Powers Fasteners, Inc.
Brewster, NY 10509

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

1.1 Product identifier

PURE 110+ Component A

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant uses

Adhesive mortar for fastening to concrete elements A-Component (Resin)

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company: Powers Fasteners, Inc.
2 Powers Lane
Brewster, NY 10509 / USA
Phone +1 800-524-3244
Fax +1 877-871-1965

Address enquiries to
Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body: Chemtrec: 1-800-424-9300 (Within Continental USA);
Chemtrec: 703-527-3887 (Outside USA).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin Irrit. 2: H315 Causes skin irritation.
Eye Irrit. 2: H319 Causes serious eye irritation.
Skin Sens. 1: H317 May cause an allergic skin reaction.
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

The product is required to be labelled in accordance with GHS-Directives.

Hazard pictograms

Signal word: WARNING

Contains:

Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700)
Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700)
Trimethylolpropane triglycidyl ether

Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water/soap.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P501 Dispose of contents/container to in accordance with local/regional/national/international regulation.
2.3 Other hazards

Human health dangers
People who are allergic to epoxide should avoid the use of the product.

Environmental hazards
Does not contain any PBT or vPvB substances.

Other hazards
Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

Product-type:
The product is a mixture.

<table>
<thead>
<tr>
<th>Range [%]</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 - &lt;50</td>
<td>Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700)</td>
</tr>
<tr>
<td>CAS: 9003-36-5</td>
<td></td>
</tr>
<tr>
<td>GHS: Skin Irrit. 2: H315 - Skin Sens. 1: H317 - Aquatic Chronic 2: H411</td>
<td></td>
</tr>
<tr>
<td>10 - &lt;30</td>
<td>Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700)</td>
</tr>
<tr>
<td>CAS: 25068-38-6</td>
<td></td>
</tr>
<tr>
<td>GHS: Skin Irrit. 2: H315 - Eye Irrit. 2: H319 - Skin Sens. 1: H317 - Aquatic Chronic 2: H411</td>
<td></td>
</tr>
<tr>
<td>&lt;20</td>
<td>Epoxy resin (number average molecular weight ≤ 700)</td>
</tr>
<tr>
<td>CAS: 28064-14-4</td>
<td></td>
</tr>
<tr>
<td>GHS: Aquatic Chronic 4: H413</td>
<td></td>
</tr>
<tr>
<td>1 - &lt;20</td>
<td>Trimethylolpropane triglycidyl ether</td>
</tr>
<tr>
<td>CAS: 30499-70-8</td>
<td></td>
</tr>
<tr>
<td>GHS: Skin Irrit. 2: H315 - Eye Irrit. 2: H319 - Skin Sens. 1: H317 - Aquatic Chronic 3: H412</td>
<td></td>
</tr>
</tbody>
</table>

Comment on component parts
Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Take off contaminated clothing and wash before reuse.

Inhalation
Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact
In case of contact with skin wash off immediately with soap and water.
Consult a doctor if skin irritation persists.

Eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion
Supply with medical care.
Rinse out mouth and give plenty of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects
Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to the doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media
foam, dry powder, water spray jet, carbon dioxide

Extinguishing media that must not be used
Full water jet
5.2 Special hazards arising from the substance or mixture

In the event of fire the following can be released:
Carbon monoxide (CO)
Chlorine compounds.

5.3 Advice for firefighters

Do not inhale explosion and/or combustion gases.
Use self-contained breathing apparatus.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.
Collect contaminated firefighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Use personal protective equipment.
High risk of slipping due to leakage/spillage of product.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Take up residues with absorbent material (e.g. sand, sawdust, general purpose binder, diatomaceous earth).
Dispose of absorbed material in accordance with the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.

