HALLIBURTON

SAFETY DATA SHEET

PENETROL®

Revision Date: 20-Nov-2020 **Revision Number:** 22

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), Non-Dangerous Goods according to the criteria of ADG.

1.1. Product Identifier

Product Name PENETROL®

Other means of Identification

Synonyms None

Hazardous Material Number: HM003729

Recommended use of the chemical and restrictions on use

Recommended Use Wetting Agent

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
Global Incident Response Access Code: 334305
Contract Number: 14012

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), Non-Dangerous Goods according to the criteria of ADG.

Classification of the hazardous chemical

Skin Corrosion/Irritation	Category 2 - H315
Serious Eye Damage/Irritation	Category 2 - H319
Acute Aquatic Toxicity	Category 3 - H402

Label elements, including precautionary statements

Hazard Pictograms

Signal Word WARNING

Hazard Statements:
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H402 - Harmful to aquatic life

Precautionary Statements

Prevention
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 + P352 - IF ON SKIN: Wash with plenty of water.
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 + P364 - Take off contaminated clothing and wash before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention

Storage None

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

Contains

Substances	**CAS Number**
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9
Diethanolamine	111-42-2

Other hazards which do not result in classification
This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

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

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Australia
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	10 - 30%	Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)
Diethanolamine	111-42-2	1 - 5%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Corr. 1 (H318) STOT RE 2 (H373) Aquatic Acute 2 (H401) Aquatic Chronic 3 (H412)

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, or suspected contact, immediately flush eyes with plenty of

	water for at least 15 minutes and get medical attention immediately after flushing.
Skin	In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention.
Ingestion	Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

Symptoms caused by exposure

Causes serious eye damage. Causes skin irritation.

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 in a fire

Decomposition in fire may produce harmful gases.

Special protective equipment and precautions for fire fighters

Special protective equipment for firefighters

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. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation.

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. 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. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

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 in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 36 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
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	Not applicable	Not applicable
Diethanolamine	111-42-2	TWA: 3 ppm TWA: 13 mg/m^3	TWA: 1 mg/m^3

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 Not normally needed. But if significant exposures are possible then the following respirator is recommended:
Organic vapor respirator.

Hand Protection Polyvinylchloride gloves.
Skin Protection Rubber apron.
Eye Protection Chemical goggles; also wear a face shield if splashing hazard exists.
Other Precautions None known.
Environmental Exposure Controls Do not allow material to contaminate ground water system.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid
Color Green
Odor: Coconut
Odor Threshold: No information available

Property Remarks/ - Method	Values
pH:	9.3
Freezing Point / Range	No data available
Melting Point / Range	No data available
Pour Point / Range	No data available
Boiling Point / Range	157 °C / 315 °F
Flash Point	No data available
Evaporation rate	No data available
Vapor Pressure	< 1 mmHg
Vapor Density	No data available
Specific Gravity	1
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
Avoid contact with oxidizers.
10.5. Incompatible materials
Strong acids. Zinc. Copper and copper alloys.
10.6. Hazardous decomposition products
Oxides of nitrogen. 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 serious eye damage. Causes skin irritation.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	>5000 mg/kg-bw (rat)	>2000 mg/kg-bw (rabbit)	No data available
Diethanolamine	111-42-2	620 µL/kg (Rat) 1600 mg/kg (Rat)	7640 µL/kg (Rabbit) 13,000 mg/kg (Rabbit)	3.35 mg/L (Rat)

Immediate, delayed and chronic health effects from exposure
Inhalation May cause respiratory irritation. Excessive inhalation causes headache, dizziness, nausea and incoordination.
Eye Contact Causes serious eye damage.
Skin Contact Causes skin irritation.
Ingestion Irritation of the mouth, throat, and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea.

Chronic Effects/Carcinogenicity Prolonged or repeated exposure may cause liver, kidney and blood effects.

Exposure Levels
No data available

Interactive effects
Skin disorders.

