

MKT Fastening, LLC  
Lonoke, AR 72086

Date printed 01.07.2015, Revision 23.08.2013

Version 01

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

### 1.1 Product identifier

**LR500+, Comp. 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** MKT Fastening, LLC  
1 Gunnebo Drive  
Lonoke, AR 72086 / USA  
Phone +1(501) 676-2222  
Fax +1(501) 676-2524  
Homepage www.mktfastening.com

#### Address enquiries to

#### Technical information

**Safety Data Sheet** sdb@chemiebuero.de

### 1.4 Emergency telephone number

**Advisory body** US Chemtrec: +1 800 424-9300 (24h)

## 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.

**Classification procedure** Calculation method

### 2.2 Label elements

The product is classified as hazardous in accordance to OSHA Standard 29 CFR 1910.1200 (HCS 2012)

#### Hazard pictograms



**Signal word** WARNING

**Contains:** Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight  $\leq$  700)

1,6-Bis(2,3-epoxypropoxy)hexane

Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight  $\leq$  700)

#### 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

P280 Wear protective gloves.  
P280 Wear eye protection/face protection.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P391 Collect spillage.  
P273 Avoid release to the environment.  
P501 Dispose of contents/container to in accordance with local/regional/national/international regulation.

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### 2.3 Other hazards

**Human health dangers**

People who are allergic to epoxide 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
30 - 40	Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight $\leq$ 700) CAS: 9003-36-5 GHS: Skin Irrit. 2: H315 - Skin Sens. 1: H317 - Aquatic Chronic 2: H411
2,5 - <20	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight $\leq$ 700) CAS: 25068-38-6 GHS: Skin Irrit. 2: H315 - Eye Irrit. 2: H319 - Skin Sens. 1: H317 - Aquatic Chronic 2: H411
1 - <20	1,6-Bis(2,3-epoxypropoxy)hexane CAS: 16096-31-4 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**

Change soaked clothing immediately.

**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

Risk of formation of toxic pyrolysis products.  
Carbon monoxide (CO)  
Chlorine compounds.

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### 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.

Keep away from all sources of ignition - Refrain from smoking.

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.

### 7.3 Specific end use(s)

See product use, SECTION 1.2

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with occupational exposure limits to be monitored (US)

not applicable

#### DNEL

Range [%]	Substance
2,5 - <20	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6
	Industrial, dermal, Long-term - systemic effects: 8,3 mg/kg bw/d.
	Industrial, inhalative, Acute - systemic effects: 12,3 mg/m <sup>3</sup> .
	Industrial, inhalative, Long-term - systemic effects: 12,3 mg/m <sup>3</sup> .
	Industrial, dermal, Acute - systemic effects: 8,3 mg/kg bw/d.
	general population, inhalative, Acute - systemic effects: 0,75 mg/m <sup>3</sup> .
	general population, inhalative, Long-term - systemic effects: 0,75 mg/m <sup>3</sup> .
	general population, dermal, Acute - systemic effects: 3,6 mg/kg bw/d.
	general population, dermal, Long-term - systemic effects: 3,6 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.
30 - 40	Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 9003-36-5
	Industrial, inhalative, Long-term - systemic effects: 29,39 mg/m <sup>3</sup> .
	Industrial, dermal, Acute - local effects: 0,0083 mg/cm <sup>2</sup> .
	Industrial, dermal, Long-term - systemic effects: 104,15 mg/kg bw/d.
	general population, inhalative, Long-term - systemic effects: 8,7 mg/m <sup>3</sup> .
	general population, dermal, Long-term - systemic effects: 62,5 mg/kg bw/d.
1 - <20	1,6-Bis(2,3-epoxypropoxy)hexane, CAS: 16096-31-4
	worker, inhalative, Long-term - systemic effects: 4,9 mg/m <sup>3</sup> .
	worker, dermal, Long-term - local effects: 22,6 µg/cm <sup>2</sup> .
	worker, dermal, Long-term - systemic effects: 2,8 mg/kg bw/d.
	worker, inhalative, Long-term - local effects: 0,44 mg/m <sup>3</sup> .
	general population, inhalative, Long-term - local effects: 0,27 mg/m <sup>3</sup> .
	general population, dermal, Acute - systemic effects: 1,7 mg/kg bw/d.
	general population, inhalative, Acute - systemic effects: 2,9 mg/m <sup>3</sup> .
	general population, oral, Acute - systemic effects: 0,83 mg/kg bw/d.
	general population, dermal, Acute - local effects: 13,6 µg/cm <sup>2</sup> .
	general population, dermal, Long-term - systemic effects: 1,7 mg/kg bw/d.
	general population, inhalative, Long-term - systemic effects: 2,9 mg/m <sup>3</sup> .
	general population, oral, Long-term - systemic effects: 0,83 mg/kg bw/d.
general population, dermal, Long-term - local effects: 13,6 µg/cm <sup>2</sup> .	