Wash hands before breaks and after work.
Use barrier skin cream.
Take off contaminated clothing and wash before reuse.
Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.
Do not store together with food and animal food/diet.
Keep container in a well-ventilated place.
Keep container tightly closed.
Keep in a cool place. Store in a dry place.
Protect from atmospheric moisture and water.
Recommended storage temperature: 5 - 25 °C

7.3 Specific end use(s)

See product use, SECTION 1.2
### SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (US)

not applicable

<table>
<thead>
<tr>
<th>DNEL Range [%]</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 - &lt;30</td>
<td>Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6</td>
</tr>
<tr>
<td></td>
<td>Industrial, dermal, Long-term - systemic effects: 8,33 mg/kg bw/d.</td>
</tr>
<tr>
<td></td>
<td>Industrial, inhalative, Long-term - systemic effects: 12,25 mg/m³.</td>
</tr>
<tr>
<td></td>
<td>Industrial, inhalative, Acute - systemic effects: 12,25 mg/m³.</td>
</tr>
<tr>
<td></td>
<td>Industrial, dermal, Acute - systemic effects: 8,33 mg/kg bw/d.</td>
</tr>
<tr>
<td></td>
<td>general population, oral, Acute - systemic effects: 0,75 mg/kg bw/d.</td>
</tr>
<tr>
<td></td>
<td>general population, oral, Long-term - systemic effects: 0,75 mg/kg bw/d.</td>
</tr>
<tr>
<td></td>
<td>general population, dermal, Long-term - systemic effects: 3,571 mg/kg bw/d.</td>
</tr>
<tr>
<td></td>
<td>general population, dermal, Acute - systemic effects: 3,571 mg/kg bw/d.</td>
</tr>
<tr>
<td>25 - &lt;50</td>
<td>Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 9003-36-5</td>
</tr>
<tr>
<td></td>
<td>Industrial, dermal, Long-term - systemic effects: 104,15 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>Industrial, inhalative, Long-term - systemic effects: 29,39 mg/m³.</td>
</tr>
<tr>
<td></td>
<td>general population, oral, Long-term - systemic effects: 6,25 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>general population, dermal, Long-term - systemic effects: 62,5 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>general population, inhalative, Long-term - systemic effects: 8,7 mg/m³.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PNEC Range [%]</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 - &lt;30</td>
<td>Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6</td>
</tr>
<tr>
<td></td>
<td>soil, 0,196 mg/l.</td>
</tr>
<tr>
<td></td>
<td>sediment (seawater), 0,0996 mg/l.</td>
</tr>
<tr>
<td></td>
<td>sediment (freshwater), 0,996 mg/l.</td>
</tr>
<tr>
<td></td>
<td>sewage treatment plants (STP), 10 mg/l.</td>
</tr>
<tr>
<td></td>
<td>seawater, 0,0006 mg/l.</td>
</tr>
<tr>
<td></td>
<td>freshwater, 0,006 mg/l.</td>
</tr>
<tr>
<td>25 - &lt;50</td>
<td>Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 9003-36-5</td>
</tr>
<tr>
<td></td>
<td>soil, 0,237 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>sediment (seawater), 0,0294 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>seawater, 0,0003 mg/l.</td>
</tr>
<tr>
<td></td>
<td>sediment (freshwater), 0,294 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>freshwater, 0,003 mg/l.</td>
</tr>
<tr>
<td></td>
<td>sewage treatment plants (STP), 10 mg/l.</td>
</tr>
</tbody>
</table>
### 8.2 Exposure controls

**Additional advice on system design**
Ensure adequate ventilation on workstation.

**Eye protection**
safety glasses

**Hand protection**
The details concerned are recommendations. Please contact the glove supplier for further information.
Nitrile rubber, >480 min (EN 374).

**Skin protection**
Protective clothing.

Avoid contact with eyes and skin.
Do not inhale gases/vapours/aerosols.

Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

**Respiratory protection**
If ventilation is insufficient, wear respiratory protection.
Short term: filter apparatus, combination filter A-P2.

