



REINSTE
Nano Ventures

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MATERIAL SAFETY DATA SHEET

WARRIOR MICRO SURFACE SHIELD

SECTION 1. PRODUCT IDENTIFICATION

Product Name : Warrior Micro Surface Shield
Product Code : RN-EW3
Catalogue Number : RN-EW3-L, RN-EW3-M, RN-EW3-H
Manufacturer/Supplier : Reinste Nano Ventures Private Limited,
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SECTION 2. INGREDIENTS

Epoxy resin : 25036-25-3
Calcium carbonate : 1317-65-3
Epoxy resin : 28064-14-4
Bisphenol A : 80-05-7
Iron oxide : 1332-37-2
Aromatic amine : 693-98-1
Crystalline silica : 14808-60-7
Silver : (CAS No.)7440-22-4
Other additional substances in trace amounts

SECTION 3. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : Solid
Color : Transparent
Odor : Neutral
Odor threshold : Not established
Specific gravity : 1.39
SOLIDS (% by weight) : 100.0 Not applicable
ph : Not established
Boiling Point (deg. C): Not established
Freezing/Melting Point (deg C) : Not established
Vapor pressure (mm Hg) : Not established
Vapor density : Not established
Evaporation rate : Not established
Octanol/water coefficient : Not established

SECTION 4. STABILITY AND REACTIVITY

Stability : Stable under normal conditions.
Chemical incompatibility : Not established
Hazardous polymerization : Will not occur.
Hazardous decomposition products : Carbon monoxide, Carbon dioxide

SECTION 5. EXPOSURE CONTROLS / PERSONAL PROTECTION EQUIPMENT

Eye protection : Wear safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Have an eye wash station available.

Skin protection : Prevent contact with this product. Wear chemically resistant gloves, long sleeved shirt, an apron, and other protective equipment depending on conditions of use.

Gloves : Nitrite

Respiratory protection : Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not



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available or sufficient to eliminate symptoms. NIOSH approved air Expiator with dust/mist filter. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).

**VENTILATION:
EXPOSURE LIMITS:**

Chemical Name	ACGIH EXPOSURE LIMITS	AIHA WEEL
Epoxy resin	Not established	Not established
Calcium carbonate	TWA (Total dust) 10 MG/M3	Not established
Epoxy resin	Not established	Not established
Bisphenol A	Not established	Not established
Iron oxide	TWA (as Fe) Fume 5 MG/M3	Not established
Aromatic amine	Not established	Not established
Crystalline silica	TWA (Respirable dust) 0.05 MG/M3	Not established

SECTION 6. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Dust clouds in air can be ignited by electric sparks, hot surfaces and open flame. Can cause skin imitation. May cause allergic skin reaction. May cause an allergic respiratory reaction. Harmful if swallowed. Cancer hazard.

HMS RATING:

HEALTH – 1
FLAMMABILITY -- 1
REACTIVITY – 0

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

Eye: Can cause minor irritation, tearing and reddening. Can cause mechanical irritation if dusts are generated. **SKIN:** Continued or prolonged contact may irritate the skin and cause a skin rash (dermatitis). May cause sensitization. Can cause light sensitivity that results in a skin rash when exposed to sunlight or ultraviolet light sources.

Inhalation: Can cause minor respiratory irritation Dust may be slightly irritating to the respiratory tract. Inhalation of dusts produced during cuffing, grinding or sanding of this product may cause irritation of the respiratory tract May cause allergic respiratory reaction. Overexposure to iron oxide dust/fume may cause siderosis. Overexposure to crystalline silica may cause silicosis. Ingestion is not an anticipated route of exposure. Harmful if swallowed.

