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.

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

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 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.

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

DNEL

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

PNEC

Range [%]	Substance
10 - <30	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6
	soil, 0,196 mg/l.
	sediment (seaater), 0,0996 mg/l.
	sediment (freshwater), 0,996 mg/l.
	sewage treatment plants (STP), 10 mg/l.
	seawater, 0,0006 mg/l.
	freshwater, 0,006 mg/l.
25 - <50	Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 9003-36-5
	soil, 0,237 mg/kg.
	sediment (seaater), 0,0294 mg/kg.
	seawater, 0,0003 mg/l.
	sediment (freshwater), 0,294 mg/kg.
	freshwater, 0,003 mg/l.
	sewage treatment plants (STP), 10 mg/l.

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

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

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

Range [%]	Substance
10 - <30	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6
	LC50, (96h), Oncorhynchus mykiss: 2 mg/l.
	EC50, (48h), Daphnia magna: 1,8 mg/l.
	IC50, Bacteria: > 42,6 mg/l (18 h).
	ErC50, (72h), Selenastrum capricornutum: 11 mg/l.
25 - <50	Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 9003-36-5
	LC50, (72h), Algae: 1,8 mg/l.
	LC50, (48h), Daphnia magna: 2,55 mg/l.
	EC50, (96h), Leuciscus idus: 2,54 mg/l.

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	UN 3077 Environmentally hazardous substance, solid, n.o.s. (Bisphenol A/F Epoxy resin) 9 III
- 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)	UN 3077 Environmentally hazardous substance, solid, n.o.s. (Bisphenol A/F Epoxy resin) 9 III
- Classification Code	M7
- Label	
Marine transport in accordance with IMDG	UN 3077 Environmentally hazardous substance, solid, n.o.s. (Bisphenol A/F Epoxy resin) 9 III MARINE POLLUTANT
- EMS	F-A, S-F
- Label	
- IMDG LQ	5 kg
Air transport in accordance with IATA	UN 3077 Environmentally hazardous substance, solid, n.o.s. (Bisphenol A/F Epoxy resin) 9 III
- Label	
DOT Road Shipment Information (49 CFR)	UN/NA 3077 Environmentally hazardous substance, solid, n.o.s. (Bisphenol A/F Epoxy resin) 9 III
- 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, HCS 2012, ANSI Z400.1-2010, OSHA-PEL, ACGIH-TLV, NTP, IARC, SARA Title III, NFPA, TSCA, California - Prop. 65
- SARA, 302	not determined
- SARA, 311	This product is classified as hazardous under SARA 311.
- SARA, 313	Not determinated.
- 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	DOT-Classification, ADR (2013); IMDG-Code (2013, 36. Amdt.); IATA-DGR (2013).

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;
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;
HMIS = 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;

16.3 Ratings

HMIS Ratings

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

NFPA Ratings

1		TOP, FLAMMABILITY: 1 - Slight Hazard
2	1	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

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 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

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.

Range [%]	Substance
20 - 30	Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine)
	CAS: 57214-10-5
	GHS/ Skin Corr. 1B: H314 - Skin Sens. 1: H317
5 - <15	m-Phenylenebis(methylamine)
	CAS: 1477-55-0
	GHS: Acute Tox. 4: H302 - Acute Tox. 4: H332 - Skin Corr. 1B: H314 - Eye Dam. 1: H318 - Skin Sens. 1: H317 - Aquatic Chronic 3: H412
3 - <10	Phenol
	CAS: 108-95-2
	GHS: Muta. 2: H341 - Acute Tox. 3: H301 - Acute Tox. 3: H311 - Acute Tox. 3: H331 - STOT RE 2: H373 - Skin Corr. 1B: H314 - Eye Dam. 1: H318
1 - <5	2,4,6-Tris(dimethylaminomethyl)phenol
	CAS: 90-72-2
	GHS: Acute Tox. 4: H302 - Skin Irrit. 2: H315 - Eye Irrit. 2: H319
1 - <5	Benzyl alcohol
	CAS: 100-51-6
	GHS: Acute Tox. 4: H302 H332
1 - <3	Quartz (< 10µm)
	CAS: 14808-60-7
	GHS: STOT RE 1: H372

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)

Range [%]	Substance
5 - <15	m-Phenylenebis(methylamine)
	CAS: 1477-55-0, EINECS/ELINCS: 216-032-5, ECB-Nr.: 01-2119480150-50-XXXX
	Long-term exposure: NIOSH
	Short-term exposure (15-minute): 0,1 mg/m³
3 - <10	Phenol
	CAS: 108-95-2, EINECS/ELINCS: 203-632-7, EU-INDEX: 604-001-00-2
	Long-term exposure: 5 ppm, 19 mg/m³, NIOSH, OSHA
	Short-term exposure (15-minute): 15.6 ppm, 60 mg/m³

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 [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]	~1,84
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

	Product
	ATE-mix, inhalativ (mist), > 5 mg/l (4 h).
	ATE-mix, dermal, Rat: > 2000 mg/kg.
	ATE-mix, oral, Rat: > 2000 mg/kg.

