | Did not show carcinogenic effects in animal experiments |

| Substances | CAS Number | Reproductive toxicity |
|----------------------|------------|--|
| Ethoxylated alcohols | | Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances) |
| Isopropanol | 67-63-0 | No significant toxicity observed in animal studies at concentration requiring classification. |

| Substances | CAS Number | STOT - single exposure |
|----------------------|------------|--|
| Ethoxylated alcohols | | No information available |
| Isopropanol | 67-63-0 | May cause headache, dizziness, and other central nervous system effects. |

| Substances | CAS Number | STOT - repeated exposure |
|----------------------|------------|---|
| Ethoxylated alcohols | | No significant toxicity observed in animal studies at concentration requiring classification. |

| | | |
|-------------|---------|--|
| Isopropanol | 67-63-0 | No significant toxicity observed in animal studies at concentration requiring classification. (similar substances) |
|-------------|---------|--|

| Substances | CAS Number | Aspiration hazard |
|----------------------|------------|-------------------|
| Ethoxylated alcohols | | Not applicable |
| Isopropanol | 67-63-0 | Not applicable |

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 |
|----------------------|-------------|---|---|---|--|
| Ethoxylated alcohols | Proprietary | EC50 (72h) 0.5 mg/L (Scenedesmus subspicatus) (similar substance) EC50 (72h) 0.85 mg/L (Selenastrum capricornutum) (similar substance) | LC50 (96h) 1.2 – 6.4 (Brachydanio rerio) (similar substance) | EC50 (30m) >10000 mg/L (Pseudomonas putida) (similar substance) | EC50 (48h) 0.5 – 1.9 mg/L (similar substance) |
| 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) |

12.2. Persistence and degradability

| Substances | CAS Number | Persistence and Degradability |
|----------------------|-------------|---|
| Ethoxylated alcohols | Proprietary | Expected to be readily biodegradable (similar substances) |
| Isopropanol | 67-63-0 | Readily biodegradable (53% @ 5d) |

12.3. Bioaccumulative potential

| Substances | CAS Number | Log Pow |
|----------------------|-------------|--------------------------|
| Ethoxylated alcohols | Proprietary | No information available |
| Isopropanol | 67-63-0 | 0.05 |

12.4. Mobility in soil

| Substances | CAS Number | Mobility |
|----------------------|-------------|--------------------------|
| Ethoxylated alcohols | Proprietary | No information available |
| Isopropanol | 67-63-0 | KOC = 1.5 |

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. Incineration recommended in approved incinerator according to 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: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol)
Transport Hazard Class(es): 3,
Packing Group: III
Environmental Hazards: Marine Pollutant

Special precautions during transport

None

HazChem Code

3[Y]

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

S5

16. Other information**Date of preparation or review**

Revision Date: 01-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.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
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
H226 - Flammable liquid and vapor
H302 - Harmful if swallowed
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H400 - Very toxic to aquatic life

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/

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End of Safety Data Sheet