AQUARIUS RUBBER (AUST) PTY LTD

Red Back Tracing Smoke

Date of issue: February 2023

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identification: Red Back Tracing Smoke
Code: RED418

Product Use: Generating smoke for testing purposes and leak detection in HVAC systems.

Supplier:

Aquarius Rubber (Aust) PTY LTD
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2. HAZARDS IDENTIFICATION

Statement of Hazardous Nature: Classified as hazardous according to NOHSC criteria

Australian Dangerous Goods Code for Transport by Road and Rail:
This product is NOT classified as a Dangerous Good for transport

Directive 67/548/EEC (DSD) and its amendments:
This product is not a Dangerous Good

GHS Label Elements:

Signal Word: Warning - Irritant Environmentally Damaging

Regulation (EC) No 1272/2008 (CLP/GHS)
Eye irritant (Category 2)
Toxic to aquatic life with long lasting effects (Category 2)

Hazard Statements:
H319 - Causes serious eye irritation
H411 - Toxic to aquatic life with long lasting effects

Precautionary statement:

P102 - Keep out of reach of children
P210 - Keep away from heat, sparks, open flames, hot surfaces. No Smoking
P273 - Avoid release to the environment
P280 - Wear eye protection

Precautionary statement Prevention:

P264 - Wash hands thoroughly after handling
P302 & P352 - IF ON SKIN: Wash with plenty of soap and water

Precautionary statement Storage:

Not applicable

Precautionary statement Disposal:

Dispose of materials and packaging in accordance with all local, state, national and international regulations

Other Hazards:

Substance meets the criteria of PBT according to Regulation (EC) No 1907/2006, Annex XIII
Not applicable as inorganic salts

Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
Not applicable as inorganic salts

Other Hazards which do not result in classification
This product produces smoke that can cause irritation on contact to eyes or inhalation with long periods of exposure or incorrect use. If uncertain how the product should be used, contact the manufacturer or product vendor.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Name:	CAS No.	%
Potassium Chlorate	3811-04-9	30-60
Ammonium Chloride	12125-02-9	30-60
Non-Hazardous ingredients		30-60

The table above lists the hazard classification of the ingredients in pure form. The mixing of these materials have reduced the hazards as described in section 16.

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

4. FIRST AID MEASURES

EYE:

Raw Product	Wash out immediately with water, and if irritation continues, seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Generated Smoke	Wash out immediately with water, and if irritation continues, seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

INHALATION:

Raw Product	If dusts, fumes, aerosols or combustion products are inhaled, remove from contaminated area and seek medical attention.
Generated Smoke	If dusts, fumes, aerosols or combustion products are inhaled, remove from contaminated area and seek medical attention.

SKIN:

Raw Product	Flush skin with running water (and soap if available). Remove contaminated clothing and shoes. Seek medical attention in the event of irritation.
Generated Smoke	Exposure not expected during normal use, however should contact over a prolonged period occur, flush skin with running water (and soap if available). Remove contaminated clothing and shoes. Seek medical attention in the event of irritation.

INGESTION:

Raw Product	If large amounts are swallowed do NOT induce vomiting. Seek medical attention immediately. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airways and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming disoriented.
PROTECTION OF FIRST AIDERS	No action shall be taken involving personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SYMPTOMS AND EFFECTS BOTH ACUTE AND DELAYED

Potential acute health effects:	*Eye* - may cause irritation *Inhalation* - exposure to decomposition products may cause health hazard. Serious effects may be delayed following exposure. *Skin* - may cause irritation *Ingestion* - no known significant effects or critical hazards.
Over-exposure signs/symptoms:	No specific data

INDICATION OF ANY IMMEDIATE ATTENTION AND SPECIAL TREATMENT NEEDED

Notes to Physician:	In the case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific Treatments:	None

