

MATERIAL SAFETY DATA SHEET

PRODUCT NAME **GREASESOLV DETERGENT**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name ECOWASH SYSTEMS
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Synonym(s) ECOWASH GREASESOLVE
Use(s) DETERGENT
MSDS Date 13 August 2007

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO NOHSC CRITERIA

RISK PHRASES
 R34 Causes burns.

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN No. 1814 **DG Class** 8 **Subsidiary Risk(s)** None Allocated
Pkg Group III **Hazchem Code** 2R **EPG** 8A1

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredient | Formula | CAS No. | Content |
|---------------------------------|---------------|---------------|-----------|
| ETHYLENE GLYCOL MONOBUTYL ETHER | C6-H14-O2 | 111-76-2 | <10% |
| ETHANOLAMINE | C2-H7-N-O | 141-43-5 | <5% |
| POTASSIUM HYDROXIDE | K-O-H | 1310-58-3 | <5% |
| SURFACTANT | Not Available | Not Available | <10% |
| ALKALINE SALT(S) | Not Available | Not Available | <5% |
| WATER | H2O | 7732-18-5 | remainder |

4. FIRST AID MEASURES

Eye Hold eyelids apart and flush continuously with water. Continue until advised to stop by the Poisons Information Centre, a doctor, or for at least 15 minutes. Keep patient calm.

Inhalation If over exposure occurs leave exposure area immediately. If irritation persists, seek medical attention.

Skin Remove contaminated clothing and gently flush affected areas with water. Continue to flush with water until skin no longer feels soapy. Seek medical attention. Launder clothing before reuse.

Ingestion For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor.

Advice to Doctor Treat symptomatically

First Aid Facilities Eye wash facilities and a hand wash basin are recommended.

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5. FIRE FIGHTING MEASURES

| | |
|---------------------------|--|
| Flammability | Combustible. May evolve carbon oxides when heated to decomposition. Contact with some metals (eg: aluminium), may liberate potentially flammable - explosive hydrogen gas. May also evolve nitrogen oxides and sulphur oxides when heated to decomposition. This product may exhibit a flash point from about 64°C also vapour/air mixtures may reach flammable concentrations. |
| Fire and Explosion | Combustible - will evolve flammable hydrogen gas in contact with some metals. If product is present in a fire, carbon oxides may be evolved. Evacuate area & contact emergency services. Remain upwind & notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas. |
| Extinguishing | Dry agent, carbon dioxide or foam. Prevent contamination of drains or waterways. Absorb runoff with sand or similar. |
| Hazchem Code | 2R |

6. ACCIDENTAL RELEASE MEASURES

| | |
|-----------------|---|
| Spillage | If spilt, absorb with sand or similar. Wear splash-proof goggles and PVC/rubber gloves. For large amounts, wear coveralls and rubber boots. Collect and place in sealable containers for disposal. Caution: Spill site may be slippery. |
|-----------------|---|

7. STORAGE AND HANDLING

| | |
|-----------------|---|
| Storage | Store in cool, dry, well ventilated area, removed from oxidising agents, acids, active metals, direct sunlight, heat sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Large storage areas should be bunded and have appropriate ventilation systems. |
| Handling | Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| Exposure Standards | Ingredient | Reference | TWA | | STEL | |
|--------------------|------------------------|-------------|-----|-------|------|-------|
| | | | ppm | mg/m3 | ppm | mg/m3 |
| | 2-Butoxyethanol (EGBE) | NOHSC (AUS) | 20 | 96.9 | 50 | 242 |
| | Ethanolamine | NOHSC (AUS) | 3 | 7.5 | 6 | 15 |
| | Potassium hydroxide | NOHSC (AUS) | -- | 2 | -- | -- |

Biological Limit Values No biological limit allocated.

Engineering Controls Do not inhale vapours. Use in well ventilated areas. In poorly ventilated areas, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

PPE Wear splash-proof goggles and rubber or PVC gloves. When using large quantities or where heavy contamination is likely, wear a faceshield, coveralls and boots. When using large quantities or where heavy contamination is likely, wear a PVC apron and a faceshield.