**Thermal hazards**
not applicable

**Delimitation and monitoring of the environmental exposition**
Protect the environment by applying appropriate control measures to prevent or limit emissions.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

- **Form**
pasty

- **Color**
light beige

- **Odor**
characteristic

- **Odour threshold**
not determined

- **pH-value**
not applicable

- **pH-value [1%]**
not applicable

- **Boiling point [°C]**
not determined

- **Flash point [°C]**
not applicable

- **Flammability [°C]**
not determined

- **Lower explosion limit**
not determined

- **Upper explosion limit**
not determined

- **Oxidizing properties**
not determined

- **Vapour pressure/gas pressure [kPa]**
not determined

- **Density [g/ml]**
1,33 (23°C / 73,4°F)

- **Bulk density [kg/m³]**
not applicable

- **Solubility in water**
insoluble

- **Partition coefficient [n-octanol/water]**
not determined

- **Viscosity**
not determined

- **Relative vapour density determined in air**
not determined

- **Evaporation speed**
not determined

- **Melting point [°C]**
not determined

- **Autoignition temperature [°C]**
not determined

- **Decomposition temperature [°C]**
not determined

### 9.2 Other information
No information available.

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No dangerous reactions known if used as directed.
10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with oxidizing agents.
Reactions with alkalies, amines and strong acids.
Reactions with alcohols.

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Range [%]</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 - &lt;30</td>
<td>Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6</td>
</tr>
<tr>
<td></td>
<td>LD50, dermal, Rabbit: 23000 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>LD50, oral, Rat: &gt; 15000 mg/kg.</td>
</tr>
<tr>
<td>1 - &lt;20</td>
<td>Trimethylolpropane triglycidyl ether, CAS: 30499-70-8</td>
</tr>
<tr>
<td></td>
<td>LD50, oral, Rat: &gt; 2000 mg/kg bw.</td>
</tr>
<tr>
<td>25 - &lt;50</td>
<td>Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 9003-36-5</td>
</tr>
<tr>
<td></td>
<td>LD50, dermal, Rat: &gt; 2000 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>LD50, oral, Rat: &gt; 10000 mg/kg.</td>
</tr>
<tr>
<td></td>
<td>NOAEL, oral, 250 mg/kg/day.</td>
</tr>
</tbody>
</table>

Serious eye damage/irritation not determined
Skin corrosion/irritation not determined
Respiratory or skin sensitisation not determined
Specific target organ toxicity — single exposure not determined
Specific target organ toxicity — repeated exposure not determined
Mutagenicity not determined
Reproduction toxicity not determined
Carcinogenicity not determined
General remarks

Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.
SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Range [%]</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 - &lt;30</td>
<td>Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6</td>
</tr>
<tr>
<td></td>
<td>LC50, (96h), Oncorhynchus mykiss: 2 mg/l.</td>
</tr>
<tr>
<td></td>
<td>EC50, (48h), Daphnia magna: 1.8 mg/l.</td>
</tr>
<tr>
<td></td>
<td>IC50, Bacteria: &gt; 42.6 mg/l (18 h).</td>
</tr>
<tr>
<td></td>
<td>ErC50, (72h), Selenastrum capricornutum: 11 mg/l.</td>
</tr>
<tr>
<td>25 - &lt;50</td>
<td>Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 9003-36-5</td>
</tr>
<tr>
<td></td>
<td>LC50, (72h), Algae: 1.8 mg/l.</td>
</tr>
<tr>
<td></td>
<td>LC50, (48h), Daphnia magna: 2.55 mg/l.</td>
</tr>
<tr>
<td></td>
<td>EC50, (96h), Leuciscus idus: 2.54 mg/l.</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

- Behaviour in environment compartments: not determined
- Behaviour in sewage plant: not determined
- Biological degradability: not determined

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

Ecological data of complete product are not available.
The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.
Do not discharge product unmonitored into the environment.
The product contains organically bound halogen in accordance with the formulation.

SECTION 13: Disposal considerations

Product
Coordinate disposal with the disposal contractor/authorities if necessary.

Contaminated packaging
Uncontaminated packaging may be taken for recycling.
Dispose full / partially emptied cartridges as hazardous waste in accordance with official regulations.