Data limitations
No data available

Substances	CAS Number	Skin corrosion/irritation
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	Irritating to skin. (Rabbit)
Diethanolamine	111-42-2	Causes moderate skin irritation. (Rabbit)

Substances	CAS Number	Serious eye damage/irritation
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	Causes severe eye irritation (Rabbit) (similar substances)
Diethanolamine	111-42-2	Causes severe eye irritation (Rabbit)

Substances	CAS Number	Skin Sensitization
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	Did not cause sensitization on laboratory animals (guinea pig)
Diethanolamine	111-42-2	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	No information available
Diethanolamine	111-42-2	No information available

Substances	CAS Number	Mutagenic Effects
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	In vitro tests did not show mutagenic effects. Some in vivo tests have shown mutagenic effects.
Diethanolamine	111-42-2	In vivo tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	No data of sufficient quality are available.
Diethanolamine	111-42-2	No data of sufficient quality are available.

Substances	CAS Number	Reproductive toxicity
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	Did not show teratogenic effects in animal experiments.
Diethanolamine	111-42-2	Animal testing did not show any effects on fertility. (similar substances) Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	No significant toxicity observed in animal studies at concentration requiring classification.
Diethanolamine	111-42-2	No information available

Substances	CAS Number	STOT - repeated exposure
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	No data of sufficient quality are available.
Diethanolamine	111-42-2	Causes damage to organs through prolonged or repeated exposure if swallowed: (Liver) (Blood) Kidney

Substances	CAS Number	Aspiration hazard
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	Not applicable
Diethanolamine	111-42-2	Not applicable

12. Ecological Information

Ecotoxicity

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	EC50(72h) 2.2 mg/L (Scenedesmus subspicatus)	LC50(96h) 3.6 mg/L (Brachydanio rerio) NOEC(28d)=0.32 mg/L (Oncorhynchus mykiss)	No information available	EC50(48h) 2.25 mg/L (Ceriodaphnia dubia) NOEC(21d) 0.07 mg/L (Daphnia magna)
Diethanolamine	111-42-2	EC50 7.8 mg/L (Desmodesmus subspicatus) EC50 (96h) 2.2 mg/L (growth rate) (Selenastrum capricornutum)	LC50 4460-4980 mg/L (Pimephales promelas) LC50 (96h) 1460 mg/L (Pimephales promelas)	EC20 >1000 mg/L (respiration rate) (activated sludge) EC90 (30min) > 1000 mg/L (Activated sludge)	EC50 (48h) 30.1 mg/L (Ceriodaphnia dubia) EC50 (48h) 55 mg/L (Daphnia magna) NOEC (21d) 0.78 mg/L (Daphnia magna) (Reproduction)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	Readily biodegradable (92.5% @ 28d)
Diethanolamine	111-42-2	Readily biodegradable (88 - 97% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	Not Bioaccumulative; BCF=65.4 L/kg (similar substance)
Diethanolamine	111-42-2	-1.71

12.4. Mobility in soil

Substances	CAS Number	Mobility
Amides, coco, N,N-bis (hydroxyethyl)	68603-42-9	No information available
Diethanolamine	111-42-2	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

Australia ADG

UN Number	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

IMDG/IMO

UN Number	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

IATA/ICAO

UN Number	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Special precautions during transport

None

HazChem Code

None Allocated

15. Regulatory Information

Safety, health and environmental regulations specific for the product

International Inventories

Australian AICS Inventory	Product contains one or more components not listed on inventory.
New Zealand Inventory of Chemicals	All components are listed on the NZIoC or are subject to a relevant exemption, permit, or assessment certificate.
US TSCA Inventory	All components listed on inventory or are exempt.
Canadian Domestic Substances List (DSL)	All components listed on inventory or are exempt.

Poisons Schedule number

None Allocated

International Agreements

Montreal Protocol - Ozone Depleting Substances:	Does not apply.
Stockholm Convention - Persistent Organic Pollutants:	Does not apply
Rotterdam Convention - Prior Informed Consent:	Does not apply.
Basel Convention - Hazardous Waste:	Does not apply.

16. Other information

Date of preparation or review

Revision Date: 20-Nov-2020

Revision Note

SDS sections updated:
2

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

H302 - Harmful if swallowed
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H373 - May cause damage to organs through prolonged or repeated exposure if inhaled
H411 - Toxic to aquatic life with long lasting effects
H412 - Harmful 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 abreviations 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/m^3 - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
w/w - weight/weight
d - day

Key literature references and sources for data
www.ChemADVISOR.com/
NZ CCID

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End of Safety Data Sheet