



Material Safety Data Sheet

acc. to ISO/DIS 11014

MERECO

Printing date 10/21/2003

Version 1

Reviewed on 10/02/2003

1 Identification of substance

· Product details

· **Trade name:** **Mereco Metasil 5021 Base**

· **Application of the substance / the preparation**

Silicone resin

· **Manufacturer/Supplier:**

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

Phone +1 / 401 / 822-9300

· **Information department:** Technical department.

· **Emergency information:** Telephone: (401) 822-9300

2 Composition/Data on components

· Chemical characterization

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· Components:

68412-37-3	Tetraethyl silicate, hydrolyzed (oligomers)	Xi; R 37
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· Additional information:

This material is a blend of silicone liquids and mineral or ceramic powders. These powders do not pose airborne hazards to the user of this formulated product because they are completely encapsulated in the liquid material. If one of the powdered ingredients is hazardous in accordance with Section 313 of the Emergency Planning and Community Right-to-know Act of 1986 it is 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

· **Hazard description:** Not applicable.

· **Information pertaining to particular dangers for man and environment:**

The product does not have 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.

· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 1
Reactivity = 0

(Contd. on page 2)

— USA —

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/21/2003

Version 1

Reviewed on 10/02/2003

Trade name: Mereco Metasil 5021 Base

(Contd. of page 1)

· **HMIS-ratings (scale 0 - 4)**

Health	= 1
Fire	= 1
Reactivity	= 0

4 First aid measures

- **General information:** No special measures required.
 - **After inhalation:** Supply fresh air; consult doctor in case of complaints.
 - **After skin contact:** Generally the product does not irritate the skin.
 - **After eye contact:** Rinse opened eye for several minutes under running water.
 - **After swallowing:** If symptoms persist consult doctor.
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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.
 - **Protective equipment:** No special measures required.
-

6 Accidental release measures

- **Person-related safety precautions:** Not required.
 - **Measures for environmental protection:** 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).
 - **Additional information:** No dangerous substances are released.
-

7 Handling and storage

- **Handling:**
 - **Information for safe handling:** No special measures required.
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.

(Contd. on page 3)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/21/2003

Version 1

Reviewed on 10/02/2003

Trade name: Mereco Metasil 5021 Base

(Contd. of page 2)

- **Further information about storage conditions:** None.

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:** The usual precautionary measures for handling chemicals should be followed.
 - **Breathing equipment:** Not required.
 - **Protection of hands:** 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 the suitable gloves does not only depend 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 break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **Eye protection:** Goggles recommended during refilling.

9 Physical and chemical properties

· General Information	
· Form:	Viscous
· Color:	White
· Odor:	Odorless
· Change in condition	
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	Undetermined.
· Flash point:	> 260°C (> 500°F)

(Contd. on page 4)

— USA —

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/21/2003

Version 1

Reviewed on 10/02/2003

Trade name: Mereco Metasil 5021 Base

(Contd. of page 3)

· Auto igniting:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Density at 20°C (68°F):	1.200 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** No dangerous reactions known.
 - **Dangerous products of decomposition:** No dangerous decomposition products known.
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11 Toxicological information

- **Acute toxicity:**
 - **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** No irritating effect.
 - **Sensitization:** No sensitizing effects known.
 - **Additional toxicological information:** The product is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
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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.
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13 Disposal considerations

- **Product:**
 - **Recommendation:** Smaller quantities can be disposed of with household waste.
 - **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.
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— USA —

(Contd. on page 5)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/21/2003

Version 1

Reviewed on 10/02/2003

Trade name: Mereco Metasil 5021 Base

(Contd. of page 4)

14 Transport information

· DOT regulations:	
· Hazard class:	- Not Regulated
· Proper shipping name (technical name):	Not Regulated
· Land transport ADR/RID (cross-border):	
· ADR/RID class:	- Not Regulated
· Maritime transport IMDG:	
· IMDG Class:	- Not Regulated
· Marine pollutant:	No
· Air transport ICAO-TI and IATA-DGR:	
· ICAO/IATA Class:	- Not Regulated

15 Regulations

· **Sara**

· Section 355 (extremely hazardous substances):	
None of the ingredients is listed.	
· Section 313 (Specific toxic chemical listings):	
None of the ingredients is listed.	
· Sections 311/312 (Specific hazard chemical listings):	
None of the ingredients is listed.	
· Sections 311/312 Hazard Categorizations:	
None of the ingredients is listed.	
· 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:	
None of the ingredients is listed.	
· Carcinogenity 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.	