RCRA Hazard Class (40CFR 261)
Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities.
SECTION 14: Transport

14.1 UN number
See SECTION 14.2 in accordance with UN shipping name

14.2 UN proper shipping name

Transport by land according to ADR/RID
- Classification Code M7
- Label
- ADR LQ 5 kg
- ADR 1.1.3.6 (8.6) Transport category (tunnel restriction code) 3 (E)

Inland navigation (ADN)
- Classification Code M7
- Label

Marine transport in accordance with IMDG
- EMS F-A, S-F
- Label
- IMDG LQ 5 kg

Air transport in accordance with IATA
- Label

DOT Road Shipment Information (49 CFR)
- Label
- 49 CFR LQ
- TDGR LQ

14.3 Transport hazard class(es)
See SECTION 14.2 in accordance with UN shipping name

14.4 Packing group
See SECTION 14.2 in accordance with UN shipping name

14.5 Environmental hazards
See SECTION 14.2 in accordance with UN shipping name

14.6 Special precautions for user
Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
not applicable
SECTION 15: Regulatory information

US Regulations
National regulations

- SARA, 302
  not determined
- SARA, 311
  This product is classified as hazardous under SARA 311.
- SARA, 313
  Not determined.
- CA Proposition 65
  No components require labelling under California Proposition 65.
- TSCA
  All chemical substances in this material are included on or exempted from listing on the TSCA Inventory.
- FDA
  not applicable

American Conference of Governmental Industrial Hygienists - ACGIH
ACGIH: yes - contains crystalline silica

International Agency for Research on Cancer IARC
IARC: yes - contains crystalline silica.

National Toxicology Program - NTP
This product is named NTP - National Toxicology Program (contains crystalline silica).
This product is named NTP - National Toxicology Program (contains glycerol).

HAP-VOC

Transport-regulations

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)
H412 Harmful to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.
H317 May cause an allergic skin reaction.
H315 Causes skin irritation.

16.2 Abbreviations and acronyms:
ACGIH = American Conference of Governmental Industrial Hygienists;
ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route;
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses;
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure;
CAS = Chemical Abstracts Service;
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act;
CFR = Code of Federal Regulations;
CPR = Controlled Products Regulations;
DNEL = Derived No Effect Level;
DOT = Department of Transportation;
EC50 = Median effective concentration;
EPA = Environmental Protection Agency;
GHS = Globally Harmonized System of Classification and Labelling of Chemicals;
IATA = International Air Transport Association;
IC50 = Inhibition concentration, 50%;
IMDG = International Maritime Code for Dangerous Goods;
IARC = International Agency for Research on Cancer;
IATA = International Air Transport Association;
TSCA = Toxic Substance Control Act;
TSCA = Toxic Substance Control Act;
HCMS = Hazardous Materials Identification System;
NFPA = National Fire Protection Association;
NIOSH = National Institute for Occupational Safety and Health;
OSHA = Occupational Safety and Health Administration;
LC50 = Lethal concentration, 50%;
LD50 = Median lethal dose, 50%;
MARPOL = International Convention for the Prevention of Marine Pollution from Ships;
PBT = Persistent, Bioaccumulative and Toxic substance;
PNEC = Predicted No-Effect Concentration;
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals;
16.3 Ratings

HMIS Ratings

| HEALTH | 2 - Moderate Hazard |
| FLAMMABILITY | 1 - Slight Hazard |
| REACTIVITY | 1 - Slight Hazard |
| PERSONAL PROTECTION | X - Personal protection rating to be supplied by user depending on use conditions |

NFPA Ratings

- 1
- 2
- 1
- -

TOP, FLAMMABILITY: 1 - Slight Hazard
LEFT, HEALTH: 2 - Moderate Hazard
RIGHT, REACTIVITY: 1 - Slight Hazard
BOTTOM, SPECIAL NOTICE: -

16.4 Other information

Classification procedure

Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects. (Calculation method)

