

**REINSTE**

Nano Ventures

designed to deliver the purest

MATERIAL SAFETY DATA SHEET**WARRIOR MICROBIAL Ag⁺ SHIELD****SECTION 1. PRODUCT IDENTIFICATION**

Product Name : Warrior Microbial Ag Shield
Product Code : RN-AW3
Catalogue Number : RN-AW3-L, RN-AW3-M, RN-AW3-H
Manufacturer/Supplier By : Reinste Nano Ventures Private Limited,
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SECTION 2. INGREDIENTS

Toluene : (CAS No.)203-625-9
Methyl ethyl ketone : (CAS No.)201-159-0
Butane : (CAS No.)203-448-7
Isobutane : (CAS No.)200-857-2
Propane : (CAS No.)00-827-9
Solvent naphtha (petroleum, light) : (CAS No.)265-199-0
Silver : (CAS No.)7440-22-4
Other additional substances in trace amounts

SECTION 3. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Aerosol Liquid
Colour : Transparent
Odour : Characteristic
Volatility description : Volatile.
Solubility : Insoluble in water
Relative density : 0.780-0.900 @ 20 C (68 F)
Vapour pressure : 0.87 kPa @ 25 °c (77 F)
Flash point (°C) : <0 (32 F) CC (Closed cup).
Auto ignition temperature : (°410/550 (770/1022 F)
Flammability limit : (LOWER(%)1.8C)
Flammability limit : UPPER(%)10

SECTION 4. STABILITY AND REACTIVITY

Stability : Stable under normal temperature conditions.
Conditions to avoid : Avoid heat, flames and other sources of ignition. Avoid contact with acids and alkalis.
Materials to avoid : Powdered metal. Alkali metals. Alkali earth metals

SECTION 5. EXPOSURE CONTROLS / PERSONAL PROTECTION EQUIPMENT

Name	Std	TWA - 8 hrs		STEL - 15min	
Butane	ES-TWA	80 ppm	1900 mg/m3		
Methyl Ethyl Ketone	ES- TWA	15p pm	445 mg/m3	300 ppm	890 mg/m3
Propane			Asphyxiating		Asphy xiating
Toluene	ES- TWA	50 ppm(Sk)	191 mg/m3(Sk)	150 ppm(S k)	574 mg/m 3(Sk)



PROTECTIVE EQUIPMENT

Eye protection :

Wear approved, tight fitting safety glasses where splashing is probable.

Other protection :

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Hygiene measures :

Wash at the end of each work shift and before eating, smoking and using the toilet. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke. **DO NOT SMOKE IN WORK AREA**

SECTION 6. HAZARDS IDENTIFICATION

RISK PHRASES

R12

Extremely flammable.

R36/38

Irritating to eyes and skin.

R48/20

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R63

Possible risk of harm to the unborn child.

R67

Vapours may cause drowsiness and dizziness.

SAFETY PHRASES

A1

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

A2

Do not spray on a naked flame or any incandescent material.

S2

Keep out of the reach of children.

S16

Keep away from sources of ignition - No smoking.

S23

Do not breathe vapour/spray.

S24/25

Avoid contact with skin and eyes.

S38

In case of insufficient ventilation, wear suitable respiratory equipment.

HAZARD ID

The above phrases are the risks associated with the product

Physical and chemical hazards :

Aerosol containers can explode when heated, due to excessive pressure build up. When sprayed on a naked flame or any incandescent material the aerosol vapours can be ignited.

Statement of hazardous nature

Hazardous substance (According to criteria of NOHSC).

Dangerous goods (According to ADG Code).

Dg class :

Class 2: Gases

Packing group :

N/A

UN NO. :

1950

SECTION 7. TOXICOLOGICAL INFORMATION

Inhalation :

Harmful by inhalation. May cause irritation to the respiratory system. Vapours may cause headache, fatigue, dizziness and nausea. High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

Skin contact :

Product has a defatting effect on skin. Prolonged contact may cause dryness of the skin.

Eye contact :

Irritating to eyes.

SECTION 8. FIRST AID MEASURES

Notes to the physician :

Treat symptomatically

Inhalation :

Move the exposed person to fresh air at once. Keep the affected person warm and at rest. Get prompt medical attention. Get medical attention.

Ingestion :

Not relevant.

Skin contact :

Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

Eye contact :

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues. Use tepid water for rinsing.

SECTION 9. FIRE FIGHTING MEASURES

Extinguishing media Use:

Powder. Dry chemicals, sand, dolomite etc. Water spray, fog or mist.



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Special fire fighting procedures :
Unusual fire & explosion hazards :

Move container from fire area if it can be done without risk.
Aerosol cans may explode in a fire

SECTION 10. ACCIDENTAL RELEASE MEASURES

Spill clean up methods :

Absorb in vermiculite, dry sand or earth and place into containers. Ventilate well.

SECTION 11. HANDLING AND STORAGE

Usage precautions :
Storage precautions :

Avoid spilling, skin and eye contact. Provide good ventilation.
Store at moderate temperatures in dry, well ventilated area

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity :

No data on possible environmental effects have been found. Not regarded as dangerous for the environment.

toluene

LC 50, 96 Hrs, FISH mg/l 24
EC 50, 48 Hrs, DAPHNIA, mg/l 19.6

methyl ethyl ketone

LC 50, 96 Hrs, FISH mg/l 3200 – 5600
EC 50, 48 Hrs, DAPHNIA, mg/l 7060

solvent naphtha (petroleum, light)

LC 50, 96 Hrs, FISH mg/l 3.77
EC 50, 48 Hrs, DAPHNIA, mg/l 7.4

SECTION 13. TRANSPORT INFORMATION

SECTION 14. DISPOSAL CONSIDERATIONS

Empty containers must not be burned because of explosion hazard. Dispose of waste and residues in accordance with local authority requirements

SECTION 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture Dir. 98/24/EC (Risks related to chemical agents at work) Dir. 2000/39/EC (Occupational exposure limit values) Dir. 2006/8/EC Regulation (EC) n. 1907/2006 (REACH) Regulation (EC) n. 1272/2008 (CLP) Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013 Regulation (EU) n. 453/2010 (Annex I) Regulation (EU) n. 286/2011 (ATP 2 CLP) Regulation (EU) n. 618/2012 (ATP 3 CLP) Regulation (EU) n. 487/2013 (ATP 4 CLP) Regulation (EU) n. 944/2013 (ATP 5 CLP) Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications: Restrictions related to the product: Restriction 3 Restriction 40 Restrictions related to the substances contained: No restriction. REACH Regulation (1907/2006) – All. XVII: N.A. Legislative Decree no. 81 of the 9th of April 2008 Title XI "Dangerous substances - Chapter I - Protection against chemical agents" Directive 2000/39/CE and s.m.i. (Professional threshold limit) Legislative Decree no. 152 of the 3rd of April 2006 and subsequent modifications and additions. (Environmental regulations) Directive 105/2003/CE (Seveso III): N.A

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