9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|------------------------|---------------------|------------------------------|----------------------|
| Appearance | RED COLOURED LIQUID | Solubility (water) | SOLUBLE |
| Odour | SLIGHT MILD ODOUR | Specific Gravity | NOT AVAILABLE |
| pH | > 11.5 | % Volatiles | 78 % (Approximately) |
| Vapour Pressure | 18 mm Hg @ 20°C | Flammability | COMBUSTIBLE |
| Vapour Density | NOT AVAILABLE | Flash Point | > 64°C |
| Boiling Point | 100°C | Upper Explosion Limit | 12.7 % (EGME) |

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| | | | |
|-------------------------|--------------------------|---------------------------------|---------------|
| Melting Point | < 0°C | Lower Explosion Limit | 1.1 % (EGME) |
| Evaporation Rate | AS FOR WATER | Autoignition Temperature | NOT AVAILABLE |
| Density | 1.1 g/mL (Approximately) | | |

10. STABILITY AND REACTIVITY

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|--------------------------|---|
| Material to Avoid | Incompatible with oxidising agents (eg. peroxides), acids (eg. sulphuric acid), active metals (eg. aluminium, potassium, magnesium), and heat and ignition sources. |
| Decomposition | May evolve carbon oxides when heated to decomposition. May also evolve nitrogen oxides and sulphur oxides when heated to decomposition. |

11. TOXICOLOGICAL INFORMATION

| | |
|------------------------------|---|
| Health Hazard Summary | This product has the potential to cause adverse health effects with eye contact or prolonged skin contact. Due to the low vapour pressure of this product an inhalation hazard is not anticipated with normal use. Use safe work practices to avoid direct eye or skin contact and vapour/ mist generation-inhalation. |
| Eye | May result in pain, redness, corneal burns and ulceration with possible permanent damage with prolonged contact. |
| Inhalation | Over exposure may result in irritation of the nose & throat with coughing, nausea and headache. Low vapour pressure reduces the inhalation hazard. |
| Skin | Prolonged and repeated contact may result in irritation, skin rash, dermatitis, blisters and burns. |
| Ingestion | Ingestion may result in ulceration to the mouth and throat with nausea and vomiting. |
| Toxicity Data | ETHYLENE GLYCOL MONOBUTYL ETHER (111-76-2) LC50 (Inhalation): 700 ppm (mouse) LD50 (Ingestion): 300 mg/kg (rabbit) LD50 (Skin): 230 mg/kg (guinea pig) ETHANOLAMINE (141-43-5) LD50 (Ingestion): 620 mg/kg (guinea pig) LD50 (Skin): 1 mL/kg (rabbit) POTASSIUM HYDROXIDE (1310-58-3) LD50 (Ingestion): 273 mg/kg (rat) |

12. ECOLOGICAL INFORMATION

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| Environment | WATER: If released to waterways, alkaline products may change the pH of the waterway. Fish will die if the pH reaches 10-11 (goldfish 10.9, bluegill 10.5). SOIL: May leach to groundwater with toxic effects on aquatic life as above. ATMOSPHERE: Not expected to reside in the atmosphere. Drops or particles released to atmosphere should be removed by gravity and/or be rained out. |
|--------------------|--|

13. DISPOSAL CONSIDERATIONS

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|-----------------------|--|
| Waste Disposal | For small amounts absorb with sand, vermiculite or similar and dispose of to an approved landfill site. Contact the manufacturer for additional information if larger amounts are involved. Prevent contamination of drains and waterways as aquatic life may be threatened and environmental damage may result. |
| Legislation | Dispose of in accordance with relevant local legislation. |

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

| | | | | | |
|----------------------|------------------------------|---------------------|----|---------------------------|----------------|
| Shipping Name | POTASSIUM HYDROXIDE SOLUTION | | | | |
| UN No. | 1814 | DG Class | 8 | Subsidiary Risk(s) | None Allocated |
| Pkg Group | III | Hazchem Code | 2R | EPG | 8A1 |



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15. REGULATORY INFORMATION

Poison Schedule Classified as a Schedule 5 (S5) Poison using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

AICS All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Additional Information RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

EXPOSURE STANDARDS - TIME WEIGHTED AVERAGE (TWA) or WES (WORKPLACE EXPOSURE STANDARD) (NZ): Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

ABBREVIATIONS:

ADB - Air-Dry Basis.

CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.

CNS - Central Nervous System.

IARC - International Agency for Research on Cancer.

M - moles per litre, a unit of concentration.

mg/m³ - Milligrams per cubic metre.

NOS - Not Otherwise Specified.

pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).

ppm - Parts Per Million.

TWA/ES - Time Weighted Average or Exposure Standard.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this Chem Alert report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Report Status

This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Material Safety Data Sheet ('MSDS').

It is based on information concerning the product which has been provided to RMT and Ecowash Systems by the manufacturer or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT and Ecowash Systems have taken all due care to include accurate and up-to-date information in this MSDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT and Ecowash Systems accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this MSDS.

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