SAFETY DATA SHEET

PRODUCT NAME **ANSUL THUNDERSTORM F-600A 3X6**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name **WORMALD NZ LTD**

Address 8 Henderson Place
Onehunga
Auckland 1061

Private Bag 93011
New Lynn
Auckland 0640

Telephone Number +64 9 6350755
Fax +64 9 2592485
Emergency 0800 243 622 [0800CHEMCALL]

Synonym(s) THUNDERSTORM F-600A 3X6

Use(s) FIRE EXTINGUISHING AGENT • FIRE FIGHTING

MSDS Date 05 June 2008

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO HAZARDOUS SUBSTANCES (CLASSIFICATION) REGULATIONS 2001 HAZARD CLASSIFICATION

HAZARD CLASSIFICATION

6.9B Substances that are harmful to human target organs or systems.

HAZARD STATEMENTS

H371 May cause damage to organs

PRECAUTIONARY STATEMENTS

P103 Read label before use.
P104 Read Safety Data Sheet before use.*.
P260 Do not breathe dust/fume/gas/mist/vapours/spray
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS No.	Content
DIETHYLENE GLYCOL MONOBUTYL ETHER	112-34-5	7%
WATER	7732-18-5	80-90%
NON HAZARDOUS INGREDIENTS	Not Available	4-10%

4. FIRST AID MEASURES

Eye If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop

by the Poison Information Centre or a doctor, or for at least 15 minutes.

Inhalation If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator where an inhalation risk exists. Apply artificial respiration if not breathing.

Skin If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre or a doctor.

Ingestion For advice, contact a Poisons Information Centre or a doctor (at once). If swallowed, do not induce vomiting.

Medical Advice Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flammability Non flammable. May evolve toxic gases (hydrocarbons, carbon oxides) when heated to decomposition.

Fire and Explosion Non flammable. Treat as per requirements for Surrounding Fires: Evacuate area and contact emergency services. Remain upwind and 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 Extinguishing agent.

Hazchem Code None allocated.

6. ACCIDENTAL RELEASE MEASURES

Spillage If spilt, absorb with sand or similar. Wear splash-proof goggles, PVC/rubber gloves, 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 an area designated for fire extinguishers. Signs should indicate fire extinguisher location. Extinguishers should be kept cool and dry and should not come into contact with any chemicals. Inspect regularly to ensure extinguishers are in good working order. Also store removed from reactive metals, electrically energised equipment and any material reactive with water.

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 Stds

Ingredient	Reference	TWA		STEL	
		ppm	mg/m3	ppm	mg/m3
Diethylene Glycol Monobutyl Ether	OSH (NZ)	10.0	67.5	15.0	101.2

Engineering Controls Do not inhale vapours/fumes/smoke. When handling this product, maintain adequate natural ventilation where practicable. In a fire situation, ventilation may be difficult to control. Contact emergency personnel.

PPE

Wear splash-proof goggles and rubber or PVC gloves. In fire situations wear a Self Contained Breathing Apparatus (SCBA) and appropriate fire fighting equipment. When using large quantities or where heavy contamination is likely, wear coveralls. Where an inhalation risk exists, wear a Type A-Class P1 (Organic gases/vapours and Particulate) Respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	ORANGE GELLED LIQUID	**Solubility (water)**	SOLUBLE
Odour	SLIGHTLY SWEET ODOUR	**Specific Gravity**	NOT AVAILABLE
pH	7.5 - 8.5 **%**	**Volatiles**	NOT AVAILABLE
Vapour Pressure	NOT AVAILABLE	**Flammability**	NON FLAMMABLE
Vapour Density	NOT AVAILABLE	**Flash Point**	NOT RELEVANT
Boiling Point	> 99°C	**Upper Explosion Limit**	NOT RELEVANT
Melting Point	NOT AVAILABLE	**Lower Explosion Limit**	NOT RELEVANT
Evaporation Rate	0.002 (Butyl Acetate = 1)	**Autoignition Temperature**	NOT AVAILABLE
Density	1.010 - 1.025	**Viscosity**	1500 - 2500 cps

