

SAFETY DATA SHEET

PLUG FOAM B

Revision Date: 18-Mar-2016

Revision Number: 3

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 PLUG FOAM B

Other means of Identification

Synonyms None
Product Code: HM007093

Recommended use of the chemical and restrictions on use

Recommended Use Additive
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 inhalation toxicity - vapor	Category 3 Category 2 - H331
Skin Corrosion/Irritation	Category 2 - H315
Serious Eye Damage/Irritation	Category 2 - H319
Respiratory Sensitization	Category 1 - H334
Skin Sensitization	Category 1 - H317
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H335
Flammable liquids.	Category 4 - H227

Label elements, including precautionary statements

Hazard pictograms



Signal Word

Danger

Hazard Statements:

- H227 - Combustible liquid
- H315 - Causes skin irritation
- H317 - May cause an allergic skin reaction
- H319 - Causes serious eye irritation
- H331 - Toxic if inhaled
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H335 - May cause respiratory irritation

Precautionary Statements

Prevention

- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P271 - Use only outdoors or in a well-ventilated area
- P272 - Contaminated work clothing should not be allowed out of the workplace
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P284 - In case of inadequate ventilation wear respiratory protection
- P285 - In case of inadequate ventilation wear respiratory protection

Response

- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
- P363 - Wash contaminated clothing before reuse
- P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- P310 - Immediately call a POISON CENTRE 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
- P337 + P313 - If eye irritation persists: Get medical advice/attention

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

Polymethylene polyphenylene isocyanate
Methyl formate

CAS Number

9016-87-9
107-31-3

Other hazards which do not result in classification

None known

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
Polymethylene polyphenylene isocyanate	9016-87-9	60 - 100%	Acute Tox. 2 (H330) Skin Irrit. 2 (H315) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) STOT SE 3 (H335) STOT RE 2 (H373)
Methyl formate	107-31-3	10 - 30%	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Eye Irrit. 2A (H319) STOT SE 3 (H335) Flam. Liq. 1 (H224)

4. First aid measures

Description of necessary first aid measures

Inhalation If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Eyes Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate 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 laundry before reuse.

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

Symptoms caused by exposure

Causes eye irritation Causes skin irritation. May cause allergic skin reaction. May cause respiratory irritation. May cause allergic respiratory reaction. Toxic if inhaled. Prolonged or repeated exposure may cause damage to organs.

Medical Attention and Special Treatment

Notes to Physician Treat symptomatically

5. Fire Fighting Measures

Suitable extinguishing equipment

Suitable Extinguishing Media

Carbon dioxide, dry chemical, foam.

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

Evacuate all persons from the area. Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas. Spills of this product are very slippery.

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. Wash hands after use. Launder contaminated clothing before reuse.

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. Store in a dry location. Store away from direct sunlight. Store in a cool well ventilated area. Keep from heat, sparks, and open flames. Keep container closed when not in use. Product has a shelf life of 12 months. Store away from acids.

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
Polymethylene polyphenylene isocyanate	9016-87-9	Not applicable	Not applicable
Methyl formate	107-31-3	TWA: 100 ppm TWA: 246 mg/m ³ STEL: 150 ppm STEL: 368 mg/m ³	TWA: 100 ppm STEL: 150 ppm

Appropriate engineering controls

Engineering Controls

Use in a well ventilated area.

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

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.

Environmental Exposure Controls

No information available

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid

Color: Dark amber

Odor: Musty

Odor Threshold: No information available

Property

Values

Remarks/ - Method

pH:

No data available

Freezing Point / Range

No data available

Melting Point / Range

No data available

Boiling Point / Range

200 °C / 392 °F

Flash Point

72 °C / 161 °F PMCC

Evaporation rate

No data available

Vapor Pressure

No data available

Vapor Density	No data available
Specific Gravity	1.179
Water Solubility	No data available
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	600 °C / 1112 °F
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
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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 any contact with water. Avoid contact with alkalis.

10.5. Incompatible materials

Strong oxidizers. Strong acids. Strong alkalis. Amines. Alcohols. Water.

10.6. Hazardous decomposition products

Hydrogen cyanide. 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 eye irritation Causes skin irritation. May cause allergic skin reaction. May cause respiratory irritation. May cause allergic respiratory reaction. Toxic if inhaled. Prolonged or repeated exposure may cause damage to organs.

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

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Polymethylene polyphenylene isocyanate	9016-87-9	> 10000 mg/kg (rats)	> 9400 mg/kg (rabbits)	0.49 mg/L (rats, 4h, aerosol)
Methyl formate	107-31-3	475 mg/kg (Rat) 1500 mg/kg (Rat)	> 5000 mg/kg (Rabbit) > 4000 mg/kg (Rat)	> 5.2 mg/L (Rat) 4 h vapour

Immediate, delayed and chronic health effects from exposure

Inhalation	Toxic if inhaled. Causes moderate respiratory irritation. May cause allergic respiratory reaction.
Eye Contact	Causes moderate eye irritation
Skin Contact	Causes moderate skin irritation. May cause an allergic skin reaction.
Ingestion	Irritation of the mouth, throat, and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea.

