

ERGON ARMOR

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MSDS No.: NI002

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Material Safety Data Sheet

SP-2000 R & W

1. PRODUCT IDENTIFICATION

Trade Name: SP - Series
Chemical Family: Epoxy
Intended Use or Product Type: Epoxy Coating

2. COMPOSITION / INFORMATION ON INGREDIENTS

OSHA Hazardous Ingredients: NA

SP-2000 R (Resin)	SP-2000 W (Resin)
DGEBA – Novolac Epoxy Resin - CAS# 208064-14-4 (10%-50%) OSHA / PEL - NE ACGIH / TLV – NE	DGEBA – Novolac Epoxy Resin - CAS# 28064-14-4 (10%-50%) OSHA / PEL - NE ACGIH / TLV – NE
DGEBF – Epoxy Resin CAS#25068-38-6 (10%-50%)	DGEBF – Epoxy Resin CAS#25068-38-6 (10%-50%)
Polybutadiene and Natural Rubber CAS # mixture (5% - 10%) OSHA / PEL – NE ACGIH / TLV - NE	

Hardener for SP Products
Modified Polyamidoamine CAS# mixture 20%-30% OSHA / PEL NE ACGIH / TLV NE
Polyamide CAS# mixture 60%-80% OSHA / PEL NE ACGIH / TLV NE

3. HAZARDOUS IDENTIFICATION

Emergency Overview: Toxic fumes are released in a fire situation. Harmful if swallowed. May cause allergic skin and eye reactions.

4. FIRST AID MEASURES

Ingestion: Resin - If large amounts are ingested, induce vomiting if conscious.
Hardener - Call physician immediately. Give generous amounts of water if conscious. **Do not** induce vomiting.

Skin: Resin - Promptly wash with mild soap and water.
Hardener - Promptly wash with mild soap and water.

Inhalation: Resin - Remove to fresh air. Give oxygen if breathing is difficult.
Hardener - Remove to fresh air. Give oxygen if breathing is difficult.

Eyes: Resin - Immediately flush eyes with water for 15 minutes. Call physician.
Hardener - Immediately flush eyes with water for 15 minutes. Call physician.

Overexposure Effects: Overexposure to this material can cause chemical burns to the skin and eyes and inhalation of vapors can cause severe respiratory irritation. Can cause allergic skin and respiratory reactions. Can have effects on the nervous system evidenced by central nervous system depression, tremors, paralysis, diarrhea and vasodilation. May also cause headache, nausea and dizziness.

Medical Conditions Aggravated by Exposure: Allergy, eczema or skin conditions.

Additional Information: Promptly remove wet contaminated non-imperious clothing, wash before reuse. Destroy contaminated leather and absorbent shoes.

5. FIRE FIGHTING MEASURES

	<u>Resin (Both R & W)</u>	<u>Hardener</u>
Flash Point:	>300°F (149°C)	>200°F (93°C)
Flash Point Method Used:	Closed cup	
Fire Fighting Extinguishing Media:	Carbon Dioxide, foam, dry chemical	
Fire Fighting Equipment:	Use a self-contained breathing apparatus	
Fire and Explosion Hazards:	Decomposition and combustion products may be toxic.	

NOTE: decomposition and combustion products may be toxic

6. ACCIDENTAL RELEASE MEASURES

Resin - Shovel into closeable container for disposal.

Hardener - Absorb into sand or other absorbent material. Shovel into closeable container and dispose of in professional manner.

7. HANDLING AND STORAGE

Precautions: Do not get in eyes, on skin, on clothing. Do not breathe vapor, mist or spray. Use only with adequate ventilation. Individuals should wash thoroughly after handling. For industrial use only.

Storage Information: Keep away from heat, sparks and open flame. Ground and bond metal containers for liquid transfer to avoid static sparks. Store at temperatures between 2°C and 40°C in tightly closed containers in dry area to prevent moisture and carbon dioxide contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protective Equipment: Wear protective equipment to prevent exposure and personal contact.

Skin Protection: Impervious gloves

Respiratory Protection: Organic chemical cartridge respirator if needed in non-vented area

Eye Protection: Splash-proof chemical goggles

Engineering Controls: Good general mechanical ventilation and local exhaust

9. PHYSICAL AND CHEMICAL PROPERTIES

	<u>Resin (SP-2000 R)</u>	<u>Resin (SP-2000W)</u>	<u>Hardener (for Both)</u>
Appearance:	Dark Gray, Light Gray	Gray, Brown	Off-White Reddish Amber
Odor:	Red, Blue None	Olive Brown None	Slight sweet odor
Physical State:	Liquid	Liquid	Liquid
Solubility in Water (% by weight):	Negligible	Negligible	Negligible
Melting Point:	<0° F (-18° C)	<0° F (-18° C)	<0° F (-18° C)
Density:	1.45	1.48	0.97
pH:	ca 5		ca 10

10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility: strong oxidizers, strong acids and bases

Hazardous Decomposition Products:

Resin: - Carbon Monoxide, Carbon Dioxide, and Phenolics

Hardener: - Carbon Monoxide, Carbon Dioxide, Phenolic Nitrogen Oxides and Compounds

Hazardous Polymerization:

Resin - will not occur

Hardener - Do not heat in bulk as dangerous decomposition may occur, liberating toxic fumes.

11. TOXICOLOGICAL INFORMATION

Acute Oral Effects (Ingestion):

Resin - LD₅₀ (rabbits): 4000 mg/kg

Hardener - LD₅₀ (rabbits): 3000 mg/kg

Sensitization: Can cause skin and respiratory sensitization

Skin Irritation: Corrosive

Eye Irritation: Corrosive

12. ECOLOGICAL INFORMATION

Additional Information: Amines, in general, may be toxic to aquatic organisms. Epoxies are only slightly soluble in water.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT: Not regulated

15. REGULATORY INFORMATION

US Federal Regulations:

Occupational Safety and Health Act (OSHA): This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

Resource Conservation and Recovery Act (RCRA): Not a hazardous waste under RCRA (40 CFR 261).

SARA Title III: Section 304 - CERCLA: Not listed.

SARA Title III: Section 313 Toxic Chemical List (TCL): This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Sec. 313 (40 CFR 372). This information must be included in all MSDS's that are copied and distributed for this material.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific features and shall not establish a legally valid contractual relationship.

