

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.02.2019

Version number 8

Revision: 21.02.2019

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

### 1.1 Product identifier

- Trade name: **Akepox 1016 Micro Filler Comp. A**
- Article number: 11786, 11789, 11792, 11795
- CAS Number: 2530-83-8
- EC number: 219-784-2
- Registration number 01-2119513212-58

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

No further relevant information available.

### Application of the substance / the mixture

Epoxy resin adhesive

### 1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH  
Lechstrasse 28  
D 90451 Nürnberg
- Tel. +49(0)911-642960  
Fax. +49(0)911-644456  
e-mail info@akemi.de

### Further information obtainable from:

Laboratory

### 1.4 Emergency telephone number:

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH  
Tel. +49(0)911-64296-59  
Reachable during the following office hours:  
Monday – Thursday from 07:30 a.m. to 16:30 p.m.  
Friday from 07:30 a.m. to 13:30 p.m.  
+44 (171) 635 91 91  
National Poison Inform. Centre  
Medical Toxicology Unit  
Avalonley Road  
London SE14 5ER

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

- Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER/doctor if you feel unwell.
- Storage: Store in a well-ventilated place. Keep container tightly closed.

### 2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008
- Hazard pictograms

The substance is classified and labelled according to the CLP regulation.



GHS05

### Signal word

Danger

### Hazard-determining components of labelling:

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane  
H318 Causes serious eye damage.

### Hazard statements

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- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"> <li>· <u>Precautionary statements</u></li> </ul>  | P101<br>P102<br>P103<br>P280<br>P305+P351+P338<br>P310 | If medical advice is needed, have product container or label at hand.<br>Keep out of reach of children.<br>Read label before use.<br>Wear eye protection / face protection.<br>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>Immediately call a POISON CENTER/doctor. |
| <ul style="list-style-type: none"> <li>· <b>2.3 Other hazards</b></li> <li>· <u>Results of PBT and vPvB assessment</u></li> <li>· <u>PBT:</u></li> <li>· <u>vPvB:</u></li> </ul> | Not applicable.<br>Not applicable.                     |   |

**SECTION 3: Composition/information on ingredients**

- **3.1 Chemical characterisation: Substances**
- CAS No. Description 2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane
- Identification number(s)
- EC number: 219-784-2

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- General information: Take affected persons out into the fresh air. Position and transport stably in side position. Immediately remove any clothing soiled by the product.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: If skin irritation continues, consult a doctor. Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Rinse out mouth and then drink plenty of water.
- **4.2 Most important symptoms and effects, both acute and delayed**
- Information for doctor: Breathing difficulty  
Coughing  
Allergic reactions  
Bisphenol-A based resins: Inhalation, swallowing or dermal incorporation may cause health damage. Irritates respiratory tract, digestion system, eyes and skin: e.g., cough, dyspnea, lacrimation, burning. May cause health interferences such as dermal changes, renal, hepatic damage, and blood count changes. May provoke skin allergies. Sensitized users can react towards very low concentrations of Bisphenol-A-Epichlorhydrine and should avoid any further contact with this chemical.  
The sensitizing effect of epoxide based resins is mainly caused by the concentration of epoxy resin polymers with a specific molecular weight  $\leq 300$ . The observed allergic dermal and respiratory appearances should be treated symptomatically in dependence of the severity. An epoxy resin based allergic disease belongs to a cell mediated (interaction of lymphocytes) type IV allergy.
- Hazards Danger of impaired breathing.  
Skin contact with polyester and epoxy resin solutions as ingredient of the product should be avoided due to risks of skin irritations or allergic skin appearances. If occasional hand contact can not be avoided, protection gloves, proper protection ointments and protective agents generating a protective layer on the skin were applied.

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· **4.3 Indication of any immediate medical attention and special treatment needed**

If swallowed, gastric irrigation with added, activated carbon.

### SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

· **5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide (CO)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

· **5.3 Advice for firefighters**

· Protective equipment:

Wear fully protective suit.

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

· Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Use respiratory protective device against the effects of fumes/dust/aerosol.

· **6.2 Environmental precautions:**

Do not allow to penetrate the ground/soil.

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Keep receptacles tightly sealed.

Store in cool, dry place in tightly closed receptacles.

Use only in well ventilated areas.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· Information about fire - and explosion protection:

No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**

· Storage:

· Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.

