



SAFETY DATA SHEET EMULSOGEN M REVISION 2, DATE 02 DEC 21

1. IDENTIFICATION

| | |
|----------------------------|---|
| Product Name | EMULSOGEN M |
| Other Names | No Data Available |
| Uses | Metal Working Industry; Emulsifier for mineral oil. |
| Chemical Family | No Data Available |
| Chemical Formula | Unspecified |
| Chemical Name | A fatty alcohol polyglycol ether |
| Product Description | No Data Available |

Contact Details of the Supplier of this Safety Data Sheet

| Organisation | Location | Telephone |
|-------------------------|--|------------------|
| Redox Ltd | 2 Swettenham Road Minto NSW 2566 Australia | +61-2-97333000 |
| Redox Ltd | 11 Mayo Road Wiri Auckland 2104 New Zealand | +64-9-2506222 |
| Redox Inc. | 3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA | +1-424-675-3200 |
| Redox Chemicals Sdn Bhd | Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia | +60-3-5614-2111 |

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

| Organisation | Location | Telephone |
|----------------------------|-----------------|--|
| Poisons Information Centre | Westmead NSW | 1800-251525 131126 |
| Chemcall | Australia | 1800-127406 +64-4-9179888 |
| Chemcall | Malaysia | +64-4-9179888 |
| Chemcall | New Zealand | 0800-243622 +64-4-9179888 |
| National Poisons Centre | New Zealand | 0800-764766 |
| CHEMTREC | USA & Canada | 1-800-424-9300 CN723420 +1-703-527-3887 |

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)

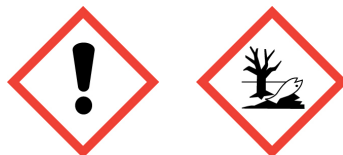
Not Scheduled



Globally Harmonised System

| | |
|------------------------------|--|
| Hazard Classification | Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) |
| Hazard Categories | Skin Corrosion/Irritation - Category 2 Long-term Hazard To The Aquatic Environment - Category 1 |

Pictograms



| | |
|--------------------|---------|
| Signal Word | Warning |
|--------------------|---------|

| | | |
|--------------------------|-------------|---|
| Hazard Statements | H315 | Causes skin irritation. |
| | H410 | Very toxic to aquatic life with long lasting effects. |

| | | | |
|---------------------------------|------------|--------------------|---|
| Precautionary Statements | Prevention | P273 | Avoid release to the environment. |
| | | P280 | Wear protective gloves. |
| | | P264 | Wash skin thoroughly after handling. |
| | Response | P332 + P313 | If skin irritation occurs: Get medical advice/attention. |
| | | P362 | Take off contaminated clothing. |
| | | P391 | Collect spillage. |
| | Disposal | P302 + P352 | IF ON SKIN: Wash with plenty of water/... |
| | | P501 | Dispose of contents/container in accordance with local / regional / national / international regulations. |

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

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|---------------------------------------|---|
| Dangerous Goods Classification | NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code) |
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

| Chemical Entity | Formula | CAS Number | Proportion |
|--------------------------------|-------------|------------|------------|
| Fatty alcohol polyglycol ether | Unspecified | 68920-66-1 | 100 % |

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

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| Swallowed | IF SWALLOWED: Rinse mouth. Do not induce vomiting. Get medical advice/attention. |
| Eye | IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention. |
| Skin | IF ON SKIN: Remove and isolate contaminated clothing and shoes. Immediately flush skin with running water for at least |

| | |
|--|---|
| Inhaled | 15 minutes. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. |
| Advice to Doctor | Treat symptomatically. Get medical advice/attention if you feel unwell (show safety data sheet or label). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. |
| Medical Conditions Aggravated by Exposure | No information available. |

