



Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/02/2011

Version 4

Reviewed on 03/02/2011

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

· Product identifier

· Trade name: **Metregrip 312 Base Clear**

· 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:

Diglycidyl Ether Bisphenol-A epoxy resin	Xi R36/38-43; N R51/53
Reactive diluent	Xn R22; Xi R36/37/38-43

· Additional information:

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.

N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of international guidelines.

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- (Contd. from page 1)
- **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
N Dangerous for the environment

· Hazard-determining components of labelling:

Diglycidyl ether Bisphenol-A epoxy resin
reactive diluent (epoxy functional)

· Risk phrases:

36/38 Irritating to eyes and skin.
43 May cause sensitisation by skin contact.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· Safety phrases:

2 Keep out of the reach of children.
28 After contact with skin, wash immediately with plenty of soap and water.
37/39 Wear suitable gloves and eye/face protection.
61 Avoid release to the environment. Refer to special instructions/safety data sheets.

· Special labelling of certain preparations:

Contains epoxy constituents. See information supplied by the manufacturer.

· Classification system:

· NFPA ratings (scale 0 - 4)

Health = 2
Fire = 1
Reactivity = 0

· HMIS-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.

* 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** Not required.
- **Environmental precautions:** Inform respective authorities in case of seepage into water course or sewage system.
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).
- **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.
Use only in well ventilated areas.
 - **Information about protection against explosions and fires:** No special measures required.
- **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.

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- **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:**
 - **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:** Not required.
 - **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

* 9 Physical and chemical properties

- | | |
|------------------------------|--------|
| · General Information | |
| · Appearance: | |
| · Form: | Liquid |
| · Color: | Clear |
| · Odor: | Mild |

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· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	201°C
· 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:	1.16 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
· Water:	Not miscible or difficult to mix.
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· Dynamic:	Not determined.
· Kinematic:	Not determined.
· Solvent content:	
· Organic solvents:	0.0 %
· Other information	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** Reacts with amines.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.

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- **Hazardous decomposition products:** Irritant gases/vapors

11 Toxicological information

- **Acute toxicity:**
 - **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:
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.
- **Ecotoxicological effects:**
 - **Remark:** Toxic for fish
- **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.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms

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.

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* 14 Transport information

<ul style="list-style-type: none"> · DOT regulations: · Hazard class: - Not Regulated · Proper shipping name (technical name): Not Regulated
<ul style="list-style-type: none"> · Land transport ADR/RID (cross-border): · ADR/RID class: - Not Regulated
<ul style="list-style-type: none"> · Maritime transport IMDG: · IMDG Class: - Not Regulated · Marine pollutant: No
<ul style="list-style-type: none"> · Air transport ICAO-TI and IATA-DGR: · ICAO/IATA Class: - Not Regulated
<ul style="list-style-type: none"> · Environmental hazards: Product contains environmentally hazardous substances: Diglycidyl ether Bisphenol-A epoxy resin

* 15 Regulatory information

- **Sara**

<ul style="list-style-type: none"> · Section 302 (extremely hazardous substances): 		
None of the ingredients is listed.		
<ul style="list-style-type: none"> · Section 313 (Specific toxic chemical listings): 		
None of the ingredients is listed by CAS number.		
<ul style="list-style-type: none"> · Sections 311/312 (Specific hazard chemical listings): 		
reactive diluent (epoxy functional)		
<ul style="list-style-type: none"> · Sections 311/312 Hazard Categorizations: 		
reactive diluent (epoxy functional)	A = Acute health hazard	3-10%
<ul style="list-style-type: none"> · TSCA (Toxic Substances Control Act): 		
All ingredients are listed.		
<ul style="list-style-type: none"> · Proposition 65 		
<ul style="list-style-type: none"> · Chemicals known to cause cancer: 		
None of the ingredients is listed.		
<ul style="list-style-type: none"> · Chemicals known to cause reproductive toxicity for females: 		
None of the ingredients is listed.		
<ul style="list-style-type: none"> · Chemicals known to cause reproductive toxicity for males: 		
None of the ingredients is listed.		