(Contd. on page 6)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/21/2003

Version 1

Reviewed on 10/02/2003

Trade name: Mereco Metasil 5021 Base

(Contd. of page 5)

· 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:**

Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations according to directives on hazardous materials.

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** 37 Irritating to respiratory system.
- **Department issuing MSDS:** Technical department.
- **Contact:** Dr. John F. Plummer



Material Safety Data Sheet

acc. to ISO/DIS 11014

MERECO

Printing date 04/21/2005

Version 2

Reviewed on 04/21/2005

1 Identification of substance

· Product details

- **Trade name:** **Mereco Metasil 5021 Activator**
- **Application of the substance / the preparation** Catalyst
- **Manufacturer/Supplier:** Mereco Division
Metachem Resins Corporation
1505 Main Street
West Warwick, RI 02893
USA Phone +1 / 401 / 822-9300
- **Information department:** Technical department.
- **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 nonhazardous additions.

· Components:		
	organotin compound	C; R 22-34-37/38
111-76-2	2-butoxyethanol	Xn; R 20/21/22-36/38

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

* 3 Hazards identification

- **Hazard description:** C Corrosive
- **Information pertaining to particular dangers for man and environment:** The product has to be labelled due to the calculation procedure of international guidelines.
R 22 Harmful if swallowed.
R 34 Causes burns.
R 37 Irritating to respiratory system.
- **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 = 3
Reactivity = 1

(Contd. on page 2)

— USA —

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 04/21/2005

Version 2

Reviewed on 04/21/2005

Trade name: Mereco Metasil 5021 Activator

(Contd. from page 1)

· **HMIS-ratings (scale 0 - 4)**

Health	= 3
Fire	= 3
Reactivity	= 1

* 4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
 - **After inhalation:** 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. Then consult a doctor.
 - **After swallowing:** Immediately call a doctor. Drink copious amounts of water and provide fresh air. Immediately call a doctor.
-

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:** Formation of toxic gases is possible during heating or in case of fire. In case of fire, the following can be released:
Hydrogen chloride (HCl)
 - **Protective equipment:** No special measures required.
 - **Additional information:** Cool endangered receptacles with water spray.
-

6 Accidental release measures

- **Person-related safety precautions:** Mouth respiratory protective device. Wear protective equipment. Keep unprotected persons away.
 - **Measures for environmental protection:** 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). Use neutralizing agent. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
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— USA —
(Contd. on page 3)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 04/21/2005

Version 2

Reviewed on 04/21/2005

Trade name: Mereco Metasil 5021 Activator

(Contd. from page 2)

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.
Prevent formation of aerosols.
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.
Protect from humidity and water.

* 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:**

14254-22-9 Butoxydibutylchlorostannane	
PEL	Short-term value: 0.2 mg/m ³
111-76-2 2-butoxyethanol	
PEL	240 mg/m ³ , 50 ppm Skin
REL	24 mg/m ³ , 5 ppm Skin
TLV	97 mg/m ³ , 20 ppm

- **Additional Occupational Exposure Limit Values for possible hazards during processing:**

Hydrogen Chloride OSHA PEL 5 ppm (ceiling)
CAS 7647-01-0 ACGIH TLV 5 ppm (ceiling)

n-Butyl Alcohol OSHA PEL 150 mg/m³ (skin)
CAS 71-36-3 ACGIH TLV 150 mg/m³ (skin)

These are hydrolysis by-products.

- **Additional information:**

The lists that were valid during the creation were used as basis.