#### PNEC

Range [%]	Substance
2,5 - <20	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6
	sediment (seaater), 0,05 mg/kg dw.
	sediment (freshwater), 0,5 mg/kg dw.
	sewage treatment plants (STP), 10 mg/l.
	seawater, 0,0003 mg/l.
	freshwater, 0,003 mg/l.

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30 - 40	Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight $\leq$ 700), CAS: 9003-36-5
	soil, 0,237 mg/kg dw.
	sediment (seaater), 0,0294 mg/kg dw.
	sediment (freshwater), 0,294 mg/kg dw.
	sewage treatment plants (STP), 10 mg/l.
	seawater, 0,0003 mg/l.
	freshwater, 0,003 mg/l.
1 - <20	1,6-Bis(2,3-epoxypropoxy)hexane, CAS: 16096-31-4
	sediment (freshwater), 0,283 mg/kg dw.
	sediment (seaater), 0,283 mg/kg dw.
	seawater, 1,15 $\mu$ g/l.
	freshwater, 0,0115 mg/l.

## 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation.
<b>Eye protection</b>	Tightly fitting goggles.
<b>Hand protection</b>	The details concerned are recommendations. Please contact the glove supplier for further information. Nitrile rubber, >480 min (EN 374).
<b>Skin protection</b>	Protective clothing.  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. Avoid contact with eyes and skin.
<b>Respiratory protection</b>	If ventilation is insufficient, wear respiratory protection. Short term: filter apparatus, combination filter A-P2.
<b>Thermal hazards</b>	not applicable
<b>Delimitation and monitoring of the environmental exposition</b>	See SECTION 6+7.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form	pasty
Color	whitish
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]	not determined
Bulk density [kg/m <sup>3</sup> ]	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 alkalis, 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.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Range [%]	Substance
2,5 - <20	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight $\leq$ 700), CAS: 25068-38-6
	LD50, dermal, Rat: > 2000 mg/kg.
	LD50, oral, Rat: > 2000 mg/kg.
30 - 40	Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight $\leq$ 700), CAS: 9003-36-5
	LD50, dermal, Rat: > 2000 mg/kg.
	LD50, oral, Rat: > 2000 mg/kg.
1 - <20	1,6-Bis(2,3-epoxypropoxy)hexane, CAS: 16096-31-4
	LD50, dermal, Rat: > 2000 mg/kg bw.
	LD50, oral, Rat: 2900 mg/kg bw.

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

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.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Range [%]	Substance
2,5 - <20	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight $\leq$ 700), CAS: 25068-38-6
	LC50, (72h), Algae: > 11 mg/l.
	LC50, (96h), fish: 1,3 mg/l.
	EC50, (48h), Daphnia magna: 2,1 mg/l.
	NOEC, (21d), Daphnia magna: 0,3 mg/l.
	BCF, 3-31.
30 - 40	Reaction product: bisphenol-F-(epichlorhydrin) Epoxy resin (number average molecular weight $\leq$ 700), CAS: 9003-36-5
	LC50, (72h), Algae: > 1000 mg/l.
	LC50, (96h), fish: 2,54 mg/l.
	EC50, (48h), Daphnia magna: 2,55 mg/l.
1 - <20	1,6-Bis(2,3-epoxypropoxy)hexane, CAS: 16096-31-4
	LC50, (96h), Oncorhynchus mykiss: 30 mg/l.
	EC50, (48h), Daphnia magna: 47 mg/l.
	EC50, (24h), Daphnia magna: 67 mg/l.
	BCF, 3,57.