Modified position

SECTION 3 been added: Epoxy resin (number average molecular weight ≤ 700)
SECTION 2 been added: P302+P352 IF ON SKIN: Wash with plenty of water/soap.
SECTION 2 deleted: P391 Collect spillage.
SECTION 2 been added: The product is required to be labelled in accordance with GHS/CLP-Directives.
SECTION 2 been added: Does not contain any PBT or vPvB substances.
SECTION 4 deleted: Change soaked clothing immediately.
SECTION 4 been added: Take off contaminated clothing and wash before reuse.
SECTION 5 deleted: Risk of formation of toxic pyrolysis products.
SECTION 5 been added: In the event of fire the following can be released:
SECTION 7 deleted: Keep away from all sources of ignition - Refrain from smoking.
SECTION 7 deleted: Take precautionary measures against static discharges.
SECTION 8 been added: Protect the environment by applying appropriate control measures to prevent or limit emissions.
SECTION 8 deleted: Tightly fitting goggles.
SECTION 8 deleted: See SECTION 6+7.
SECTION 8 been added: safety glasses
SECTION 11 deleted: Irritant
SECTION 11 deleted: Irritant
SECTION 11 deleted: Sensitizing.
SECTION 12 deleted: The product was classified on the basis of the calculation procedure of the preparation directive.
SECTION 15 deleted: Chemical safety assessments for substances in this mixture were not carried out.
SECTION 16 been added: Observe employment restrictions for young people.
SECTION 16 been added: Calculation method
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

PURE 110+ Component B

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant uses

Adhesive mortar for fastening to concrete elements B-Component (Hardener)

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company
Powers Fasteners, Inc.
2 Powers Lane
Brewster, NY 10509 / USA
Phone +1 800-524-3244
Fax +1 877-871-1965

Address enquiries to
Safety Data Sheet
sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body
Chemtrec: 1-800-424-9300 (Within Continental USA);
Chemtrec: 703-527-3887 (Outside USA).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin Corr. 1B: H314 Causes severe skin burns and eye damage.
Skin Sens. 1: H317 May cause an allergic skin reaction.
Muta. 2: H341 Suspected of causing genetic defects.
Eye Dam. 1: H318 Causes serious eye damage.
2.2 Label elements

The product is required to be labelled in accordance with GHS-Directives.

**Hazard pictograms**

![Hazard pictogram](image)

**Signal word**

DANGER

**Contains:**

- Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine)
- m-Phenylenebis(methylamine)
- Phenol

**Hazard statements**

- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H341 Suspected of causing genetic defects.

**Precautionary statements**

- P201 Obtain special instructions before use.
- P260 Do not breathe vapours.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER/doctor.
- P363 Wash contaminated clothing before reuse.
- P501 Dispose of contents/container to in accordance with local/regional/national/international regulation.
- P405 Store locked up.

2.3 Other hazards

**Human health dangers**

People who are allergic to amines should avoid the use of the product.

**Other hazards**

Further hazards were not determined with the current level of knowledge.
### SECTION 3: Composition / Information on ingredients

**Product-type:**
The product is a mixture.

<table>
<thead>
<tr>
<th>Range [%]</th>
<th>Substance</th>
<th>CAS</th>
<th>GHS/ H314</th>
<th>H317</th>
<th>H332</th>
<th>H331</th>
<th>H318</th>
<th>H317</th>
<th>H318</th>
<th>H412</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 30</td>
<td>Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine)</td>
<td>57214-10-5</td>
<td>Skin Corr. 1B: H314</td>
<td>Skin Sens. 1: H317</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 - &lt;15</td>
<td>m-Phenylenebis(methylamine)</td>
<td>1477-55-0</td>
<td>H302 - Acute Tox. 4: H332 - Skin Corr. 1B: H314 - Eye Dam. 1: H318 - Skin Sens. 1: H317 - Aquatic Chronic 3: H412</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1 - &lt;5</td>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>90-72-2</td>
<td>Acute Tox. 4: H302 - Skin Irrit. 2: H315 - Eye Irrit. 2: H319</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - &lt;5</td>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>GHS: Acute Tox. 4: H302 H332</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - &lt;3</td>
<td>Quartz (&lt;10μm)</td>
<td>14808-60-7</td>
<td>GHS: STOT RE 1: H372</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comment on component parts**
The quartz in this preparation is not available on foreseeable use.
Substances of Very High Concern - SVHC: substances are not contained or are below 0,1%.
For full text of H-statements: see SECTION 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

**General information**
Remove contaminated soaked clothing immediately and dispose of safely.

**Inhalation**
Remove the victim into fresh air and keep him calm.
Seek medical advice immediately.

**Skin contact**
In case of contact with skin wash off immediately with soap and water.
Immediate medical treatment necessary, as untreated burns can result in slow-healing wounds.