5. FIRE FIGHTING MEASURES

Extinguishing Media:	Extinguish with water DO NOT use foam, powder or Carbon Dioxide
Hazards from the substance or mixture:	In case of fire, dangerous decomposition products may be dispersed.
Hazardous thermal decomposition products:	Decomposition products may include ammonia and hydrogen chloride.
Special protective actions for Fire Fighters:	Isolate scene of fire by evacuating all affected personnel. Move any exposed product away if this can be completed without risk. Use water spray to keep fire exposed containers cool.
Special protective equipment for Fire Fighters:	Fire Fighters should wear appropriate protective equipment including self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode. Clothing for Fire Fighters (including helmets protective boots and gloves) conforming to AS/NZS 4967:2009 (EN 469 Europe; ANSI/NFPA 1971 - USA) will provide a basic level of protection for chemical incidents.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For Non-Emergency Personnel:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas and keep unnecessary and unprotected personnel from entering. Do no touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard areas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For Emergency Responders:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental Precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spills	Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contactor.
Large spills	Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. HANDLING AND STORAGE

Procedure for Handling:	Put on appropriate personal protective equipment (see section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from clothing, incompatible materials and combustible materials. Keep away from heat. Empty containers retain product residue and can be hazardous. Do not reuse containers unless for similar use. When using product ensure placed in/on an incombustible base and ensure following use that the product remains are cool and not emitting smoke prior to disposal.

General occupational hygiene advice	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibles:	Store in accordance with local regulations. Store in original bags protected from direct sunlight in a dry, cool and well ventilated area, away from incompatible materials (see section 10) and food and drink. Separate from combustible materials. Keep containers tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled bags or containers. Use appropriate containment to avoid environmental contamination. Separate from reducing agents and combustible materials. Keep away from acids or bases.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters:

Occupational Exposure limits

No specific exposure limit for Potassium Chlorate determined.

General Nuisance dusts:

Source	Material	TWA mg/m3	STEL mg/m3
Safe Work Aust. Exposure Standards For airborne contaminants	Ammonium Chloride	10	20

Derived no-effect levels (DNEL)

No data available

Exposure Controls:

Good general ventilation should be sufficient to control worker exposure to airborne contaminants. The risk of inhalation of dust must be minimised so use local exhaust ventilation or other engineering controls to keep worker exposure below the recommended statutory limits.

Individual protection measures

<u>Hygiene</u>
Wash hands, exposed forearms and face thoroughly after handling chemical products, before eating, smoking and using the toilet at the end of the working period.

Eye/Face Protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to dusty environment. (AS/NZS 1336 - Australia, EN166 - Europe, ANSI Z87.1 - USA

Skin Protection

Hand protection - Chemical resistant, impervious gloves complying with an approved standard (AS/NZS 2161.2 - Australia, EN420 - Europe) should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Under normal conditions of handling and use, no additional skin protection measures should be necessary.

Respiratory Protection

In the case of inadequate ventilation wear respiratory protection conforming to approved standard (AS/NZS 1715 - Australia, ANSI Z88 - USA, EN 132-149 -Europe)

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Paste
Physical Properties:	
Colour	Grey paste
Odour	Faint sweet aromatic
pH	Not Available
Melting/freezing point	Not Available
Flash Point (°C)	Closed cup: Not applicable
Decomposition temperature	Not Available
Vapour pressure	Not Available
Density	2.1 g/cm^3 [20^{o}C]
Solubility (ies)	Not applicable
Solubility at room temperature	Not applicable
Partition coefficient: n-octonal /water	Not applicable
Viscosity	Not Available
Oxidising properties	May intensify fire; weak oxidiser

10. STABILITY AND REACTIVITY

Reactivity:	Stable in stored form, but note reactivity with other substances.
Chemical stability:	Product is stable under recommended storage and handling conditions.
Possibity of hazardous reactions:	Hazardous reactions or instability may occur under certain conditions that include: contact with combustible materials and reactions that have the risk of causing or intensifying fire.
Conditions to avoid:	Avoid contamination by metals, dust and combustible materials. Keep away from heat, sparks and flames. Store away from direct sunlight. Avoid contact with combustible materials.
Incompatible materials:	Extremely reactive/incompatible with acids, alkalis and some organic materials.
Hazardous decomposition products:	Hazardous decomposition products may be produced including ammonia and hydrochloric acid.