INGESTION:

Long-term (chronic) health effects

target organ(s): Skin, Lungs

Regulated carcinogen status:

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

Crystalline silica

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: Skin disease including eczema and sensitization; Lung disease

SECTION 7. TOXICOLOGICAL INFORMATION

CHEMICAL NAME	LD50/LC50
Epoxy resin	Oral LD50 Rat > 30 g/kg Inhalation LC50 Rat > 800 mg/cu m/4H Dermal LD50 Rabbit > 3 g/kg
Calcium carbonate	Not established



Epoxy resin	Not established
Bisphenol A	Oral LD50 Ret = 3250 mg/kg Dermal LD50 Rabbit = 3 ml/kg
Iron oxide	Not established
Aromatic amine	Not established
Crystalline silica	Not established

TOXICOLOGY SUMMARY: No additional health information available.

SECTION 8. FIRST AID MEASURES

If in eyes : Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention and monitor the eye daily as advised by your physician Flush eye with water for 20 minutes. Get medical attention.

If on skin : Wash with soap and water. Remove contaminated clothing, launder immediately, and discard contaminated leather goods. Get medical attention immediately.

If Vapours Inhaled : Remove to fresh air. Call a physician if symptoms persist.

If swallowed : No hazard in normal industrial use. Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS.

SECTION 9. FIRE FIGHTING MEASURES

Flash point : Not applicable

Autoignition temperature : Not established

Lower explosive limit (% in air) : Not established

Upper explosive limit (% in air) : Not established

Extinguishing media : Use water spray, foam, dry chemical or carbon dioxide.

Unusual fire and explosion hazards : Material will burn in a fire. Normal LEL for powder coatings 0.04 to 0.07 ounces/cubic foot. Strong explosions are not expected below 0.4 to 0.7.

Special firefighting instructions : Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.

Hazardous combustion products : Carbon dioxide, Carbon monoxide

SECTION 10. ACCIDENTAL RELEASE MEASURES

Special protection : No health effects expected from the cleanup of this material if contact can be avoided.

Clean-up : Avoid creating dusts. Eliminate ignition sources. If a vacuum is used, ensure that the material is wetted or otherwise treated so an explosive dust atmosphere is not created within the vacuum.

SECTION 11. HANDLING AND STORAGE

Handling : Mildly irritating material. Avoid unnecessary exposure. Avoid creating dusts as an explosive dust air mixture can be created at high concentrations. If dusts are created, ensure no sources of ignition are present. Take precautionary measures to prevent electrostatic discharges.

Storage : Store in a cool, dry place.

SECTION 12. ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available



No levels of volatile organic compound emissions are expected at ambient temperatures and pressure. Depending on powder chemistry, however, higher levels of VOC and low molecular weight hydrocarbons may be emitted at cure temperatures. Emissions data are best developed by monitoring actual plant conditions.

SECTION 13. TRANSPORT INFORMATION

General : For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

UN number

UN No. (ADR/RID) 1950
UN No. (IMDG) 1950
UN No. (ICAO) 1950
UN No. (ADN) 1950

UN proper shipping name

Proper shipping name (ADR/RID) : AEROSOLS
Proper shipping name (IMDG) : AEROSOLS (CONTAINS Naphtha (petroleum), hydro desulfurized heavy, Hydrocarbons, C9- C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%))
Proper shipping name (ICAO) : AEROSOLS Proper shipping name (ADN) AEROSOLS

Transport hazard class(es)

ADR/RID class : 2.1
ADR/RID classification code : 5F
ADR/RID label : 2.1
IMDG class : 2.1
ICAO class/division : 2.1
ADN class : 2.1

Transport labels

Packing group



ADR/RID packing group None
IMDG packing group None
ICAO packing group None
ADN packing group None

Environmental hazards

Environmentally hazardous substance/marine pollutant



Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS : F-D, S-U

ADR transport category : 2

Tunnel restriction code : (D)

Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 14. DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Disposal via incineration at an approved facility is recommended. Consult state, local or provincial authorities for more restrictive 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



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the 3rd of April 2006 and subsequent modifications and additions. (Environmental regulations) Directive 105/2003/CE (Seveso III): N.A

SECTION 16. DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

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WARRIOR

SMART COATINGS