### 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

No information available.

### 12.6 Other adverse effects

The product was classified on the basis of the calculation procedure of the preparation directive.

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.

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### SECTION 13: Disposal considerations

<b>Product</b>	Coordinate disposal with the disposal contractor/authorities if necessary. Dispose of as hazardous waste.
<b>Contaminated packaging</b>	Uncontaminated packaging may be taken for recycling. Dispose full / partially emptied cartridges as hazardous waste in accordance with official regulations.
<b>RCRA Hazard Class (40CFR 261)</b>	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



#### 14.3 Transport hazard class(es)

See SECTION 14.2 in accordance with UN shipping name

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#### 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 determined.

- CA Proposition 65

This product contains a substance known to the State of California to cause cancer. Silica, Quartz - CAS# 14808-60-7.

- 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).

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)

H412 Harmful to aquatic life with long lasting effects.

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.

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## 16.2 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
2 1
-

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

### Modified position

## 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 Labeling 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

### Modified position

none

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

### 1.1 Product identifier

**LR500+, Comp. 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** MKT Fastening, LLC  
1 Gunnebo Drive  
Lonoke, AR 72086 / USA  
Phone +1(501) 676-2222  
Fax +1(501) 676-2524  
Homepage [www.mktfastening.com](http://www.mktfastening.com)

#### Address enquiries to

#### Technical information

**Safety Data Sheet** [sdb@chemiebuero.de](mailto:sdb@chemiebuero.de)

### 1.4 Emergency telephone number

**Advisory body** US Chemtrec: +1 800 424-9300 (24h)

## 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.

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## 2.2 Label elements

### Hazard pictograms



### Signal word

DANGER

### Contains:

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

Phenol

3-Aminomethyl-3,5,5-trimethylcyclohexylamine

4,4'-Isopropylidenediphenol

### 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.

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.

P405 Store locked up.

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 amines 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.

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### SECTION 3: Composition / Information on ingredients

**Product-type:**

The product is a mixture.

Range [%]	Substance
1 - <25	Benzyl alcohol
	CAS: 100-51-6
	GHS: Acute Tox. 4: H302 H332 - Eye Irrit. 2: H319
1 - <10	Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine)
	CAS: 57214-10-5
	GHS: Skin Corr. 1C: H314 - Eye Dam. 1: H318 - Skin Sens. 1B: H317 - Aquatic Chronic 3: H412
1 - <10	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
1 - <5	Formaldehyde, oligomeric reaction products with 4,4'-isopropylidenediphenol and m-phenylenebis (methylamine)
	CAS: 161278-17-7
	GHS: Acute Tox. 4: H302 H312 - Skin Corr. 1B: H314 - Skin Sens. 1: H317 - Aquatic Chronic 4: H413 - Eye Dam. 1: H318
1 - <5	2,4,6-Tris(dimethylaminomethyl)phenol
	CAS: 90-72-2
	GHS: Skin Corr. 1B: H314 - Aquatic Chronic 3: H412 - Skin Sens. 1: H317
1 - <5	3-Aminomethyl-3,5,5-trimethylcyclohexylamine
	CAS: 2855-13-2
	GHS: Acute Tox. 4: H302 H312 - Skin Corr. 1B: H314 - Skin Sens. 1: H317 - Eye Dam. 1: H318 - Aquatic Chronic 3: H412
1 - <5	Quartz (< 10µm)
	CAS: 14808-60-7
	GHS: STOT RE 1: H372
1 - <2,5	Phenol
	CAS: 108-95-2
	GHS: Muta. 2: H341 - Acute Tox. 3: H301 H311 H331 - STOT RE 2: H373 - Skin Corr. 1B: H314 - Eye Dam. 1: H318
1 - <5	4,4'-Isopropylidenediphenol
	CAS: 80-05-7
	GHS: STOT SE 3: H335 - Skin Sens. 1: H317 - Repr. 2: H361f - Eye Dam. 1: H318 - Aquatic Chronic 2: H411

