

1. Identification of Substance & Company**Product**

Product name	GlowMark
Product code	GM_500ML
HSNO approval	HSR002515
Approval description	Aerosols (Flammable) Group Standard 2006
UN number	1950
Proper Shipping Name	Aerosols
Packaging group	NA
Hazchem code	2YE
Uses	Marking Paint

Company Details

Company	Ramset New Zealand A Division of ITW New Zealand 29 Poland Rd Glenfield Auckland 0627 New Zealand
Address	
Telephone	+64 9 444-3510

Emergency Telephone Number: 09 444-3510 (Monday to Friday, 8:00 am to 5:00 pm)
POISON CENTRE NUMBER: 0800 764 766 (24 Hours)

2. Hazard Identification**Hazard Classifications**

This product has been approved under the Hazardous Substances and New Organisms Act (HSNO) Approval: Aerosols (Flammable) Group Standard 2006, HSR002515), and is classified as follows:

Classes:

2.1.2A	flammable aerosol
6.1D (oral)	acutely toxic by ingestion
6.1E (inhalation)	acutely toxic by inhalation
6.3A	skin irritant
6.4A	eye irritant
6.8B	suspected human reproductive or developmental toxicant
6.9B	suspected human target organ toxicant
9.1D	harmful to the aquatic environment
9.3C	harmful to terrestrial vertebrates

SYMBOLS**DANGER****Other Classifications**

There are no other Classifications that are known to apply.

Hazard and Precautionary Statements

Hazard	Extremely flammable aerosol. Harmful if swallowed. May be harmful if inhaled. Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child May cause damage to organs Harmful to aquatic life. Harmful to terrestrial vertebrates.
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Precautionary Keep out of reach of children.
 Read label before use.
 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 Do not spray on an open flame or other ignition source.
 Pressurized container: Do not pierce or burn, even after use.
 Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
 Wear eye/face protection. Wear protective gloves/protective clothing.
 Wash hands thoroughly after handling.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe spray.
 Do not eat, drink or smoke when using this product.
 Avoid release to the environment.

Further precautionary statements can be found in Section 4 – First Aid.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Class for ingredient(s)	Conc (w/w %)
Toluene	108-88-3	3.1B, 6.1D (oral, inhalation), 6.3A, 6.4A, 6.8B, 6.9B (inhalation), 9.1D (fish, crustacean, algal), 9.3C	30-60%
Propane	74-98-6	2.1.1A – propellant	10-30%
Butane	106-97-8	2.1.1A - propellant	10-30%
Non hazardous ingredients	Proprietary	Non hazardous	balance

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. First Aid

General Information

You should call the National Poisons Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

If medical advice is needed, have this MSDS, product container or label at hand. If exposed or concerned: Get medical advice/ attention.

Recommended first aid facilities Ready access to running water is required. Accessible eyewash is required. Emergency shower, hand wash, soap. CPR training, oxygen mask.

Exposure

Swallowed IF SWALLOWED: Do NOT induce vomiting. Rinse mouth. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. If eye irritation persists: Get medical advice.

Skin contact IF ON SKIN (or hair): Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention. Take off contaminated clothing and wash before re-use.

Inhaled IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a doctor if you feel unwell.

Advice to Doctor

Treat symptomatically

5. Firefighting Measures

Fire and explosion hazards: Spray/Vapours may form an explosive mixture in air which can be ignited by many sources such as pilot lights, open flames, electrical motors, switches and static electricity. This product has the potential to cause fire or to create an additional hazard during fire. Containers may vent, rupture or burst at temperatures above 50°C

Suitable extinguishing substances: Water fog, Alcohol foam, carbon dioxide or dry chemical.

Unsuitable extinguishing substances: Unknown.

Products of combustion: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.

Protective equipment: Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.

Hazchem code: 2YE

6. Accidental Release Measures

Containment If greater than 3000L is stored, secondary containment is required. Emergency plans to manage any potential spills must be in place. Prevent spillage from spreading or entering soil, waterways or drains.