5. FIRE FIGHTING MEASURES

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| General Measures | Move containers from fire area if you can do it without risk. Cool containers with water spray until well after fire is out. Dike fire-control water for later disposal. |
| Flammability Conditions | Combustible liquid (C2); May burn but does not ignite readily. |
| Extinguishing Media | Use dry chemical, Carbon dioxide (CO ₂), alcohol-resistant foam, normal foam or water spray for extinction - Do not scatter spilled material with high-pressure water streams. *Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used. |
| Fire and Explosion Hazard | Containers may explode when heated. |
| Hazardous Products of Combustion | In case of fires, hazardous combustion gases are formed, including Carbon monoxide (CO), Carbon dioxide (CO ₂). |
| Special Fire Fighting Instructions | Contain runoff from fire control or dilution water - Runoff may pollute waterways. |
| Personal Protective Equipment | Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. |
| Flash Point | 203 °C [ISO 2719] |
| Lower Explosion Limit | No Data Available |
| Upper Explosion Limit | No Data Available |
| Auto Ignition Temperature | >292 °C |
| Hazchem Code | No Data Available |

6. ACCIDENTAL RELEASE MEASURES

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| General Response Procedure | Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Avoid breathing vapours and contact with eyes, skin and clothing. |
| Clean Up Procedures | Pick up with sand or other non-combustible absorbent material and place into containers for later disposal (see SECTION 13). |
| Containment | Stop leak if you can do it without risk. Dike far ahead of large spill for later disposal. Prevent entry into waterways, sewers, basements or confined areas. |
| Decontamination | No information available. |
| Environmental Precautionary Measures | The product should not be allowed to enter drains, water courses or the soil. |
| Evacuation Criteria | Immediately isolate spill or leak area. Keep unauthorised personnel away. Stay upwind and/or uphill. |
| Personal Precautionary Measures | Wear suitable protective equipment (see SECTION 8). |

7. HANDLING AND STORAGE

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|-----------------|---|
| Handling | Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure |
|-----------------|---|

adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing mist/vapours and contact with eyes, skin and clothing. Do not ingest. Wear suitable protective equipment (see SECTION 8). Avoid release to the environment - Collect spillage (see SECTION 6).

*If the product becomes turbid as a result of exposure to low temperatures, warm it slowly to 30 - 50°C and stir it. Before using the product, ensure that it is completely homogeneous.

Storage Frost-sensitive! Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat and sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10).

*Recommended storage temperature: 20 °C.

Container Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Contains no substances with occupational exposure limit values.

Exposure Limits No Data Available

Biological Limits No information available.

Engineering Measures A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Protection Equipment

- Respiratory protection: Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure. Recommended: Full mask, filter A, Filter class 2 (refer to AS/NZS 1715 & 1716). The use of filter apparatus presupposes that the environment atmosphere contains at least 17% oxygen by volume, and does not exceed the maximum gas concentration, usually 0.5% by volume.
- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side protection or goggles, and if necessary, face shield.
- Hand protection: Wear protective gloves. Recommended: For long-term exposure, Impervious butyl rubber gloves (Break-through time: 480 min. Glove thickness: 0.7 mm). For short-term exposure (splash protection), Nitrile rubber gloves (Break-through time: 30 min. Glove thickness: 0.4 mm). Consider also the particular working conditions under which the gloves are being used.
- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Wear suitable protective equipment.

Special Hazards Precautions No information available.

Work Hygienic Practices Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid

Appearance Liquid

Odour Fatty odour

Colour Yellowish, clear

pH approx. 7-10 g/l (20 °C)

Vapour Pressure <0.001 Pa (@ 25 °C)

Relative Vapour Density No Data Available

Boiling Point >360 °C

Melting Point approx. 3 °C (pour point) [ISO 3016]

Freezing Point No Data Available

Solubility 0.040 g/l in water (20 °C) - 0.044 g/l in water (25 °C) pH: 6.4 evaluated from the critical micelle concentration