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· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
· Carcinogenic categories	
· EPA (Environmental Protection Agency)	
None of the ingredients is listed.	
· IARC (International Agency for Research on Cancer)	
None of the ingredients is listed.	
· NTP (National Toxicology Program)	
None of the ingredients is listed.	
· 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.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Department issuing MSDS:** Technical department
- **Contact:** Dr. John F. Plummer
- *** Data compared to the previous version altered.**



MERECO

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 07/13/2009

Version 3

Reviewed on 07/13/2009

1 Identification of substance

- **Trade name:** Metregrip 312 LV 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: (401) 822-9300

* 2 Composition/Data on components

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

· Components:	
Mercaptan-terminated polymer	Xi; R 36/38
alkyl amino phenol	T, Xi; R 21/22-24-36/37/38

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

* 3 Hazards identification

- **Hazard description:** Xn Harmful
- **Information pertaining to particular dangers for man and environment:** The product has to be labelled due to the calculation procedure of international guidelines.
R 21 Harmful in contact with skin.
R 36/38 Irritating to eyes and skin.
- **Classification system:** The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0 - 4)**
Health = 3
Fire = 1
Reactivity = 0

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- **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:**
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:** Not required.
 - **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.

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Trade name: Metregrip 312 LV Activator

 · **Eye protection:** Tightly sealed goggles

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9 Physical and chemical properties

· General Information	
· Form:	Liquid
· Color:	Yellow
· Odor:	Sulfurous
· Change in condition	
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	Undetermined.
· Flash point:	149°C
· Auto igniting:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Density at 20°C:	1 g/cm ³
· Solubility in / Miscibility with	
· Water:	Not miscible or difficult to mix.
· Solvent content:	
· Organic solvents:	0.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions**
 - Strong exothermic reaction with acids.
 - Corrosive action on metals.
 - Reacts with strong acids and oxidizing agents.
 - Reacts with peroxides and other radical forming substances.
- **Dangerous products of decomposition:**
 - Hydrogen sulfide
 - Irritant gases/vapors
 - Sulfur oxides (SO_x)

* 11 Toxicological information

- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
Mercaptan-terminated Polymer		
Oral	LD50	2600 mg/kg (rabbit)

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Dermal	LD50	10200 mg/kg (rabbit)
90-72-2 2,4,6-tris(dimethylaminomethyl)phenol		
Oral	LD50	1670 mg/kg (rat)
Dermal	LD50	1400 mg/kg (rabbit)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

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

 - Harmful
 - Irritant

12 Ecological information

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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

· DOT regulations: <ul style="list-style-type: none"> · Hazard class: - Not Regulated · Proper shipping name (technical name): Not Regulated
· Land transport ADR/RID (cross-border): <ul style="list-style-type: none"> · ADR/RID class: - Not Regulated
· Maritime transport IMDG: <ul style="list-style-type: none"> · IMDG Class: - Not Regulated

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· Marine pollutant:	No
· Air transport ICAO-TI and IATA-DGR:	
· ICAO/IATA Class:	9 Regulated for air shipment only
· UN/ID Number:	3334
· Label	9
· Packaging group:	- No packing group assigned
· Proper shipping name:	AVIATION REGULATED LIQUID, N.O.S. (Mercaptan-terminated Polymer)

* 15 Regulations

· Sara

· Section 302 (extremely hazardous substances):
None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):
None of the ingredients is listed by CAS number.

· Sections 311/312 (Specific hazard chemical listings):
90-72-2 2,4,6-tris(dimethylaminomethyl)phenol

· Sections 311/312 Hazard Categorizations:
90-72-2 2,4,6-tris(dimethylaminomethyl)phenol A = Acute Health Hazard 3-10%

· 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.

· Carcinogenicity categories

· EPA (Environmental Protection Agency)
None of the ingredients is listed.

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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.
· 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.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**

Xn Harmful

· **Hazard-determining components of labelling:**

2,4,6-tris(dimethylaminomethyl)phenol

· **Risk phrases:**

21 Harmful in contact with skin.
36/38 Irritating to eyes and skin.

· **Safety phrases:**

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.

* **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**

21/22 Harmful in contact with skin and if swallowed.
24 Toxic in contact with skin.
36/37/38 Irritating to eyes, respiratory system and skin.
36/38 Irritating to eyes and skin.

· **Department issuing MSDS:**

Technical department

· **Contact:**

Dr. John F. Plummer

· *** Data compared to the previous version altered.**