Emergency procedures In the event of spillage alert the fire brigade to location and give brief description of hazard.
Shut off all possible sources of ignition.
Wear protective equipment to prevent skin, eye and respiratory exposure.
Clear area of any unprotected personnel.
Contain using sand, earth or vermiculite.
Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).

Clean-up method Use absorbent (soil, sand or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazard.
Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

Disposal Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.

Precautions Wear protective equipment to prevent skin and eye contamination and the inhalation of vapour. Work up wind or increase ventilation.

7. Storage & Handling

Storage Avoid storage of harmful substances with food. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10. Location test certificates must be available if storing greater than 3000 L of flammable aerosols with 2.1.2A classification.
Containers (and outer packaging) must bear the prescribed labelling, including the Hazchem code, UN number, flammability warning and name of contents.

Handling Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of vapour, mist or aerosols.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by the NZ Department of Labour for this product. There is a general limit of 10mg/m³ for dusts and mists when limits have not otherwise been established.

NZ Workplace Exposure Stds (OSH 2010)	Ingredient	WES-TWA	WES-STEL
	Toluene	50ppm, 188 mg/m ³ (skin)	no data
	Propane	no data (simple asphyxiant)	no data
	Butane	800ppm 1900mg/m ³	no data

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety in Employment Act 1992 (HSE). Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment
Eyes


Avoid contact with eyes. Do not spray near eyes. Use safety glasses and or chemical splash goggles if splashes are possible. Avoid wearing contact lenses.

Skin


Avoid repeated or prolonged skin contact. If discomfort is felt (e.g., if pre-existing conditions exist, such as dermatitis, cuts or sensitive skin), gloves may be helpful. If you suffer from dermatitis type skin conditions, use gloves. Neoprene and Latex gloves are recommended. Replace gloves frequently. Gloves should be checked for tears or holes before use.

Respiratory


A respirator with an organic vapour cartridge when airborne concentrations approach the WES (section 8). If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance	Coloured liquid in aerosol can
Odour	Characteristic hydrocarbon
pH	no data
Vapour density	1.6 (Air =1)
Vapour Pressure	300-700kPa
Boiling point	no data
Volatile materials	no data
Freezing / melting point	no data
Solubility	Insoluble in water
Specific gravity / density	no data
Flash point	<0 °C
Danger of explosion	Container may explode when exposed to extreme heat
Auto-ignition temperature	no data
Upper & lower flammable limits	LEL: 1.2%; UEL: 9.5% (propellant)
Corrosiveness	no data

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Flammable substance. Keep away from sources of ignition at all times. Containers should be kept closed in order to avoid contamination.
Incompatible groups	strong oxidisers
Substance Specific Incompatibility	Avoid heat, sparks, flames and any other sources of ignition.
Hazardous decomposition products	Thermal decomposition is highly dependant on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.
Hazardous reactions	Will react with strong oxidising materials.

11. Toxicological Information

Summary

No specific data is available for this product. Where available, toxicological data has been researched and data for the mixture calculated. The results of these calculations are presented below. The product is considered to have the following toxicity:

Supporting Data

Acute	Oral	Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (oral, rat) for the mixture is >5,000 mg/kg. Data considered includes: Toluene 636 mg/kg (rat). The solvent is considered an acute oral toxicant by aspiration.
	Dermal Inhaled	No evidence of dermal toxicity for any of the ingredients. Using LC ₅₀ 's for ingredients, the calculated LC ₅₀ (inhalation, rat) for the mixture is >20mg/L. Data considered includes: Toluene 12.5 - 28.8 mg/l (vapour, rat). Inhalation of vapours may cause irritation to the respiratory system. High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.
	Eye	The mixture is considered to be an eye irritant, because Toluene is considered eye irritant.
	Skin	The mixture is considered to be a skin irritant, because Toluene is considered skin irritant. Prolonged or repeated skin contact may cause drying or cracking, irritation and possible dermatitis (non-allergic)
Chronic	Sensitisation	No ingredient present at concentrations > 0.1% is considered a sensitizer.
	Mutagenicity	No ingredient present at concentrations >0.1% considered a suspected or confirmed mutagen.
	Carcinogenicity	No ingredient present at concentrations >0.1% considered a suspected or confirmed carcinogen.
	Reproductive / Developmental Systemic	Toluene is classed by ERMA as 6.8B. Exposure of pregnant women may cause serious disruption to neuronal development in the fetus. This substance may affect the Central Nervous System through repeated exposure. Chronic overexposure to toluene may lead to effects on the liver, kidneys, and nervous system.
	Aggravation of existing conditions	Any existing dermatitis may be aggravated.