Specific Gravity approx. 0.95

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|---|---|
| Flash Point | 203 °C [ISO 2719] |
| Auto Ignition Temp | >292 °C |
| Evaporation Rate | No Data Available |
| Bulk Density | No Data Available |
| Corrosion Rate | No Data Available |
| Decomposition Temperature | >200 °C |
| Density | approx. 0.95 g/cm ³ [DIN 51757] |
| Specific Heat | No Data Available |
| Molecular Weight | No Data Available |
| Net Propellant Weight | No Data Available |
| Octanol Water Coefficient | log Pow: 6.13 [Calculated by Syracuse] |
| Particle Size | No Data Available |
| Partition Coefficient | No Data Available |
| Saturated Vapour Concentration | No Data Available |
| Vapour Temperature | No Data Available |
| Viscosity | approx. 65 mPa.s (@ 20 °C) |
| Volatile Percent | No Data Available |
| VOC Volume | No Data Available |
| Additional Characteristics | No information available. |
| Potential for Dust Explosion | Not applicable. |
| Fast or Intensely Burning Characteristics | No information available. |
| Flame Propagation or Burning Rate of Solid Materials | No information available. |
| Non-Flammables That Could Contribute Unusual Hazards to a Fire | No information available. |
| Properties That May Initiate or Contribute to Fire Intensity | Combustible liquid (C2); May burn but does not ignite readily. |
| Reactions That Release Gases or Vapours | In case of fires, hazardous combustion gases are formed, including Carbon monoxide (CO), Carbon dioxide (CO ₂). |
| Release of Invisible Flammable Vapours and Gases | No information available. |

10. STABILITY AND REACTIVITY

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|---|---|
| General Information | Reactions with oxidising agents. |
| Chemical Stability | Stable. |
| Conditions to Avoid | Keep away from heat and sources of ignition. |
| Materials to Avoid | Incompatible/reactive with strong acids and oxidising agents. |
| Hazardous Decomposition Products | When handled and stored appropriately, no dangerous decomposition products are known. In case of fires, hazardous combustion gases are formed, including Carbon monoxide (CO), Carbon dioxide (CO ₂). |
| Hazardous Polymerisation | No information available. |

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: No information available.
- Skin corrosion/irritation: Causes skin irritation. Irritating (Rabbit) [OECD Test Guideline 404].
- Eye damage/irritation: No eye irritation (Rabbit) [OECD Test Guideline 405].
- Respiratory/skin sensitisation: Non-sensitising [OECD Test Guideline 406].
- Germ cell mutagenicity: Not mutagenic in Ames Test.
- Carcinogenicity: No information available.
- Reproductive toxicity: No information available.
- STOT (single exposure): No information available.
- STOT (repeated exposure): No information available.
- Aspiration toxicity: No information available.

Acute**Ingestion**

Acute toxicity (Oral):
- LD50, Rat: >2,000 mg/kg [CESIO].

Carcinogen Category

None

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Aquatic toxicity:
- LC50, Fish (Danio rerio): >10 - 100 mg/l (96 h) [OECD Test Guideline 203].
*M-Factor (Acute aquatic toxicity): 1
Toxicity to microorganisms:
- EC50, Activated sludge (domestic): >1,000 mg/l [OECD Test Guideline 209].

Persistence/Degradability

Readily biodegradable (73 %) [OECD Test Guideline 301B].
*Chemical Oxygen Demand (COD): 2,470 mg/g

Mobility

No information available.

Environmental Fate

Very toxic to aquatic life with long lasting effects - Avoid release to the environment.

Bioaccumulation Potential

No information available.

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS**General Information**

Dispose of waste from residues in accordance with local/regional/national regulations. Take to special waste incineration plant.

Special Precautions for Land Fill

Contaminated packaging: Packaging that cannot be cleaned should be disposed of as product waste.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name

EMULSOGEN M

Class

C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable

Subsidiary Risk(s)

No Data Available

EPG

47 Low To Moderate Hazard Substances

UN Number

No Data Available

Hazchem

No Data Available

| | |
|-------------------|--|
| Pack Group | No Data Available |
| Special Provision | AU01 |
| Comments | Not regulated as DG when transported by road or rail in packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs. |

Land Transport (Malaysia)

ADR Code

| | |
|----------------------|---|
| Proper Shipping Name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohols, C16-18 and C18-unsaturated, ethoxylated (> 5-15 EO)) |
| Class | 9 Miscellaneous Dangerous Goods and Articles |
| Subsidiary Risk(s) | No Data Available |
| EPG | 47 Low To Moderate Hazard Substances |
| UN Number | 3082 |
| Hazchem | •3Z |
| Pack Group | III |
| Special Provision | No Data Available |

Land Transport (New Zealand)

NZS5433

| | |
|----------------------|---|
| Proper Shipping Name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohols, C16-18 and C18-unsaturated, ethoxylated (> 5-15 EO)) |
| Class | 9 Miscellaneous Dangerous Goods and Articles |
| Subsidiary Risk(s) | No Data Available |
| EPG | 47 Low To Moderate Hazard Substances |
| UN Number | 3082 |
| Hazchem | •3Z |
| Pack Group | III |
| Special Provision | No Data Available |