**Eye contact**
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Shield unaffected eye.
Seek medical advice immediately.

**Ingestion**
Do not induce vomiting.
Seek medical advice immediately.
Rinse out mouth and give plenty of water to drink.

#### 4.2 Most important symptoms and effects, both acute and delayed

Product is caustic.
Allergic reactions
Risk of serious damage to eyes.

#### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: foam, dry powder, water spray jet, carbon dioxide

Extinguishing media that must not be used: Full water jet

5.2 Special hazards arising from the substance or mixture

In the event of fire the following can be released:
- Carbon monoxide (CO)
- Nitrogen oxides (NOx).

5.3 Advice for firefighters

Do not inhale explosion and/or combustion gases.
Use self-contained breathing apparatus.
Wear full protective suit.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.
Collect contaminated firefighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Use personal protective equipment.
High risk of slipping due to leakage/spillage of product.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Take up residues with absorbent material (e.g. sand, sawdust, general purpose binder, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Remove contaminated soaked clothing immediately and dispose of safely.
Do not eat, drink, smoke or take drugs at work.
Wash hands before breaks and after work.
Use barrier skin cream.
Showers and eye wash stations should be provided.
7.2 Conditions for safe storage, including any incompatibilities

- Keep only in original container.
- Prevent penetration into the ground.
- Do not store together with food and animal food/diet.
- Keep container in a well-ventilated place.
- Keep container tightly closed.
- Keep in a cool place. Store in a dry place.
- Protect from atmospheric moisture and water.
- Recommended storage temperature: 5-25 °C (41-77 °F).

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (US)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5 - &lt;15</td>
<td>m-Phenylenebis(methylamine)</td>
<td>1477-55-0, EINECS/ELINCS: 216-032-5, ECB-Nr.: 01-2119480150-50-XXXX</td>
<td></td>
<td></td>
<td>NIOSH</td>
<td>0,1 mg/m³</td>
</tr>
<tr>
<td>3 - &lt;10</td>
<td>Phenol</td>
<td>108-95-2, EINECS/ELINCS: 203-632-7, EU-INDEX: 604-001-00-2</td>
<td></td>
<td></td>
<td></td>
<td>5 ppm, 19 mg/m³, NIOSH, OSHA</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>15.6 ppm, 60 mg/m³</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Additional advice on system design: Ensure adequate ventilation on workstation.

Eye protection: Tightly fitting goggles.

Hand protection: The details concerned are recommendations. Please contact the glove supplier for further information. 0,7 mm Nitrile rubber, >480 min (EN 374).

Skin protection: Protective clothing. Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

Respiratory protection: If ventilation is insufficient, wear respiratory protection. Short term: filter apparatus, combination filter A-P2.

Thermal hazards: not applicable

Delimitation and monitoring of the environmental exposition: Protect the environment by applying appropriate control measures to prevent or limit emissions.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form: pasty
Color: red
Odor: amine-like
Odour threshold: not determined
pH-value: not applicable
pH-value [%]: not applicable
Boiling point [°C]: not determined
Flash point [°C]: not applicable
Flammability [°C]: not determined
Lower explosion limit: not determined
Upper explosion limit: not determined
Oxidizing properties: not determined
Vapour pressure/gas pressure [kPa]: not determined
Density [g/ml]: ~1,84
Bulk density [kg/m³]: not applicable
Solubility in water: partially miscible
Partition coefficient [n-octanol/water]: not determined
Viscosity: not determined
Relative vapour density determined in air: not determined
Evaporation speed: not determined
Melting point [°C]: not determined
Autoignition temperature [°C]: not determined
Decomposition temperature [°C]: not determined

9.2 Other information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with oxidizing agents.
Reactions with strong acids.
Reactions with epoxides

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

See SECTION 10.3.
Copper and copper-bearing alloys
10.6 Hazardous decomposition products

No hazardous decomposition products known.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

