

Material Safety Data Sheet

POLYARMOR

1. CHEMICAL PRODUCTS AND COMPANY IDENTIFICATION

Product Name: POLYARMOR

Company Identification:

Manufacturer:

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2.HAZARDS IDENTIFICATION

Hazard Classification :	Skin corrosion/irritation	category2
	Sensitisation, skin	category1
	Serious eye damage/eye irritation	category2A
	Hazardous to the aquatic environment, long-term hazard	category2

Hazard statements :	Eyes: May cause discomfort
	Ingestion: May cause irritation of digestive tract
	Inhalation: N/A
	Skin: Skin contact may cause allergies, burns
	Environment: Harmful to aquatic organisms, would cause long-term effects in the aquatic environment

Precautionary statements:

Respiratory:

No special protection is needed working with solid material. Protection from fumes or vapors from molten material may be necessary, using a suitable filter-type respirator.

Eyes:

Chemical goggles

Ventilation: None required under normal use.
Protective Gloves: None required under normal use.
Other Protection: Wear Coveralls

Other hazards which do not result in classification: Do not store near flame, heat, or strong oxidizing agents. Avoid prolonged skin contact. Wash thoroughly after handling.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Part A

Chemical Name	CAS#	Percent	EINECS/ELINCS
Epoxy Resin	25068-38-6	40% - 50%(m/m)	
Branched polymer with ether and urethane groups and crosslinkable, blocked isocyanate groups	-----	10% - 15%(m/m)	
Poly(Propylene Glycol)Diglycidylether	26142-30-3	10% - 15% (m/m)	
Flour Filler	-----	20-40%	

Part B

Chemical Name	CAS#	Percent	EINECS/ELINCS
Polymers with Butyl Glycidyl Ether and Diethylenetriamine	-----	40%-50%	
Polyether Amine	9046-10-0	30%-40%	
Benzyl Alcohol	100-51-6	5%-15%	
Flour Filler	-----	5%-10%	

4. FIRST AID MEASURES

General Advice: Seek medical advice. If breathing has stopped or is labored, give assisted respiration. Supplemental oxygen maybe indicated. If the heart has stopped., trained personnel should begin cardiopulmonary resuscitation immediately.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.

Skin Contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10minutes. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. For contact with hot product, flush contaminated skin with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze. Get medical attention immediately.

Ingestion: Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest, If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the

exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Inhalation: Move exposed person to fresh air. Keep person warm and at rest.

5. Fire-Fighting Measures

- Suitable extinguishing media:** Carbon dioxide (CO₂)
Dry chemical.
Dry sand.
- Chronic Health Hazard :** Decomposition products may include the following materials: carbon dioxides. Downwind personnel must be evacuated. Burning produces noxious and toxic fumes.
- Special protective equipment:** Avoid contact with the skin. Fire-fighters should wear appropriate personal protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Further information :** Do not allow run-off from fire fighting to enter drains or water courses.

6. Accidental Release Measures

- Personal precautions:** No action shall be taken involving any personal risk or without suitable training. Put on appropriate personal protective equipment (see Section 8).
- Environmental precaution:** Avoid dispersal of spilled material and run off and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the products has caused environmental pollution (sewers, waterways, soil or air)
- Methods for cleaning up** Wearing appropriate personal protective equipment (See Section 8), pick up spilled material. If contaminated, dispose of via a licensed waste disposal contractor. See Section 13 for waste disposal.
- Additional advice** None.

7. HANDLING AND STORAGE

- Handling** Put on appropriate personal protective equipment (See Section 8). 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 or smoking. Persons with history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.

Storage Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (See Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully released and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Technical Precautions: None.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Consult local authorities for accepted exposure limits.

Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
Engineering Measures	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep workers exposure to airborne contaminants below any recommended or statutory limits.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing or discard as necessary. Ensure that eyewash stations and safety showers are close to the workstation location.
Respiratory Protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicated this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Eye Protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. This may include, but is not limited to, safety glasses, goggles and face shields.
Skin Protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. This equipment may include, but is not limited to, impervious gloves, gauntlets, impervious shoes/boots, and protective clothing. The breakthrough time of the selected protective glove(S), shoes, and clothing must be greater than the intended use period.

Environmental exposure controls Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Environmental exposure controls may also include dikes or other liquid containment devices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Flowable Paste	Auto-ignition temperature	N/A
Color		Odor threshold	N/A
Odor		Evaporation rate	N/A
Flammable Limits	N/A	Viscosity	N/A
Relative vapor density	N/A	pH	
Relative Density	1.50g/cm³	Boiling point/range	N/A
Vapor Pressure	N/A	Flash point	Above 100 °C (212°F) (Abel)
Density at 70F(21°C)		Water solubility	Insoluble in water

10. STABILITY AND REACTIVITY

At room temperature or higher temperatures, react with strong oxidizing agents, and amines, sulfuric acid and Lewis acid polymerized exothermic reaction.

11. TOXICOLOGICAL INFORMATION

None

12. ECOLOGICAL INFORMATION

None

13. DISPOSAL CONSIDERATIONS

Waste disposal

The generation of waste should be avoided or minimized wherever possible. 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 and authority requirements. Avoid disposal of spilled material and runoff and contact with soil, waterways, drains and sewers. Dispose of contaminated containers, soils, etc. in compliance with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements.

14. TRANSPORT INFORMATION

Proper shipping name: Environmentally hazardous substances, liquid

UN-No: 3082

Class: 9

Packing Group: III

International Maritime Organization / International Maritime

Class: 9

Packing Group: III

ICAO / IATA

Class: 9

Packing Group: III

15. REGULATORY INFORMATION

Containing: Liquid epoxy resin, Amine curing agent

Hazard symbol: Xi- Irritant

N- Harmful to the environment

16. OTHER INFORMATION

The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. Central Products MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the products is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a Central's product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the Central's product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.