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- Information about storage in one common storage facility: Prevent any seepage into the ground.
- Further information about storage conditions: Store away from reducing agents.
- 7.3 Specific end use(s) Store receptacle in a well ventilated area.  
Protect from frost.
- 7.3 Specific end use(s) No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- Additional information about design of technical facilities: No further data; see item 7.
- **8.1 Control parameters**
- Ingredients with limit values that require monitoring at the workplace: Not required.

## · DNELs

**2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane**

|            |                             |                                  |
|------------|-----------------------------|----------------------------------|
| Oral       | DNEL (Langzeit-wiederholt)  | 12.5 mg/kg bw/day (BEV)          |
| Dermal     | DNEL (Kurzzeit-akut)        | 21 mg/kg bw/day (ARB)            |
|            |                             | 12.5 mg/kg bw/day (BEV)          |
| Inhalative | DNEL ( Langzeit-wiederholt) | 21 mg/kg bw/day (ARB)            |
|            |                             | 12.5 mg/kg bw/day (BEV)          |
|            | DNEL (Kurzzeit-akut)        | 147 mg/m <sup>3</sup> Air (ARB)  |
|            |                             | 43.5 mg/m <sup>3</sup> Air (BEV) |
|            | DNEL (Langzeit-wiederholt)  | 147 mg/m <sup>3</sup> Air (ARB)  |
|            |                             | 43.5 mg/m <sup>3</sup> Air (BEV) |

## · PNECs

**2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane**

|                |                             |
|----------------|-----------------------------|
| PNEC (wässrig) | >10 mg/l (KA)               |
|                | 0.1 mg/l (MW)               |
|                | 1 mg/l (SW)                 |
|                | 1 mg/l (WAS)                |
| PNEC (fest)    | 0.13 mg/kg Trockengew (BO)  |
|                | 0.79 mg/kg Trockengew (SWS) |

- Additional information: The lists valid during the making were used as basis.

· **8.2 Exposure controls**

- Personal protective equipment:
- General protective and hygienic measures:

Do not eat, drink, smoke or sniff while working.  
Use skin protection cream for skin protection.  
Clean skin thoroughly immediately after handling the product.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the eyes.

- Respiratory protection:

Short term filter device:  
Filter A/P2

- Protection of hands:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.  
Preventive skin protection by use of skin-protecting agents is recommended.

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After use of gloves apply skin-cleaning agents and skin cosmetics.  
Skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:

STOKO EMULSION (<http://www.stoko.com>)

Skin protection recommendation for skin cleaning after product handling:

Kresto Classic (<http://debstoko.com>)

Skin protection agent recommendation for skin aftercare:

STOKO VITAN (<http://www.stoko.com>)

The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times' data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory analyses of the company KCL GmbH in compliance with EN374.

This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: <http://www.kcl.de>).



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Butyl rubber, BR

Fluorocarbon rubber (Viton)

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

Value for the permeation: Level  $\leq$  6; 480 min

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· For the permanent contact gloves made of the following materials are suitable:

Butyl rubber, BR

Butoject (KCL, Art\_No. 897, 898)

Fluorocarbon rubber (Viton)

Vitoject (KCL, Art\_No. 890)

· As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Camatril (KCL, 730, 731, 732, 733)

Chloroprene rubber, CR

Camapren (KCL, Art\_No. 720, 722, 726)

· Not suitable are gloves made of the following materials:

Leather gloves

Strong material gloves

· Eye protection:



Tightly sealed goggles

· Body protection:

Protective work clothing

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### SECTION 9: Physical and chemical properties

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

##### · General Information

##### · Appearance:

Form: Pasty

Colour: Colourless

· Odour: Weak, characteristic

· Odour threshold: Not determined.

· pH-value: Not determined.

##### · Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: 120/3 mbar °C

· Flash point: 57 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Not determined.

· Explosive properties: Product does not present an explosion hazard.

##### · Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapour pressure: Not determined.

· Density at 20 °C: 1.07 g/cm<sup>3</sup>

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

##### · Solubility in / Miscibility with

water: Fully miscible.

· Partition coefficient: n-octanol/water: Not determined.

##### · Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

· Solvent separation test: Not applicable

· Organic solvents: 0.0 %

· 9.2 Other information: No further relevant information available.

### SECTION 10: Stability and reactivity

· 10.1 Reactivity: No further relevant information available.

#### · 10.2 Chemical stability

##### · Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

#### · 10.3 Possibility of hazardous reactions

May produce violent reactions with bases and numerous organic substances including alcohols and amines.

Strong exothermic reaction with acids.

Reacts with reducing agents.

#### · 10.4 Conditions to avoid

No further relevant information available.

#### · 10.5 Incompatible materials:

No further relevant information available.