Land Transport (United States of America)

US DOT

| | |
|----------------------|---|
| Proper Shipping Name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohols, C16-18 and C18-unsaturated, ethoxylated (> 5-15 EO)) |
| Class | 9 Miscellaneous Dangerous Goods and Articles |
| Subsidiary Risk(s) | No Data Available |
| ERG | 171 Substances (Low to Moderate Hazard) |
| UN Number | 3082 |
| Hazchem | •3Z |
| Pack Group | III |
| Special Provision | No Data Available |

Sea Transport

IMDG Code

| | |
|----------------------|---|
| Proper Shipping Name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohols, C16-18 and C18-unsaturated, ethoxylated (> 5-15 EO)) |
| Class | 9 Miscellaneous Dangerous Goods and Articles |
| Subsidiary Risk(s) | No Data Available |
| UN Number | 3082 |
| Hazchem | 3Z |

| | |
|-------------------|-------------------|
| Pack Group | III |
| Special Provision | No Data Available |
| EMS | F-A S-F |
| Marine Pollutant | Yes |

Air Transport

IATA DGR

| | |
|----------------------|---|
| Proper Shipping Name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohols, C16-18 and C18-unsaturated, ethoxylated (> 5-15 EO)) |
| Class | 9 Miscellaneous Dangerous Goods and Articles |
| Subsidiary Risk(s) | No Data Available |
| UN Number | 3082 |
| Hazchem | •3Z |
| Pack Group | III |
| Special Provision | No Data Available |

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

| | |
|--------------------------------|---|
| Dangerous Goods Classification | NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code) |
|--------------------------------|---|

15. REGULATORY INFORMATION

| | |
|-------------------------|-------------------|
| General Information | No Data Available |
| Poisons Schedule (Aust) | Not Scheduled |

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

| | |
|---------------|--------------|
| Approval Code | Not Assessed |
|---------------|--------------|

National/Regional Inventories

| | |
|-------------------|----------------|
| Australia (AIC) | Listed |
| Canada (DSL) | Not Determined |
| Canada (NDSL) | Not Determined |
| China (IECSC) | Not Determined |
| Europe (EINECS) | Not Determined |
| Europe (REACH) | Not Determined |
| Japan (ENCS/METI) | Not Determined |
| Korea (KECI) | Not Determined |

| | |
|--|----------------|
| Malaysia (EHS Register) | Not Determined |
| New Zealand (NZIoC) | Not Determined |
| Philippines (PICCS) | Not Determined |
| Switzerland (Giftliste 1) | Not Determined |
| Switzerland (Inventory of Notified Substances) | Not Determined |
| Taiwan (NCSR) | Not Determined |
| USA (TSCA) | Not Determined |

16. OTHER INFORMATION

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|-----------------------|---|
| Related Product Codes | SUFOLH4000 |
| Revision | 2 |
| Revision Date | 02 Dec 2021 |
| Reason for Issue | New SDS |
| Key/Legend | <p>< Less Than > Greater Than</p> <p>AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² Square Centimetres CO₂ Carbon Dioxide COD Chemical Oxygen Demand deg C (°C) Degrees Celcius EPA (New Zealand) Environmental Protection Authority of New Zealand deg F (°F) Degrees Farenheit g Grams g/cm³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health immiscible Liquids are insoluable in each other. inHg Inch of Mercury inH₂O Inch of Water K Kelvin kg Kilogram kg/m³ Kilograms per Cubic Metre lb Pound LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. ltr or L Litre m³ Cubic Metre mbar Millibar mg Milligram mg/24H Milligrams per 24 Hours mg/kg Milligrams per Kilogram mg/m³ Milligrams per Cubic Metre Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present. mm Millimetre mmH₂O Millimetres of Water mPa.s Millipascals per Second</p> |

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OECD Organisation for Economic Co-operation and Development

Oz Ounce

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

ppm Parts per Million

ppm/2h Parts per Million per 2 Hours

ppm/6h Parts per Million per 6 Hours

psi Pounds per Square Inch

R Rankine

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tne Tonne

TWA Time Weighted Average

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight