



SAFETY DATA SHEET

Trade Name: Super Radiator Flush

Version No.: 03.04(22)

Reference: SDS.AI222.MY.EN

Issue Date: 15/02/2022

BIOACTIVE MICROORGANISM ENZYMATIC RADIATOR DECONTAMINATION / CLEANER

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	Bioactive Microorganism Enzymatic Radiator Decontamination / Cleaner
Trade Name:	Super Radiator Flush
Other Identification:	BMRD
Recommended Use:	For cleaning & decontamination of grimes and biofilm on vehicle radiator and water hose; Use according to manufacturer's directions.
Supplier:	Airestec Innovations Sdn Bhd B-09-10/11, Gateway Corporate Suites, Gateway Kiaramas, 1, Jalan Desa Kiara, Mont' Kiara, 50480 Kuala Lumpur, Malaysia info@airestec.com / www.airestec.com
Emergency information:	(+60)3 – 6203 1923 Monday – Friday: 8.30 am – 5.00 pm

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture (According to GHS Classifications)

Hazardous Chemical. Non-Dangerous Goods.

When mixed with water at or more than 1:10, the diluted product is classified as non-hazardous.

GHS Classifications



- Skin corrosion / irritation (Category 3)
- Eye irritation (Category 2B)
- Respiratory tract irritation (Category 3)

Hazard Statements

- Warning – H316 Causes mild skin irritation
- Warning – H320 Causes eye irritation
- Warning – H335 May cause respiratory irritation

Precautionary Statements

- P103 Read label before use
- P261 Avoid breathing dust / fume / gas / mist / vapors / spray
- P264 Wash hands thoroughly after handling
- P270 Do not eat, drink or smoke when using this product

- P271 Use only outdoors or in a well-ventilated area
- P280 Wear protective gloves / eye protection

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients Name	CAS No.	Proportion (%)
Water	7732-18-5	65 - 70
Glycerol	56-81-5	15 - 20
Airestec 002P	9014-01-1	7 – 10
Propylene Glycol	57-55-6	5 - 7
Sodium Bicarbonate	144-55-8	1 – 3
Citric Acid	5949-29-1	1 - 3

4. FIRST AID MEASURES

Ingestion: IF SWALLOWED, Rinse mouth. Do not induce vomiting. Call a POISON CENTER or doctor / physician if you feel unwell.

Skin: IF ON SKIN, wash with plenty of water
IF SKIN irritation occurs, get medical advice / attention.

Eyes: IF IN EYES, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF eye irritation persists, get medical advice / attention.

Inhalation: IF INHALED, remove victim to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First Aid Facilities: Access to potable water. Wash bottles or eye wash.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically. Remove patient from further exposure. Treatment of exposure should be directed at the control of symptoms and clinical condition of the patient. Seek medical advice / attention immediately if symptoms worsen.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water spray, Foam, Dry powder

Special Hazards Arising from The Substance: May cause irritation by inhalation of dust or aerosol.

Advice for Firefighters: Wear breathing apparatus and full protective gear, in case of fire. Prevent, by any means available, spillage from entering drain or water courses. Remove containers from path of fire, if safe to do so.

Fire / Explosion Hazards:

Product is not readily combustible under normal condition. It is not considered as significant fire risk. However, it may decompose on heating and may produce harmful vapours and toxic fumes (i.e: carbon monoxide, carbon oxides). Heat may cause rupture of containers.

6. ACCIDENTAL RELEASE MEASURES**Personal Precautions, Protective Equipment and Emergency Equipment**

Use in a well-ventilated area with adequate equipment and emergency procedures. Stop leak if it is safe to do so. Wipe up spilled material and follow precaution of protective equipment. Keep unnecessary personnel from entering the area.

Environmental Precaution

Prevent, by any means available, spillage from entering drains or water courses.

Methods and Materials for Containment and Cleaning Up

Minor spills:

- Slippery when spilled.
- Avoid direct contact with skin and eyes. Use protective gloves.
- Stop leak if safe to do so.
- Clean up spills immediately.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Residue may be washed away with water and detergents.
- Wipe up and place in a suitable and labelled container for disposal.

Major spills:

- Slippery when spilled.
- Clear area of personnel.
- Wear breathing apparatus, eye protection and protective gloves.
- Stop leak if it is safe to do so.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Residue may be washed away with water and detergents.
- Wipe up and place in a suitable and labelled container for disposal.
- Alert Fire Brigade if the spill is too large to be handled safely and effectively.

7. HANDLING AND STORAGE**Precautions for Safe Handling:**

Use in a well-ventilated area with adequate equipment and emergency procedures. Avoid breathing dust or spray. Use appropriate personal protection. Do not eat, drink or smoke while handling the product. Avoid direct contact with skin and eyes. Handle in accordance to good industrial hygiene and safety practice.

Conditions for Safe Storage:	Keep containers tightly closed and store in a dry, cool and well-ventilated area and locked up. Protect containers against physical damage. Keep containers upright at all times.
Suitable Container:	HDPE container. Packing as recommended by manufacturer. Ensure all containers are clearly labelled and free from leaks.
Specific End Use(s):	See Section 1 for more information

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Engineering Controls:	Use in well-ventilated area. If ventilation is poor, the use of local exhaust ventilation system is recommended.
General Safety and Hygiene Measures:	Handle in accordance to good industrial hygiene and safety practice.
Respiratory Protection:	Wear suitable respiratory protection (for use against dust and mist) if potential for inhalation occurs.
Eye and Face Protection:	Safety glasses with side shields / Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. Lens should be removed in a clean environment only after workers have washed hands thoroughly. In the event of chemical exposure, remove contact lenses as soon as possible.
Hands Protection:	Wear protective gloves / rubber gloves. Specific workplace conditions must be taken into consideration separately. The resistance of glove materials cannot be calculated in advance and has therefore to be checked prior to application. Personal hygiene is the key element of effective hand care. Gloves must be worn on clean hands. After using gloves, hands should be washed thoroughly.
Skin Protection:	Not generally required when used as per directions. Avoid prolonged direct skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light brown liquid
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Odour:	Slight fermentation odour
Odour Threshold:	No data available
pH:	6.0 – 8.0 (Neutral pH)
Melting / Freezing Point:	Not determined (liquid at normal temperature range)
Boiling Point:	99°C
Flash Point:	Not applicable
Evaporation Rate:	Not applicable
Flammability:	Non-flammable liquid
Explosive Limit:	Not applicable
Vapour Pressure:	No data available
Vapour Density:	No data available
Relative Density / Specific Gravity:	1.0861 g/mL
Partition Coefficient:	No data available
Auto-ignition Temperature:	Not applicable
Decomposition Temperature:	No data available
Viscosity:	18.4 cPs
Solubility:	Soluble in water

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions of use and storage
Possibility of Hazardous Reactions:	None under normal conditions of use and storage
Conditions to Avoid:	Avoid excessive inhalation
Incompatible Materials:	No data available
Hazardous Decomposition Products:	None known
Reactivity:	Stable under recommended transport, use and storage conditions

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Oral:	Not expected to be toxic by ingestion
Dermal:	No data available
Inhalation:	No data available

IRRITATION

Skin: May cause irritation, to susceptible individuals.
Eyes: Causes irritation.
Respiratory: Excessive inhalation may cause respiratory irritation.

OTHER EFFECTS

Systemic Toxicity: No data available.
Sensitization: Excessive inhalation may cause respiratory irritation. However, the product would not be applied via spray / mist. May cause skin irritation in susceptible individuals, on prolonged / repeated exposure.
Mutagenic Effects: No data available.
Carcinogenicity: Not expected to be carcinogenic.
Reproductive Effects: This product does not contain any known reproductive hazards.
Developmental Toxicity: Not expected to produce reproductive or developmental toxicity.

12. ECOLOGICAL INFORMATION

Toxicity: Contain no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Persistence and Degradability: Readily Biodegradable (92% within 28 days).

Bioaccumulative Potential: Bioaccumulation is unlikely.

Mobility in Soil: Soluble

Other Adverse Effects: None known

13. DISPOSAL CONSIDERATIONS

- Disposal may be subjected to local laws and regulations and these should be considered first.
- Containers should be emptied as completely as practical before disposal. If possible, recycle containers either in-house or send to recycle company.

14. TRANSPORT INFORMATION

Marine Pollutant: NO
HAZCHEM: Not Applicable

This product is **not** classified as Dangerous Goods by ADG, IATA or IMDG Criteria. No special transport conditions are necessary.

15. REGULATORY INFORMATION

No chemical / safety assessment has been carried out for this substance or mixture by the supplier.

16. OTHER INFORMATION

Version #: 04
Revision date: 15/02/2022
Initial Date: 13/12/2021

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazard Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of uses, frequency of use and current available engineering controls must be considered.

Disclaimer:

This suggestion and data are based on information obtained from the manufacturer's SDS that we believe to be reliable. They are offered solely for your reference without any guarantee or warranty, as the conditions and methods of use of this product is beyond our control. We recommend the user to determine the suitability of our materials and suggestions before adopting them on a commercial scale.

-END OF SDS-