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- **10.6 Hazardous decomposition products:** Irritant gases/vapours

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values relevant for classification:**

|        |      |                      |
|--------|------|----------------------|
| Oral   | LD50 | 7,010 mg/kg (rat)    |
| Dermal | LD50 | 4,248 mg/kg (rabbit) |

### 2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane

|            |             |   |
|------------|-------------|---|
| Oral       | LD50        | 8,025 mg/kg (rat) (OECD 401)  |
|            | NOAEL-Werte | ≥5 mg/kg (mouse)<br>200 mg/kg (rabbit) (OECD 414)<br>500 mg/kg (rat) (OECD 415) |
|            | Dermal      | LD50  |
| Inhalative | LC50/4 h    | >5.3 mg/l (rat) (OECD 403)  |
|            | NOAEC       | 0.225 mg/l (rat) (OECD 412)   |

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1 Toxicity

- **Aquatic toxicity:**

|          |                                      |
|----------|--------------------------------------|
| EC50/48h | 710 mg/l (daphnia magna)             |
| EC10/5h  | 1,500 mg/l (pseudomonas putida)      |
| EC50/72h | 350 mg/l (Selenastrum capricornutum) |
| LC50/96h | 237 mg/l (Oncorhynchus mykiss)       |

### 2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane

|           |  |
|-----------|--|
| EC50/96h  | 350 mg/l (Pseudokirchneriella subcapitata) (OECD 201)            |
|           | >100 mg/l (Salmo gairdneri)                                      |
| EC50      | 119 mg/l (green alge)  |
| IC50      | 255 mg/l (Scenedesmus subspicatus)                               |
| EC50/48h  | 324 mg/l (daphnia magna)   |
| EC10/5h   | 1,500 mg/l (pseudomonas putida)                                  |
| ErC50/72h | 350 mg/l (Selenastrum capricornutum)                             |
| ECO/96h   | 44 mg/l (Cyprinus carpio)  |
| NOEC      | >100 mg/kg (Klärschlamm: Atmungs-/Vermehrungshemmung) (OECD 209) |
| NOEC/21d  | ≥100 mg/l (daphnia magna) (OECD 211)                             |

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|          |   |
|----------|---|
| EC50/48h | 324-710 mg/l (daphnia magna) (OECD 202) |
| EC50/72h | 255 mg/l (Scenedesmus subspicatus)      |
| LC50/96h | 55 mg/l (Cyprinus carpio) (OECD 203)    |
|          | 237 mg/l (Oncorhynchus mykiss)          |

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- Ecotoxicological effects:
- Remark: Toxic for fish
- Additional ecological information:
- General notes: Do not allow product to reach ground water, water course or sewage system.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms  
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
- **12.5 Results of PBT and vPvB assessment**
- PBT: Not applicable.
- vPvB: Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- European waste catalogue

|          |   |
|----------|---|
| 06 00 00 | WASTES FROM INORGANIC CHEMICAL PROCESSES                |
| 06 08 00 | wastes from the MFSU of silicon and silicon derivatives |
| 06 08 99 | wastes not otherwise specified                          |

- Uncleaned packaging:
- Recommendation: Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
- Recommended cleansing agents: Water, if necessary together with cleansing agents.

**SECTION 14: Transport information**

- **14.1 UN-Number**
- ADR, ADN, IMDG, IATA Void
- **14.2 UN proper shipping name**
- ADR, ADN, IMDG, IATA Void
- **14.3 Transport hazard class(es)**
- ADR, ADN, IMDG, IATA
- Class Void
- **14.4 Packing group**
- ADR, IMDG, IATA Void
- **14.5 Environmental hazards:** Not applicable.
- **14.6 Special precautions for user** Not applicable.

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· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

· UN "Model Regulation": Void

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- National regulations:
- Information about limitation of use: Employment restrictions concerning juveniles must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.
- Waterhazard class: Water hazard class 2 (Assessment by list): hazardous for water.
- VOC EU 0.0 g/l
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Recommended restriction of use refer to Technical Data Sheet (TDS)
- Department issuing SDS: Laboratory
- Contact: Dieter Zimmermann
- Abbreviations and acronyms:
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - ICAO: International Civil Aviation Organisation
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - DNEL: Derived No-Effect Level (REACH)
  - PNEC: Predicted No-Effect Concentration (REACH)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Eye Dam. 1: Serious eye damage/eye irritation – Category 1

- \* Data compared to the previous version altered. Adaptation in accordance with REACH directive 1907/2006/EC