**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**

In case of contact with eyes rinse thoroughly and immediately with plenty of water and seek medical advice.  
Shield unaffected eye.

**Ingestion**

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

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#### 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.  
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)  
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 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.

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.

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## 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.

## 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
1 - <2,5	Phenol
	CAS: 108-95-2
	Long-term exposure: 5 ppm, 19 mg/m <sup>3</sup> , NIOSH, OSHA
	Short-term exposure (15-minute): 15,6 ppm, 60 mg/m <sup>3</sup>
1 - <10	m-Phenylenebis(methylamine)
	CAS: 1477-55-0
	Long-term exposure: NIOSH
	Short-term exposure (15-minute): 0,1 mg/m <sup>3</sup>

### DNEL

Range [%]	Substance
1 - <2,5	Phenol, CAS: 108-95-2
	Industrial, dermal, Long-term - systemic effects: 1,23 mg/kg bw/d.
	Industrial, inhalative, Long-term - systemic effects: 8 mg/m <sup>3</sup> .

### PNEC

Range [%]	Substance
1 - <2,5	Phenol, CAS: 108-95-2
	soil, 0,136 mg/kg dwt..
	sediment (seaater), 0,00915 mg/kg dwt..
	sediment (freshwater), 0,0915 mg/kg dwt..
	seawater, 0,0077 mg/l.
	freshwater, 0,077 mg/l.
1 - <5	2,4,6-Tris(dimethylaminomethyl)phenol, CAS: 90-72-2
	sewage treatment plants (STP), 0,2 mg/l.
	seawater, 0,0084 mg/l.
	freshwater, 0,084 mg/l.

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## 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation.
<b>Eye protection</b>	Tightly fitting goggles.
<b>Hand protection</b>	The details concerned are recommendations. Please contact the glove supplier for further information. Nitrile rubber, >480 min (EN 374).
<b>Skin protection</b>	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.
<b>Respiratory protection</b>	If ventilation is insufficient, wear respiratory protection. Short term: filter apparatus, combination filter A-P2.
<b>Thermal hazards</b>	not applicable
<b>Delimitation and monitoring of the environmental exposition</b>	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

<b>Form</b>	pasty
<b>Color</b>	black
<b>Odor</b>	amine-like
<b>Odour threshold</b>	not determined
<b>pH-value</b>	not applicable
<b>pH-value [1%]</b>	not applicable
<b>Boiling point [°C]</b>	not determined
<b>Flash point [°C]</b>	not applicable
<b>Flammability [°C]</b>	not determined
<b>Lower explosion limit</b>	not determined
<b>Upper explosion limit</b>	not determined
<b>Oxidizing properties</b>	not determined
<b>Vapour pressure/gas pressure [kPa]</b>	not determined
<b>Density [g/ml]</b>	not determined
<b>Bulk density [kg/m<sup>3</sup>]</b>	not applicable
<b>Solubility in water</b>	partially miscible
<b>Partition coefficient [n-octanol/water]</b>	not determined
<b>Viscosity</b>	not determined
<b>Relative vapour density determined in air</b>	not determined
<b>Evaporation speed</b>	not determined
<b>Melting point [°C]</b>	not determined
<b>Autoignition temperature [°C]</b>	not determined
<b>Decomposition temperature [°C]</b>	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.

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## 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.

## 10.4 Conditions to avoid

Strong heating.

## 10.5 Incompatible materials

See SECTION 10.3.