Chronic Effects/Carcinogenicity Prolonged or repeated exposure may also cause heart and lung damage. This product contains a potential carcinogen.

Exposure Levels

No data available

Interactive effects

Allergic skin and/or respiratory reaction.

Data limitations

No data available

Substances	CAS Number	Skin corrosion/irritation
Polymethylene polyphenylene isocyanate	9016-87-9	Causes moderate skin irritation. (Rabbit) (similar substances)
Methyl formate	107-31-3	Non-irritating to the skin (Rabbit)

Substances	CAS Number	Serious eye damage/irritation
Polymethylene polyphenylene isocyanate	9016-87-9	Non-irritating to the eye (Rabbit) (similar substances)
Methyl formate	107-31-3	Irritating to eyes (Rabbit)

Substances	CAS Number	Skin Sensitization
Polymethylene polyphenylene isocyanate	9016-87-9	May cause sensitization by skin contact (similar substances)
Methyl formate	107-31-3	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Polymethylene polyphenylene isocyanate	9016-87-9	May cause sensitization by inhalation
Methyl formate	107-31-3	No information available

Substances	CAS Number	Mutagenic Effects
Polymethylene polyphenylene isocyanate	9016-87-9	While some in vitro tests were positive and/or equivocal, in vivo results were negative. (similar substances)
Methyl formate	107-31-3	In vitro tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Polymethylene polyphenylene isocyanate	9016-87-9	No data of sufficient quality are available.
Methyl formate	107-31-3	Did not show carcinogenic effects in animal experiments (similar substances)

Substances	CAS Number	Reproductive toxicity
Polymethylene polyphenylene isocyanate	9016-87-9	Did not show teratogenic effects in animal experiments.
Methyl formate	107-31-3	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)

Substances	CAS Number	STOT - single exposure
Polymethylene polyphenylene isocyanate	9016-87-9	May cause respiratory irritation.
Methyl formate	107-31-3	May cause respiratory irritation.

Substances	CAS Number	STOT - repeated exposure
Polymethylene polyphenylene isocyanate	9016-87-9	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)
Methyl formate	107-31-3	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Polymethylene polyphenylene isocyanate	9016-87-9	Not applicable
Methyl formate	107-31-3	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
Polymethylene polyphenylene isocyanate	9016-87-9	EC50(72h): > 1640 mg/L (Desmodesmus subspicatus)	LC50(96h): > 1000 mg/L (Danio rerio)	EC50(3h): > 100 mg/L (activated sludge)	EC50(24h): > 1000 mg/L (Daphnia magna) NOEC(21d): > 10 mg/L (Daphnia magna)
Methyl formate	107-31-3	EC50(72h): 1079 mg/L (growth rate) (Scenedesmus subspicatus)	LC50(96h): 103 mg/L (Danio rerio) LC50(96h): ca. 115 mg/L (Leuciscus idus)	EC50(17h) > 10000 mg/L (Pseudomonas putida)	EC50(48 h) > 500 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Polymethylene polyphenylene isocyanate	9016-87-9	(0% @ 28d)
Methyl formate	107-31-3	Readily biodegradable (93% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Polymethylene polyphenylene isocyanate	9016-87-9	BCF = 92 (Cyprinus carpio)
Methyl formate	107-31-3	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Polymethylene polyphenylene isocyanate	9016-87-9	No information available
Methyl formate	107-31-3	KOC = 2.15

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 UN2810
UN proper shipping name: Toxic Liquid, Organic, N.O.S. (Contains Polymethylene polyphenylene isocyanate)
Transport Hazard Class(es): 6.1
Packing Group: III
Environmental Hazards 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	All components are listed on the AICS or are subject to a relevant exemption, permit, or assessment certificate.
New Zealand Inventory of Chemicals	All components are listed on the AICS or are subject to a relevant exemption, permit, or assessment certificate.
EINECS (European Inventory of Existing Chemical Substances)	This product, and all its components, complies with EINECS
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

S6

International Agreements

Montreal Protocol - Ozone Depleting Substances:	Does not apply
Stolkhom 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: 18-Mar-2016

Revision Note

SDS sections updated: 2

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

- H224 - Extremely flammable liquid and vapor
- H227 - Combustible liquid
- H302 - Harmful if swallowed
- H315 - Causes skin irritation
- H317 - May cause an allergic skin reaction
- H319 - Causes serious eye irritation
- H330 - Fatal if inhaled
- H331 - Toxic if inhaled
- H332 - Harmful if inhaled
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H335 - May cause respiratory irritation
- H373 - May cause damage to organs through prolonged or repeated exposure

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