11. TOXICOLOGICAL INFORMATION

Toxicological effects

Acute Toxicity:

No toxicological test completed on the raw product.

No hazards expected if used as directed.

Raw product ingredients in pure and concentrated form.
Potassium Chlorate:
LD50 Oral rat: 1870 mg/kg bodyweight. Dermal, rabbit KD50 > 2000 mg/kg
Ammonium Chloride:
LD50 Oral rat: 1400 mg/kg bodyweight.

Irritation/Corrosion:

Skin
Irritating to the skin

Eyes
Irritating to the eyes

Respiratory
Not applicable

Sensitisation:

Summary
Skin - Sensitiser to skin
Respiratory - Non sensitiser

Mutagenicity: No known Mutagenic effect

Carcinogenicity: No known Carcinogenic effect

Reproductive toxicity:	No applicable data
Teratogenicity:	No applicable data
Specific Target Organ Toxicity (Single exposure)	No applicable data
Specific Target Organ Toxicity (Repeated exposure)	No applicable data
Aspiration Hazard:	No applicable data
Information on the likely routes of exposure	Anticipated route of entry is ingestion (Oral) Potential Acute Health Effects *Ingestion* - No known significant effects or critical hazards *Eye* - may cause eye irritation *Skin* - may cause skin irritation *Inhalation* - exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. Potential Chronic Health Effects No specific data available
The physical chemical and toxicological characteristics	No known significant effects or critical hazards.
Delayed and immediate effects and also chronic effects from short and long term exposure	
Short term exposure:	Potential Immediate Effects Adverse health effects are considered unlikely when product is used according to label instructions. Potential Delayed Effects None identified
Long term exposure:	Potential Immediate Effects Adverse health effects are considered unlikely when product is used according to label instructions. Potential Delayed Effects Non Identified

Potential Chronic Effects:

General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION

Toxicity: No eco-toxicological data available for raw product.

Data below is for pure forms of the constituent chemicals

Product	Result	Species	Exposure
Ammonium Chloride	LC50 = 725 mg/l	Lepomis macrochirus	24 hour
	LC50 = 209 mg/l	Cyprinus carpio	96 hours
	LC50 = 202 mg/l	Daphnia magna	24 hour
Potassium Chlorate	LC50 = 1750 mg/l	Oncorhynchus mykiss	96 hours
	EC50 = 599 mg/l	Daphnia magna	48 hours
	IC50 = 1750 mg/l	Algae	72 hours

Persistence and degradability: No data available

Bio accumulative potential: Not available

Mobility in soil: No data available

Other adverse effects: No known significant effects or critical hazards

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Product:

Disposal Method

The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Hazardous Waste

The classification of the product may meet criteria for a hazardous waste

Packaging:

Disposal Method

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling not feasible.

Special Precautions

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

Not classified as Dangerous Goods for transport by Road and Rail as per Australian Dangerous Goods Code, 7th Edition

This product is only supposed to be transported by road or railway and just the transport regulations ADR/RID thus apply. If other means of transport are to be used, contact the publisher of this safety data sheet.

Transport in bulk according to Annex II of Marpol 73 and the IBC Code: Not applicable

15. REGULATORY INFORMATION

Safety, Health and Environmental regulations specific for the substance or mixture

EU Regulation (EC) No 1907/2006 (REACH)

Annex XIV - List of Substances subject to authorisation

Substances of very high concern

None of the components are listed

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable

16. OTHER INFORMATION

This document was prepared in accordance with the Code of Practice: Preparation of safety data sheets for hazardous chemicals, Safework Australia (December 2011) and Annex 4 of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS). The document should be used for guidance only in conjunction with appropriately skilled and knowledgeable persons and appropriate equipment.

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