



Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/25/2011

Version 2

Reviewed on 08/25/2011

1 Identification of the substance/mixture and of the company/undertaking

· Product identifier

· Trade name: **Metaduct 1216-2**

· Application of the substance / the preparation

Epoxy resin

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Mereco Division
Metachem Resins Corporation
1505 Main Street
West Warwick, RI 02893
USA

Phone +1 / 401 / 822-9300

· Information department:

Technical department.
email = info@mereco.com

· Emergency telephone number:

Telephone: (401) 822-9300

* 2 Composition/information on ingredients

· Chemical characterization: Mixtures

· Description: Mixture of the substances listed below with non-hazardous additions.

· Components:	
epoxy resin	Xi R36/38
Reactive diluent	Xn R22; Xi R36/37/38-43
polyamide resin	Xi R36/37/38

· Additional information:

This material is a blend of epoxy resins, curing agents, metallic filler particles and possible other mineral, ceramic or organic fillers. These fillers do not pose airborne hazards to the user of this formulated product because they are completely encapsulated in the liquid mass. If any of the fillers are hazardous in accordance with Section 313 of the Emergency Planning and Community Right-to-know Act (EPCRA) they are identified in section 15 of this MSDS (SARA Section 313).

For the wording of the listed risk phrases refer to section 16.

* 3 Hazards identification

· Classification of the substance or mixture

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Irritant

R36/38-43: Irritating to eyes and skin. May cause sensitisation by skin contact.

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- **Information concerning particular hazards for human and environment:** The product has to be labelled due to the calculation procedure of international guidelines.
- **Classification system:** The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· Label elements

- **Labelling according to EU guidelines:** The product has been classified and marked in accordance with directives on hazardous materials.
- **Code letter and hazard designation of product:** Xi Irritant
- **Hazard-determining components of labelling:** reactive diluent (epoxy functional)
- **Risk phrases:**
 - 36/38 Irritating to eyes and skin.
 - 43 May cause sensitisation by skin contact.
- **Safety phrases:**
 - 23 Do not breathe gas/fumes/vapour/spray.
 - 25 Avoid contact with eyes.
 - 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 - 37 Wear suitable gloves.
 - 60 This material and its container must be disposed of as hazardous waste.
 - 64 If swallowed, rinse mouth with water (only if the person is conscious).
- **Classification system:**
 - **NFPA ratings (scale 0 - 4)**
 - Health = 2
 - Fire = 1
 - Reactivity = 0
 - **HMS-ratings (scale 0 - 4)**
 - Health = 2
 - Fire = 1
 - Reactivity = 0

4 First aid measures

- **After inhalation:** Supply fresh air. For added safety, call a doctor. In case of unconsciousness place patient in a stable side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

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· *After swallowing:* If symptoms persist consult doctor.

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* 5 Firefighting measures

- *Suitable extinguishing agents:* CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- *Special hazards arising from the substance or mixture* No further relevant information available.
- *Protective equipment:* No special measures required.

* 6 Accidental release measures

- *Personal precautions, protective equipment and emergency procedures* Mouth respiratory protective device.
- *Environmental precautions:* Do not allow to enter sewers/ surface or ground water.
- *Methods and material for containment and cleaning up:* Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
- *Reference to other sections* See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

* 7 Handling and storage

- *Handling:*
- *Precautions for safe handling* Store in cool, dry place in tightly closed receptacles.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Use only in well ventilated areas.
This material is a blend of liquid resins and latent curing agents. The curing reaction is activated by heat. The material must be stored at or below 25°C (77°F) in order to maintain its specified shelf life. Containers must be closed when not in use and must be protected from heat.

- *Information about protection against explosions and fires:* No special measures required.

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- **Storage:**
 - **Requirements to be met by storerooms and receptacles:** Material must be stored at or below 25°C (77°F) to maintain the specified shelf life.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
 - Keep receptacle tightly sealed.
 - Protect from humidity and water.
 - Store in cool, dry conditions in well sealed receptacles.
 - This material contains a latent curing agent that is activated by heat. This material must be kept cool to prevent the reaction between the resin and the latent curing agent. The rated shelf life will be shortened if the storage temperature exceeds 25°C.
 - **Recommended storage temperature:** 0°C - 25°C (32°F - 77°F)
 - **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
 - **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
 - **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
 - **Breathing equipment:** In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
 - **Protection of hands:**
 - Protective gloves
 - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 - Selection of the glove material is based on consideration of the penetration times, rates of diffusion and the degradation of the material.

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- **Material of gloves** The selection of suitable gloves depends not only on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
 - **Penetration time of glove material** The exact penetration time has to be determined by the glove manufacturer and has to be observed.
 - **Eye protection:** Tightly sealed goggles
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* 9 Physical and chemical properties

· General Information	
· Appearance:	
· Form:	Pasty
· Color:	Gray
· Odor:	Mild
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	Undetermined.
· Flash point:	> 93°C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Vapor pressure:	Not determined.
· Density at 20°C:	
· Relative density	2.9 g/cm ³
· Vapour density	Not determined.
· Evaporation rate	Not determined.

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· Solubility in / Miscibility with · Water:	Not miscible or difficult to mix.
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity: · Dynamic: · Kinematic:	Not determined. Not determined.
· Solvent content: · Organic solvents: · Other information	0.0 % No further relevant information available.

* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Reaction between resin and latent curing agent occurs if temperature exceeds 38°C (100°F). Reaction rate is dependent on actual temperature and the time at temperature. Small volumes of material do not generate excessive exotherm heat.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Irritant gases/vapors

* 11 Toxicological information

· Acute toxicity:

· LD/LC50 values that are relevant for classification:		
28064-14-4 polymer of epichlorohydrin, phenol-formaldehyde novolac		
Oral	LD50	4000 mg/kg (rat)
Dermal	LD50	3000 mg/kg (rabbit)
68003-28-1 polyamide		
Oral	LD50	>1000 mg/kg (rat)
Dermal	LD50	> 3000 mg/kg (rabbit)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.

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· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

* 12 Ecological information

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
 - **Bioaccumulative potential** No further relevant information available.
- **Additional ecological information:**
 - **General notes:** Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.

* 14 Transport information

· UN-Number	
· DOT, ADR, ADN, IMDG, IATA	Not Applicable
· UN proper shipping name	
· DOT	Not Regulated
· ADR, ADN, IMDG, IATA	Not Applicable
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	Not Applicable
· Packing group	
· DOT, ADR, IMDG, IATA	Not Applicable
· Environmental hazards:	
· Marine pollutant:	No

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· Special precautions for user	Not applicable.
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· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
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* 15 Regulatory information

· Sara

· **Section 302 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

7440-22-4	silver	>60%
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· **Sections 311/312 (Specific hazard chemical listings):**

	reactive diluent (epoxy functional)
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68003-28-1	polyamide
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· **Sections 311/312 Hazard Categorizations:**

	reactive diluent (epoxy functional)	A = Acute health hazard	3-10%
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68003-28-1	polyamide	A = Acute health hazard	3-10%
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· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

7440-22-4	silver	D
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· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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· TLV (Threshold Limit Value established by ACGIH)
None of the ingredients is listed.
· MAK (German Maximum Workplace Concentration)
None of the ingredients is listed.
· NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.
· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

16 Other information

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

- **Relevant phrases**
 - R22 Harmful if swallowed.
 - R36/37/38 Irritating to eyes, respiratory system and skin.
 - R36/38 Irritating to eyes and skin.
 - R43 May cause sensitisation by skin contact.
- **Department issuing MSDS:** Technical department
- **Contact:** Dr. John F. Plummer
- *** Data compared to the previous version altered.**