

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 01/22/2014

1 Identification

· Product identifier

- Trade name: **Akepox 5000 Component B**
- Article number: 10681, 10682
- 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

· 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
- Information department: Laboratory
- 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.

2 Hazard(s) identification

· Classification of the substance or mixture



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin.
Skin Sens. 1 H317 May cause an allergic skin reaction.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Corrosive

Causes burns.



Harmful

Harmful in contact with skin and if swallowed.



Irritant

May cause sensitization by skin contact.

· Information concerning particular hazards for human and environment:

Contact with skin and inhalation of aerosols/ vapours of the preparation should be avoided.

Acid burns have to be treated immediately, as it may otherwise cause badly curing wounds.

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· Classification system:

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Label elements

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS05 GHS07

Signal word

Danger

Hazard-determining components of labeling:

cycloaliphatic polyamines
Benzyl alcohol

Hazard statements

H302+H312 Harmful if swallowed or in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P260 Do not breathe vapours.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P312 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)



Health = 3
Fire = 1
Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = 3
Fire = 1
Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

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

Dangerous components:

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	cycloaliphatic polyamines C R34; Xn R21/22; Xi R43 Acute Tox. 3, H311; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Sens. 1, H317	25-50%
CAS: 100-51-6 EINECS: 202-859-9 Index number: 603-057-00-5	Benzyl alcohol Xn R20/22 Acute Tox. 4, H302; Acute Tox. 4, H332	12.5-25%

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

4 First-aid measures

Description of first aid measures

- General information: Take affected persons out into the fresh air.
Position and transport stably on side.
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation: Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: If skin irritation continues, consult a doctor.
Immediately wash with water and soap and rinse thoroughly.
Immediately rinse with water.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Immediately call a doctor.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- Information for doctor: Amines: Inhalation, swallowing or dermal contact may cause health damages. Cause burns, harm respiratory tract, eyes, skin, and digestion system in worst case up to complete destruction. Intermediate interferences such as headache, nausea, cough, dyspnea may occur. May cause allergies. Sensitized users may react towards very low amine concentrations and should avoid any further contact with this group of chemicals.
- Most important symptoms and effects, both acute and delayed Breathing difficulty
Headache
Coughing
Allergic reactions
- Danger Danger of impaired breathing.
- Indication of any immediate medical attention and special treatment needed If swallowed, gastric irrigation with added, activated carbon.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- 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)
Nitrogen oxides (NOx)
In certain fire conditions, traces of other toxic gases cannot be excluded.
- Advice for firefighters
- Protective equipment: Wear fully protective suit.
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.

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· **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.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation
 Use respiratory protective device against the effects of fumes/dust/aerosol.
 Wear protective equipment. Keep unprotected persons away.

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

· **Methods and material for containment and cleaning up:** Dispose of the collected material according to regulations.
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Use neutralizing agent.
 Dispose contaminated material as waste according to item 13.
 Ensure adequate ventilation.

· **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.

7 Handling and storage

· **Handling:**

· **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.

· **Information about protection against explosions and fires:** No special measures required.

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

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
 Prevent any seepage into the ground.

· **Information about storage in one common storage facility:** Store away from oxidizing agents.
 Store away from foodstuffs.

· **Further information about storage conditions:** Store under lock and key and out of the reach of children.
 Keep receptacle tightly sealed.

· **Storage class:** 8

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

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· Control parameters

· Components with limit values that require monitoring at the workplace:

100-51-6 Benzyl alcohol

WEEL Long-term value: 10 ppm

· Additional information:

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

· Exposure controls

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

Avoid close or long term contact with the skin.
 Do not eat, drink, smoke or sniff while working.
 Use skin protection cream for skin protection.
 Clean skin thoroughly immediately after handling the product.
 Keep away from foodstuffs, beverages and feed.
 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 and skin.