## 10.6 Hazardous decomposition products

No hazardous decomposition products known.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product
ATE-mix, inhalativ (vapour ), Rat: > 20 mg/l (4 h).
ATE-mix, dermal, Rabbit: > 2000 mg/kg.
ATE-mix, oral, Rat: > 2000 mg/kg.

Range [%]	Substance
1 - <5	3-Aminomethyl-3,5,5-trimethylcyclohexylamine, CAS: 2855-13-2
	LD50, oral, Rat: 1030 mg/kg.
1 - <2,5	Phenol, CAS: 108-95-2
	LD50, dermal, Rat: 525-714 mg/kg.
	LD50, oral, Rat: 317 mg/kg.
	LC50, inhalative, Rat: 316 mg/kg.
1 - <5	4,4'-Isopropylidenediphenol, CAS: 80-05-7
	LD50, dermal, Rabbit: > 2000 mg/kg.
	LD50, oral, Rat: > 2000 mg/kg.
1 - <10	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.
1 - <5	2,4,6-Tris(dimethylaminomethyl)phenol, CAS: 90-72-2
	LD50, dermal, Rat: >1 ml/kg (Lit.).
	LD50, oral, Rat: >2000 mg/kg (Lit.).

<b>Serious eye damage/irritation</b>	Risk of serious damage to eyes.
<b>Skin corrosion/irritation</b>	Product is caustic.
<b>Respiratory or skin sensitisation</b>	Sensitizing.
<b>Specific target organ toxicity — single exposure</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity — repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Mutagenicity</b>	This product contains one or more substance(s) of Muta. 2 (CAS 108-95-2)
<b>Reproduction toxicity</b>	This product contains one or more substance(s) of categorie Repr. 2 (CAS 80-05-7)
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.
<b>General remarks</b>	

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.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Range [%]	Substance
1 - <2,5	Phenol, CAS: 108-95-2
	LC50, (96h), Oncorhynchus mykiss: 5 mg/l.
	EC50, (48h), Daphnia magna: 4,2 mg/l.
	IC50, (96h), Algae: 150 mg/l.
1 - <5	4,4'-Isopropylidenediphenol, CAS: 80-05-7
	LC50, (96h), fish: 7,5 mg/l.
	EC50, (48h), Daphnia magna: 3,9 - 10,2 mg/l.
	EC50, (96h), Algae: 2,5 - 3,1 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.

## SECTION 13: Disposal considerations

Product	Coordinate disposal with the disposal contractor/authorities if necessary. Dispose of as hazardous waste.
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.

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## 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 Polyamines, solid, corrosive, n.o.s (Formaldehyde, polymer with 1,3-benzenedimethanamine and phenol; m-xylenediamine) 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 Polyamines, solid, corrosive, n.o.s (Formaldehyde, polymer with 1,3-benzenedimethanamine and phenol; m-xylenediamine) 8 II

- Classification Code

C8

- Label



Marine transport in accordance with IMDG

UN 3259 Polyamines, solid, corrosive, n.o.s (Formaldehyde, polymer with 1,3-benzenedimethanamine and phenol; m-xylenediamine) 8 II

- EMS

F-A, S-B

- Label



- IMDG LQ

1 kg

Air transport in accordance with IATA

UN 3259 Polyamines, solid, corrosive, n.o.s (Formaldehyde, polymer with 1,3-benzenedimethanamine and phenol; m-xylenediamine) 8 II

- Label



DOT Road Shipment Information (49 CFR)

UN/NA 3259 Polyamines, solid, corrosive, n.o.s (Formaldehyde, polymer with 1,3-benzenedimethanamine and phenol; m-xylenediamine) 8 II 8 II

- Label



### 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

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## SECTION 15: Regulatory information