**Acute toxicity**

<table>
<thead>
<tr>
<th>Product</th>
<th>Acute toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE-mix, inhalative (mist)</td>
<td>LD50, inhalative, Rat: 3.89 mg/l/1h.</td>
</tr>
<tr>
<td>ATE-mix, dermal, Rat</td>
<td>LD50, oral, Rat: 2000 mg/kg.</td>
</tr>
<tr>
<td>ATE-mix, oral, Rat</td>
<td>LD50, oral, Rat: 2000 mg/kg.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Range [%]</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - &lt;5</td>
<td>Benzyl alcohol, CAS: 100-51-6</td>
</tr>
<tr>
<td>3 - &lt;10</td>
<td>Phenol, CAS: 108-95-2</td>
</tr>
<tr>
<td>5 - &lt;15</td>
<td>m-Phenylenebis(methylamine), CAS: 1477-55-0</td>
</tr>
<tr>
<td>20 - 30</td>
<td>Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine), CAS: 57214-10-5</td>
</tr>
</tbody>
</table>

**Serious eye damage/irritation**

- Toxicological data of complete product are not available.
- Risk of serious damage to eyes.
- Calculation method

**Skin corrosion/irritation**

- Toxicological data of complete product are not available.
- Product is caustic.
- Calculation method

**Respiratory or skin sensitisation**

- Toxicological data of complete product are not available.
- May cause an allergic skin reaction.
- Calculation method

**Specific target organ toxicity — single exposure**

- Does not contain any relevant substances fulfilling the classification criteria.

**Specific target organ toxicity — repeated exposure**

- Toxicological data of complete product are not available.
- Based on the information available, the classification criteria have not been fulfilled.

**Mutagenicity**

- Toxicological data of complete product are not available.
- Suspected of causing genetic defects.
- Calculation method

**Reproduction toxicity**

- Does not contain any relevant substances fulfilling the classification criteria.

**Carcinogenicity**

- Does not contain any relevant substances fulfilling the classification criteria.

**Aspiration hazard**

- Does not contain any relevant substances fulfilling the classification criteria.

**General remarks**

The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.
SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Range [%]</th>
<th>Substance</th>
<th>Toxicity Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - &lt;5</td>
<td>Benzyl alcohol, CAS: 100-51-6</td>
<td>LC50, (96h), Lepomis macrochirus: 10 mg/l (IUCLID).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EC50, Bacteria: 71.4 mg/l (0.5 h) (IUCLID).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EC50, (24h), Daphnia magna: 400 mg/l (IUCLID).</td>
</tr>
<tr>
<td>3 - &lt;10</td>
<td>Phenol, CAS: 108-95-2</td>
<td>LC50, (96h), Oncorhynchus mykiss: 5 mg/l (Lit.).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EC50, (48h), Daphnia magna: 4.2 mg/l (Lit.).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IC50, (96h), Algae: 150 mg/l (Lit.).</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

- **Behaviour in environment compartments**: not determined
- **Behaviour in sewage plant**: not determined
- **Biological degradability**: not determined

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

Ecological data of complete product are not available.
The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.
Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

- **Product**: Coordinate disposal with the disposal contractor/authorities if necessary.
- **Contaminated packaging**: Uncontaminated packaging may be taken for recycling.
  Dispose full / partially emptied cartridges as hazardous waste in accordance with official regulations.
- **RCRA Hazard Class (40CFR 261)**: Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities.
SECTION 14: Transport

14.1 UN number

See SECTION 14.2 in accordance with UN shipping name

14.2 UN proper shipping name

Transport by land according to ADR/RID
- Classification Code: C8
- Label

- ADR LQ: 1 kg
- ADR 1.1.3.6 (8.6) Transport category (tunnel restriction code) 2 (E)

Inland navigation (ADN)
- Classification Code: C8
- Label

Marine transport in accordance with IMDG
- EMS: F-A, S-B
- Label

- IMDG LQ: 1 kg

DOT Road Shipment Information (49 CFR)
- Label

DOT Road Shipment Information (49 CFR)
- Label
- 49 CFR LQ
- TDGR LQ

14.3 Transport hazard class(es)

See SECTION 14.2 in accordance with UN shipping name

14.4 Packing group

See SECTION 14.2 in accordance with UN shipping name

14.5 Environmental hazards

See SECTION 14.2 in accordance with UN shipping name

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable
SECTION 15: Regulatory information