Range [%]	Substance
1 - <5	Benzyl alcohol, CAS: 100-51-6
	LD50, dermal, Rabbit: 2000 mg/kg bw (RTECS).
	LD50, oral, Rat: 1230 mg/kg bw (IUCLID).
	LC50, inhalative, Rat: 4,178 mg/l/4h (OECD TG 403).
	LC50, inhalative, Rat: 8,8 mg/l (4h) (IUCLID).
1 - <5	2,4,6-Tris(dimethylaminomethyl)phenol, CAS: 90-72-2
	LD50, dermal, Rat: 1280 mg/kg.
	LD50, oral, Rat: 1200 mg/kg.
3 - <10	Phenol, CAS: 108-95-2
	LD50, dermal, Rat: 660 mg/kg (OECD 402).
	LD50, oral, Rat: 317 mg/kg (RTECS).
	LC50, inhalative, Rat: 0,316 mg/l (RTECS).
20 - 30	Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine), CAS: 57214-10-5
	LD50, oral, Rat: > 5000 mg/kg.
5 - <15	m-Phenylenebis(methylamine), CAS: 1477-55-0
	LD50, dermal, Rabbit: 2000 mg/kg.
	LD50, oral, Rat: 930 mg/kg.
	LC50, inhalative, Rat (female): 0,8 mg/l/4h.
	LC50, inhalative, Rat: 2,4 mg/l/4h.
	LC50, inhalative, Rat: 3,89 mg/l/1h.

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

Range [%]	Substance
1 - <5	Benzyl alcohol, CAS: 100-51-6
	LC50, (96h), Lepomis macrochirus: 10 mg/l (IUCLID).
	EC50, Bacteria: 71,4 mg/l (0,5 h) (IUCLID).
	EC50, (24h), Daphnia magna: 400 mg/l (IUCLID).
3 - <10	Phenol, CAS: 108-95-2
	LC50, (96h), Oncorhynchus mykiss: 5 mg/l (Lit.).
	EC50, (48h), Daphnia magna: 4,2 mg/l (Lit.).
	IC50, (96h), Algae: 150 mg/l (Lit.).

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	UN 3259 Amines, solid, corrosive, n.o.s. (Phenol, m-Phenylenebis(methylamine)) 8 II
- 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)	UN 3259 Amines, solid, corrosive, n.o.s. (Phenol, m-Phenylenebis(methylamine)) 8 II
- Classification Code	C8
- Label	
Marine transport in accordance with IMDG	UN 3259 Amines, solid, corrosive, n.o.s. (Phenol, m-Phenylenebis(methylamine)) 8 II
- EMS	F-A, S-B
- Label	
- IMDG LQ	1 kg
DOT Road Shipment Information (49 CFR)	UN/NA 3259 Amines, solid, corrosive, n.o.s. (Phenol, m-Phenylenebis(methylamine)) 8 II
- Label	
DOT Road Shipment Information (49 CFR)	UN/NA 3259 Amines, solid, corrosive, n.o.s. (Phenol, m-Phenylenebis(methylamine)) 8 II
- Label	
DOT Road Shipment Information (49 CFR)	UN/NA 3259 Amines, solid, corrosive, n.o.s. (Phenol, m-Phenylenebis(methylamine)) 8 II
- 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

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	DOT-Classification, ADR (2013); IMDG-Code (2013, 36. Amdt.); IATA-DGR (2013).
Other Right to Know Laws	

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	3 - Severe Hazard
FLAMMABILITY	1	1 - Slight Hazard
REACTIVITY	1	1 - Slight Hazard
PERSONAL PROTECTION	X	X - Personal protection rating to be supplied by user depending on use conditions

NFPA Ratings

1	TOP, FLAMMABILITY: 1 - Slight Hazard
3 1	LEFT, HEALTH: 3 - Severe Hazard RIGHT, REACTIVITY: 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;
HMIS = 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