10. STABILITY AND REACTIVITY

Stability	Stable under recommended conditions of storage.
Conditions to Avoid	No known conditions to avoid.
Material to Avoid	Incompatible with oxidising agents (eg. hypochlorites, peroxides) and acids (eg. sulphuric acid). Also incompatible with reactive metals (eg. potassium), electrically energised equipment and any material reactive with water.
Decomposition	May evolve toxic gases (hydrocarbons, carbon oxides) when heated to decomposition**.**
Polymerization	Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Low toxicity - Irritant. This product has the potential to cause adverse acute and chronic health effects with over exposure, however given product dilution and application over exposure is not anticipated with normal use. Chronic over exposure to some glycols may result in kidney, liver and nerve damage.
Eye	Irritant. Contact may result in irritation, lacrimation, pain and redness.
Inhalation	Low irritant. Over exposure at high levels may result in mucous membrane irritation of the nose and throat with coughing. Under extreme temperatures in a fire situation toxic by-products associated with this extinguishing agent and surrounding materials may also be generated.
Skin	Low irritant. Prolonged or repeated contact may result in mild irritation, rash and dermatitis.
Ingestion	Low to moderate toxicity. Ingestion may result in gastrointestinal irritation, nausea, vomiting, headache, abdominal pain and diarrhoea. However, due to product form ingestion is considered unlikely. Maintain good personal hygiene standards.
Toxicity Data	DIETHYLENE GLYCOL MONOBUTYL ETHER (112-34-5) LD50 (Ingestion): 2000 mg/kg (guinea pig) LD50 (Skin): 2700 mg/kg (rabbit)

12. ECOLOGICAL INFORMATION

Environment	Limited ecotoxicity data was available for this product at the time this report was prepared. Ensure appropriate measures are taken to prevent this product from entering the environment.
Ecotoxicity	Diethylene glycol monobutyl ether: Fish LC50 (96hrs) = 1,300 mg/L (Lepomis marcrochinus); LC50 (24hrs) = 2,700 mg/L (Carrassius auratus).
Persistence / Degradability	Diethylene glycol monobutyl ether: Indirect photodegradation is about 50% in 3.5 hours. Aerobic degradation with adapted sludge is 60% after 28 days. COD = 2080 mg/g substance. BOD5 = 250 mg O2/g substance. Theoretical oxygen demand = 2.17 mg/mg. Should not bioaccumulate - estimated bioaccumulation factor (log BCF) = 0.46.
Mobility	Diethylene glycol monobutyl ether: Should not partition from a water column to organic matter contained in sediments and suspended solids.

13. DISPOSAL CONSIDERATIONS

Waste Disposal	Export the substance from New Zealand as waste ; or Treat the substance so that it is no longer a hazardous substance ; or Discharge the substance into the environment so that, after reasonable mixing, the concentration of the substance in an environmental medium does not exceed any relevant tolerable exposure limit and/or environmental exposure limit set for the substance or any of its components.
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO LAND TRANSPORT RULE: DANGEROUS GOODS 2005 NZS 5433:2007, UN, IMDG OR IATA

Shipping Name	None Allocated				
UN No.	None Allocated	**DG Class**	None Allocated	**Subsidiary Risk(s)**	None Allocated
Pkg Group	None Allocated	**Hazchem Code**	None Allocated	**EPG**	None Allocated

15. REGULATORY INFORMATION

Approval Code	HSR002573
Group Name	Fire Fighting Chemicals Group Standard 2006
HSNO Controls	**Refer to the ERMA website for more information: www.ermanz.govt.nz**

16. OTHER INFORMATION

Additional Information

ABBREVIATIONS:
ADB - Air-Dry Basis.

BEI - Biological Exposure Indice(s)
CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.
CNS - Central Nervous System.
EINECS - European INventory of Existing Commercial chemical Substances.
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.
NTP - National Toxicology Program.
OSHA - Occupational Safety and Health Administration.
pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm - Parts Per Million.
RTECS - Registry of Toxic Effects of Chemical Substances.
TWA/ES - Time Weighted Average or Exposure Standard.

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 SDS report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this SDS 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.

Report Status

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

It is based on information concerning the product which has been provided to RMT 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 has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT 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 SDS.

Prepared By

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SDS Date:05 June 2008
Reviewed by Responsible Care NZ 15 August 2013

End of Report

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P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS No.	Content
DIETHYLENE GLYCOL MONOBUTYL ETHER	112-34-5	7%
WATER	7732-18-5	80-90%
NON HAZARDOUS INGREDIENTS	Not Available	4-10%

4. FIRST AID MEASURES

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by the Poison Information Centre or a doctor, or for at least 15 minutes.

Inhalation If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator where an inhalation risk exists. Apply artificial respiration if not breathing.

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Extinguishing Extinguishing agent.

Hazchem Code None allocated.

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

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Shipping Name	None Allocated				
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Prepared By

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SDS Date:05 June 2008
Reviewed by Responsible Care NZ 15 August 2013

End of Report