12. Ecological Data

Summary

No specific data is available for this product. Where available, ecotoxicological data has been researched and data for the mixture calculated. The results of these calculations are presented below. The product is considered to have the following ecotoxicity groups:

Supporting Data

Aquatic	This substance is considered harmful to fish and aquatic invertebrates. The EC50 is between 1 and 100mg/l.
Degradability	This substance is expected to be readily biodegradable. It oxidises readily by photochemical reactions in air.
Bioaccumulation	This substance is not expected to bioaccumulate significantly.
Soil	The mixture is not considered toxic to the soil environment. The substance may adsorb to soil and have low mobility.
Terrestrial vertebrate	This product is not considered toxic to terrestrial vertebrates. No LC ₅₀ (diet) data for ingredients are available and the classification is based on the LD ₅₀ (oral) – see section 11 – oral toxicity.
Terrestrial invertebrate	The mixture is not considered harmful to terrestrial invertebrates.
Biocidal	Not applicable

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated packaging	Pressurised container: Do not puncture or incinerate containers. Send to landfill or similar. Dispose of large quantities as hazardous waste.

14. Transport Information

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a hazardous substance for transport.

UN number:	1950	Proper shipping name:	Aerosols
Class(es)	2	Packing group:	no data
Precautions:	Flammable Aerosol	Hazchem code:	2YE

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: Aerosols (Flammable) Group Standard 2006, HSR002515).

Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix)

Key workplace requirements are:

MSDS	To be available within 10 minutes in workplaces storing any quantity.
Labelling	No removal of labels and/or decanting of product into other containers can occur.
Emergency plan	Detailed Emergency Management Plan required if > 3000L is stored.
Approved handler	Required for quantities >3000 L.
Tracking	Not required.
Bunding and secondary containment	Required if > 3000L is stored.
Signage	Required if > 3000L is stored in any one location.
test certificate	Required if storing >3000 L. This applies to all flammable aerosol with 2.1
Flammable zone	Must be established if storing >3000 L is stored in any one location.
Fire extinguisher	Required if > 3000L present.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health, Safety in Employment Act and Regulations, local Council Rules and Regional Council Plans.

16. Other Information

Abbreviations

Approval Code	Approval Aerosols (Flammable) Group Standard 2006, HSR002515, Controls, ERMA. www.ermanz.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
Controls Matrix	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
EC₅₀	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
ERMA	Environmental Risk Management Authority
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD₅₀	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
MSDS	Material Safety Data Sheet (or Safety Data Sheet)
OSH	The Occupational Safety and Health Service of the Department of Labour (NZ)
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed in a work day.

References

Data	Unless otherwise stated comes from the ERMA HSNO chemical classification information database (CCID) http://www.ermanz.govt.nz/hs/compliance/chemicals.html , for specific chemicals.
ERMA Transfer Gazettes	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004)
Controls Matrix	Part of the ERMA New Zealand User Guide to the HSNO Control Regulations
WES 2002	The NZ Workplace Exposure Standards Effective from 2002, published by OSH and available on their web site – www.osh.dol.govt.nz .
Other References:	Manufacturers MSDS

Disclaimer

This MSDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The MSDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the MSDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. **The likely HSNO classifications for this MSDS have been estimated based on general information from the supplier (e.g., hazard, toxicological).** Full formulation details were not available. This MSDS is copyright Datachem and must not be copied, edited or used for other than intended purpose.
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