(Contd. on page 4)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 04/21/2005

Version 2

Reviewed on 04/21/2005

Trade name: Mereco Metasil 5021 Activator

(Contd. from page 3)

- **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.
 - **Material of gloves** The selection of the suitable gloves does not only depend 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	
· Form:	Liquid
· Color:	Yellow
· Odor:	Pungent
· Change in condition	
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	171°C
· Flash point:	65°C
· Ignition temperature:	240.0°C
· Auto igniting:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Density at 20°C:	1.20 g/cm ³

(Contd. on page 5)

— USA —

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 04/21/2005

Version 2

Reviewed on 04/21/2005

Trade name: Mereco Metasil 5021 Activator

(Contd. from page 4)

<ul style="list-style-type: none"> · Solubility in / Miscibility with · Water: 	Hydrolized.
<ul style="list-style-type: none"> · Solvent content: · Organic solvents: 	9.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:** Protect from humidity and water.
- **Dangerous reactions**
 - Reacts with water and acids.
 - Possible development of hydrochloric acid in humid air.
 - Corrodes aluminium.
 - Reacts with strong acids and oxidizing agents.
- **Dangerous products of decomposition:**
 - Hydrogen chloride (HCl)
 - Irritant gases/vapors

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** Caustic effect on skin and mucous membranes.
 - **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
 - The product shows the following dangers according to internally approved calculation methods for preparations:
 - Harmful
 - Corrosive
 - Irritant
 - Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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.
 - Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 04/21/2005

Version 2

Reviewed on 04/21/2005

Trade name: Mereco Metasil 5021 Activator

(Contd. from page 5)

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: 3 · Identification number: UN2924 · Packing group: III · Proper shipping name (technical name): FLAMMABLE LIQUID, CORROSIVE, N.O.S. (2-butoxyethanol) · Label 3+8
<ul style="list-style-type: none"> · Land transport ADR/RID (cross-border): <ul style="list-style-type: none"> · ADR/RID class: 3 Flammable liquids · Danger code (Kemler): 38 · UN-Number: 2924 <ul style="list-style-type: none"> · Packaging group: III · Description of goods: 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Organotin, 2-butoxyethanol)
<ul style="list-style-type: none"> · Maritime transport IMDG: <ul style="list-style-type: none"> · IMDG Class: 3 · UN Number: 2924 <ul style="list-style-type: none"> · Label 3+8 · Packaging group: III · EMS Number: F-E,S-C · Marine pollutant: Yes · Propper shipping name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (2-butoxyethanol)
<ul style="list-style-type: none"> · Air transport ICAO-TI and IATA-DGR: <ul style="list-style-type: none"> · ICAO/IATA Class: 3 · UN/ID Number: 2924 <ul style="list-style-type: none"> · Label 3+8 · Packaging group: III · Proper shipping name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (2-butoxyethanol)

* 15 Regulations

- **Sara**

<ul style="list-style-type: none"> · Section 355 (extremely hazardous substances):
None of the ingredients is listed.

(Contd. on page 7)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 04/21/2005

Version 2

Reviewed on 04/21/2005

Trade name: Mereco Metasil 5021 Activator

(Contd. from page 6)

- **Section 313 (Specific toxic chemical listings):** Glycol Ethers Category N230 5 - 15%

None of the ingredients is listed by CAS number.

- **Sections 311/312 (Specific hazard chemical listings):**

All ingredients are listed.

- **Sections 311/312 Hazard Categorizations:**

14254-22-9	Butoxydibutylchlorostannane	A = Acute health hazard	>70%
111-76-2	2-butoxyethanol	A = Acute; C = Chronic; F = Fire	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:**

None of the ingredients is listed.

- **Carcinogenicity 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.

- **Product related hazard informations:**

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

- **Hazard symbols:**

C Corrosive

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

Butoxydibutylchlorostannane

- **Risk phrases:**

22 Harmful if swallowed.
34 Causes burns.
37 Irritating to respiratory system.

(Contd. on page 8)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 04/21/2005

Version 2

Reviewed on 04/21/2005

Trade name: Mereco Metasil 5021 Activator

(Contd. from page 7)

- **Safety phrases:**
 - 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).
 - 60 This material and its container must be disposed of as hazardous waste.
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* 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**
 - 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
 - 22 Harmful if swallowed.
 - 34 Causes burns.
 - 36/38 Irritating to eyes and skin.
 - 37/38 Irritating to respiratory system and skin.
 - **Department issuing MSDS:** Technical department.
 - **Contact:** Dr. John F. Plummer
 - *** Data compared to the previous version altered.**
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— USA —