



MERECO

Material Safety Data Sheet

acc. to ISO/DIS 11014

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Printing date 11/30/2007

Version 1

Reviewed on 11/30/2007

1 Identification of substance

- **Trade name:** **Mereco 3180 Series Activator**
- **Application of the substance / the preparation** Epoxy curing agent
- **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 information:** Telephone: (800) 424-9300 (Chemtrec)
Call this number in the event of an accident resulting in a spill, leak or fire. Call this number in the event of exposure to the chemicals.

2 Composition/Data on components

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· Components:		
108-45-2	m-phenylenediamine	T, Xi, N; R 23/24/25-36-43-68-50/53
872-50-4	N-methyl-2-pyrrolidone	Xi; R 36/38

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- **Hazard description:** T Toxic
N Dangerous for the environment
- **Information pertaining to particular dangers for man and environment:**
The product has to be labelled due to the calculation procedure of international guidelines.
R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R 36/38 Irritating to eyes and skin.
R 43 May cause sensitisation by skin contact.
R 68 Possible risk of irreversible effects.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Classification system:** The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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- **NFPA ratings (scale 0 - 4)** Health = 3
Fire = 1
Reactivity = 0
 - **HMS-ratings (scale 0 - 4)** Health = 3
Fire = 1
Reactivity = 0
-

4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product. Remove breathing apparatus only after contaminated clothing have been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.
 - **After inhalation:** Supply fresh air or oxygen; call for 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.
 - **After swallowing:** Do not induce vomiting; immediately call for medical help.
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5 Fire fighting measures

- **Suitable extinguishing agents:** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
 - **Special hazards caused by the material, its products of combustion or resulting gases:** During heating or in case of fire poisonous gases are produced.
 - **Protective equipment:** Mouth respiratory protective device.
-

6 Accidental release measures

- **Person-related safety precautions:** Mouth respiratory protective device.
- **Measures for environmental protection:** Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to item 13.

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 Ensure adequate ventilation.

7 Handling and storage

- **Handling:**

- **Information for safe handling:**

Store in cool, dry place in tightly closed receptacles.
 Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
 Prevent formation of aerosols.
 Use only in well ventilated areas.

- **Information about protection against explosions and fires:**

Keep respiratory protective device available.

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

No special requirements.

- **Information about storage in one common storage facility:**

Not required.

- **Further information about storage conditions:**

Keep receptacle tightly sealed.

8 Exposure controls and 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:**

108-45-2 m-phenylenediamine	
TLV	0.1 mg/m ³
872-50-4 N-methyl-2-pyrrolidone	
WEEL	10 ppm
	Skin

- **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.
 Store protective clothing separately.
 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.

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- **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.
 - **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	
· Form:	Liquid
· Color:	Red-brown
· Odor:	Aromatic
· Change in condition	
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	202°C
· Flash point:	93°C
· Ignition temperature:	270°C
· Auto igniting:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
· Lower:	1.3 Vol %
· Upper:	9.5 Vol %
· Vapor pressure at 20°C:	0.3 hPa
· Density at 20°C:	1.1 g/cm ³
· Solubility in / Miscibility with	
· Water:	Not miscible or difficult to mix.

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- | | |
|----------------------------|--------|
| · Solvent content: | |
| · Organic solvents: | 27.0 % |
-

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
 - **Dangerous reactions**
 - Reacts with reducing agents.
 - Reacts with acids.
 - Reacts with strong acids.
 - Reacts with strong oxidizing agents.
 - **Dangerous products of decomposition:**
 - Nitrogen oxides
 - Irritant gases/vapors
-

11 Toxicological information

- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:

108-45-2 m-phenylenediamine		
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Oral	LD50	650 mg/kg (rat)
Inhalative	LC50/4 h	3.2 mg/l (rat)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
 - **Sensitization:** Sensitization possible through skin contact.
 - **Additional toxicological information:**
 - The product shows the following dangers according to internally approved calculation methods for preparations:
 - Toxic
 - Irritant
-

12 Ecological information

- **Ecotoxicological effects:**
 - **Remark:** Very toxic for fish
 - **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.
 - Also poisonous for fish and plankton in water bodies.
 - Very toxic for aquatic organisms
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13 Disposal considerations

- **Product:**
 - **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

<ul style="list-style-type: none"> · DOT regulations: <ul style="list-style-type: none"> · Hazard class: 6.1 · Identification number: UN2810 · Packing group: III · Proper shipping name (technical name): TOXIC LIQUID, ORGANIC, N.O.S. (PHENYLENEDIAMINES) · Label 6.1
<ul style="list-style-type: none"> · Land transport ADR/RID (cross-border): <ul style="list-style-type: none"> · ADR/RID class: 6.1 (T1) Toxic substances · Danger code (Kemler): 60 · UN-Number: 2810 <ul style="list-style-type: none"> · Packaging group: III · Description of goods: 2810 TOXIC LIQUID, ORGANIC, N.O.S. (PHENYLENEDIAMINES)
<ul style="list-style-type: none"> · Maritime transport IMDG: <ul style="list-style-type: none"> · IMDG Class: 6.1 · UN Number: 2810 <ul style="list-style-type: none"> · Label 6.1 · Packaging group: III · EMS Number: F-A,S-A · Marine pollutant: No · Propper shipping name: TOXIC LIQUID, ORGANIC, N.O.S. (PHENYLENEDIAMINES)
<ul style="list-style-type: none"> · Air transport ICAO-TI and IATA-DGR: <ul style="list-style-type: none"> · ICAO/IATA Class: 6.1 · UN/ID Number: 2810 <ul style="list-style-type: none"> · Label 6.1 · Packaging group: III · Proper shipping name: TOXIC LIQUID, ORGANIC, N.O.S. (PHENYLENEDIAMINES)

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15 Regulations

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· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

108-45-2	m-phenylenediamine	>60%
872-50-4	N-methyl-2-pyrrolidone	20-40%

· Sections 311/312 (Specific hazard chemical listings):

108-45-2 | m-phenylenediamine

· Sections 311/312 Hazard Categorizations:

108-45-2 | m-phenylenediamine | A = Acute, C = Chronic (health hazards) | >60%

· 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:

872-50-4 | N-methyl-2-pyrrolidone | 20-40%

· Carcinogenicity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· IARC (International Agency for Research on Cancer)

108-45-2 | m-phenylenediamine | 3 | >60%

· NTP (National Toxicology Program)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

108-45-2 | m-phenylenediamine | A4 | >60%

· MAK (German Maximum Workplace Concentration)

108-45-2 | m-phenylenediamine | 3 | >60%

· 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.

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- **Product related hazard informations:** The product has been classified and marked in accordance with directives on hazardous materials.
- **Hazard symbols:** T Toxic
N Dangerous for the environment
- **Hazard-determining components of labelling:** m-phenylenediamine
- **Risk phrases:** 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
36/38 Irritating to eyes and skin.
43 May cause sensitisation by skin contact.
68 Possible risk of irreversible effects.
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Safety phrases:** 4 Keep away from living quarters.
9 Keep container in a well-ventilated place.
20 When using do not eat or drink.
23 Do not breathe gas/fumes/vapour/spray.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
57 Use appropriate container to avoid environmental contamination.

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 R-phrases** 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
36 Irritating to eyes.
36/38 Irritating to eyes and skin.
43 May cause sensitisation by skin contact.
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
68 Possible risk of irreversible effects.
- **Department issuing MSDS:** Technical department
- **Contact:** Dr. John F. Plummer

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