### US Regulations

<b>National regulations</b>	29 CFR 1910.1200-HCS 2012, 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	This product contains a substance known to the State of California to cause cancer. Silica, Quartz - CAS# 14808-60-7.
- TSCA	Some chemical substances in this material are not included on or not exempted from listing on the TSCA Inventory.
- FDA	not applicable
<b>American Conference of Governmental Industrial Hygienists - ACGIH</b>	ACGIH: yes - contains crystalline silica
<b>International Agency for Research on Cancer IARC</b>	not determined
<b>National Toxicology Program - NTP</b>	This product is named NTP - National Toxicology Program (contains crystalline silica). This product is named NTP - National Toxicology Program (contains Benzyl alcohol). This product is named NTP - National Toxicology Program (contains Phenol).
<b>HAP-VOC</b>	not applicable
<b>Transport-regulations</b>	DOT-Classification, ADR (2015); IMDG-Code (2015, 37. Amdt.); IATA-DGR (2015).
<b>Other Right to Know Laws</b>	

## SECTION 16: Other information

### 16.1 Hazard statements (SECTION 3)

H315 Causes skin irritation.  
H411 Toxic to aquatic life with long lasting effects.  
H361f Suspected of damaging fertility.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.  
H341 Suspected of causing genetic defects.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H413 May cause long lasting harmful effects to aquatic life.  
H302+H312 Harmful if swallowed or in contact with skin.  
H332 Harmful if inhaled.  
H302 Harmful if swallowed.  
H412 Harmful to aquatic life with long lasting effects.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H314 Causes severe skin burns and eye damage.  
H319 Causes serious eye irritation.  
H302+H332 Harmful if swallowed or if inhaled.

### 16.2 Ratings

#### HMIS Ratings

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

#### NFPA Ratings

1	
2	1
-	

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### 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;  
NFFPA = 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 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)

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**Modified position**

SECTION 2 deleted: m-Phenylenebis(methylamine)  
SECTION 2 been added: Phenol  
SECTION 2 been added: Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine)  
SECTION 2 deleted: 4,4'-Isopropylidenediphenol  
SECTION 2 deleted: Formaldehyde, oligomeric reaction products with 4,4'-isopropylidenediphenol and m-phenylenebis (methylamine)  
SECTION 3 been added: Quartz (< 10µm)  
SECTION 2 deleted: 3-Aminomethyl-3,5,5-trimethylcyclohexylamine  
SECTION 3 been added: Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine)  
SECTION 3 been added:  
SECTION 2 been added: Gesundheitsgefahr  
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 2 been added: H341 Suspected of causing genetic defects.  
SECTION 2 been added: Muta. 2  
SECTION 2 deleted: The product is classified as hazardous in accordance to OSHA Standard 29 CFR 1910.1200 (HCS 2012)  
SECTION 2 deleted: P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
SECTION 3 been added: The quartz in this preparation is not available on foreseeable use.  
SECTION 4 been added: Risk of serious damage to eyes.  
SECTION 4 deleted: Seek medical advice immediately.  
SECTION 4 deleted: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
SECTION 4 been added: Shield unaffected eye.  
SECTION 4 been added: In case of contact with eyes rinse thoroughly and immediately with plenty of water and seek medical advice.  
SECTION 5 been added: In the event of fire the following can be released:  
SECTION 5 deleted: Risk of formation of toxic pyrolysis products.  
SECTION 8 been added: Protect the environment by applying appropriate control measures to prevent or limit emissions.  
SECTION 8 deleted: See SECTION 6+7.  
SECTION 11 been added: Product is caustic.  
SECTION 11 been added: Based on available data, the classification criteria are not met.  
SECTION 11 been added: This product contains one or more substance(s) of Muta. 2 (CLP).  
SECTION 11 been added: This product contains one or more substance(s) of categorie Repr. 2 (CLP).  
SECTION 11 been added: Based on available data, the classification criteria are not met.  
SECTION 11 deleted: The product was classified on the basis of the calculation procedure of the preparation directive.  
SECTION 11 been added: Toxicological data of complete product are not available.  
SECTION 11 been added: Risk of serious damage to eyes.  
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 mothers-to-be and nursing mothers.  
SECTION 16 been added: Calculation method  
SECTION 16 been added: Observe employment restrictions for young people.

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