US Regulations

National regulations
29 CFR 1910.1200, ANSI Z400.1-2010, OSHA-PEL, ACGIH-TLV, NTP, IARC, SARA Title III, NFPA, TSCA, California - Prop. 65
- SARA, 302
  This product is classified as hazardous under SARA 302.
- SARA, 311
  This product is classified as hazardous under SARA 311.
- SARA, 313
  One or some ingredient(s) are listed under this regulation.
- CA Proposition 65
  No components require labelling under California Proposition 65.
- TSCA
  All chemical substances in this material are included on or exempted from listing on the TSCA Inventory.
- FDA
  not applicable

American Conference of Governmental Industrial Hygienists - ACGIH
not determined

International Agency for Research on Cancer IARC
IARC: Contains one substance Group 3: Not classifiable as to carcinogenicity to humans.

National Toxicology Program - NTP
This product is named NTP - National Toxicology Program (contains crystalline silica).
This product is named NTP - National Toxicology Program (contains Phenol).
This product is named NTP - National Toxicology Program (contains Benzyl alcohol).
HAP-VOC
not applicable

Transport-regulations

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H372 Causes damage to organs through prolonged or repeated exposure.
H302+H332 Harmful if swallowed or if inhaled.
H319 Causes serious eye irritation.
H315 Causes skin irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H331 Toxic if inhaled.
H311 Toxic in contact with skin.
H301 Toxic if swallowed.
H341 Suspected of causing genetic defects.
H412 Harmful to aquatic life with long lasting effects.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H314 Causes severe skin burns and eye damage.

16.2 Ratings

HMIS Ratings

| HEALTH | 3 - Severe Hazard |
| FLAMMABILITY | 1 - Slight Hazard |
| REACTIVITY | 1 - Slight Hazard |

PERSONAL PROTECTION | X - Personal protection rating to be supplied by user depending on use conditions |

NFPA Ratings

| TOP | 1 |
| LEFT | 3 - Severe Hazard |
| RIGHT | 1 - Slight Hazard |

BOTTOM, SPECIAL NOTICE: -
16.3 Abbreviations and acronyms:

ACGIH = American Conference of Governmental Industrial Hygienists;
ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route;
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses;
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure;
CAS = Chemical Abstracts Service;
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act;
CFR = Code of Federal Regulations;
CPR = Controlled Products Regulations;
DMEL = Derived Minimum Effect Level;
DNEL = Derived No Effect Level;
DOT = Department of Transportation;
EC50 = Median effective concentration;
EPA = Environmental Protection Agency;
GHS = Globally Harmonized System of Classification and Labelling of Chemicals;
IATA = International Air Transport Association;
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;
IC50 = Inhibition concentration, 50%;
IMDG = International Maritime Code for Dangerous Goods;
IARC = International Agency of Research on Cancer;
IATA = International Air Transport Association;
TSCA = Toxic Substance Control Act;
HMSI = Hazardous Materials Identification System;
NFPA = National Fire Protection Association;
NIOSH = National Institute for Occupational Safety and Health;
OSHA = Occupational Safety and Health Administration;
LC50 = Lethal concentration, 50%;
LD50 = Median lethal dose, 50%;
MARPOL = International Convention for the Prevention of Marine Pollution from Ships;
PBT = Persistent, Bioaccumulative and Toxic substance;
PNEC = Predicted No-Effect Concentration;
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals;
SARA = Superfund Amendments and Reauthorization Act;
TLV®/TWA = Threshold limit value – time-weighted average;
TLV®STEL = Threshold limit value – short-time exposure limit;
VOC = Volatile Organic Compounds;
vPvB = very Persistent and very Bioaccumulative;

16.4 Other information

Classification procedure
Skin Corr. 1B: H314 Causes severe skin burns and eye damage. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
Muta. 2: H341 Suspected of causing genetic defects. (Calculation method)
Eye Dam. 1: H318 Causes serious eye damage. (Calculation method)

Modified position
none