· Breathing equipment:

Not necessary if room is well-ventilated.
 Short term filter device:
 Filter A/P2
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:

Preventive skin protection by use of skin-protecting agents is recommended.
 After use of gloves apply skin-cleaning agents and skin cosmetics.
 Akemi skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:
 STOKO EMULSION (<http://www.stoko.com>)
 Akemi skin protection recommendation for skin cleaning after product handling:
 SLIG SPEZIAL (<http://www.stoko.com>)
 Akemi 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.
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Butyl rubber, BR
 Nitrile rubber, NBR

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Fluorocarbon rubber (Viton)
 Chloroprene rubber, CR
 Natural rubber, NR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material Value for the permeation: Level ≤ 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:
 Chloroprene rubber, CR
 Camapren (KCL, Art No. 720, 722, 726)
 Nitrile rubber, NBR
 Camatril (KCL, Art No. 730, 731, 732, 733)
 Butyl rubber, BR
 Butoject (KCL, Art No. 897, 898)

· 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 gloves

· Eye protection:
 Tightly sealed goggles

· Body protection: Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· General Information

· Appearance:

Form: Fluid
 Color: Colorless

· Odor: Characteristic

· pH-value: Not applicable

· Change in condition

Melting point/Melting range: Undetermined.
 Boiling point/Boiling range: 205 °C (401 °F)

· Flash point: 101 °C (214 °F)

· Ignition temperature: 435 °C (815 °F)

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower: 1.3 Vol %
 Upper: 13.0 Vol %

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· Vapor pressure at 20 °C (68 °F):	0.1 hPa
· Density at 20 °C (68 °F):	1.08 g/cm ³ (9.013 lbs/gal)
· Specific gravity at 20 °C (68 °F):	1.08 g/cm ³ (9.013 lbs/gal)
· Solubility in / Miscibility with Water:	Partly soluble.
· Viscosity: Dynamic at 20 °C (68 °F):	4000 mPas
· Solvent content: Organic solvents:	24.5 %
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity	
· Chemical stability	
· Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
· Possibility of hazardous reactions	Strong exothermic reaction with acids.
· Conditions to avoid	No further relevant information available.
· Incompatible materials:	No further relevant information available.
· Hazardous decomposition products:	Corrosive gases/vapors Nitrogen oxides Nitrogen oxides (NOx)

11 Toxicological information

- **Information on toxicological effects**
- Acute toxicity:

· LD/LC50 values that are relevant for classification:

cycloaliphatic polyamines

Oral	LD50	1000 mg/kg (rat)
Dermal	LD50	ca. 850 mg/kg (rat)

100-51-6 Benzyl alcohol

Oral	LD50	1040 mg/kg (mouse) 1040 mg/kg (rabbit) 1230 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)
Inhalative	LC50/4 h	> 1000 mg/l (rat)
	LC50/4h	>4.178 mg/m ³ (rat)
	LC50/8h	1000 ppm (rat)
	LC50/48h	645 mg/l (goo)

- **Primary irritant effect:**
- on the skin: Caustic effect on skin and mucous membranes.
- on the eye: Strong caustic effect.
- Sensitization: Sensitization possible through skin contact.
- **Additional toxicological
information:** The product shows the following dangers according to internally approved calculation methods for preparations:

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Harmful
Corrosive
Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· Carcinogenic categories· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

12 Ecological information· Toxicity· Aquatic toxicity:**100-51-6 Benzyl alcohol**

EC50	21°0 mg/l (BES) (OECD 209) 79 mg/l (Scenedesmus quadricauda)
EC50/16h	658 mg/l (pseudomonas putida)
EC50/24h	55-400 mg/l (daphnia magna)
EC50/30min	71.4 mg/l (Photobac. phosphoreum) 400 mg/l (pseudomonas putida)
EC50/48h	230 mg/l (daphnia magna) (OECD 202)
EC50/72h	770 mg/l (green alge) (OECD 201)
EC50/96h	640 mg/l (Scenedesmus pluvialis)
IC5/96h	640 mg/l (Scenedesmus quadricauda)
LC50/96h	645 mg/l (goo) 10 mg/l (Iepomis macrochirus) 460 mg/l (Pimephales promelas)
NOEC/21d	51 mg/l (daphnia magna) (OECD211)

· **Persistence and degradability** No further relevant information available.· **Behavior in environmental systems:**· Bioaccumulative potential No further relevant information available.· Mobility in soil No further relevant information available.· **Additional ecological information:**· General notes: Do not allow product to reach ground water, water course or sewage system.
Water hazard class 2 (Self-assessment): hazardous for water· **Results of PBT and vPvB assessment**· PBT: Not applicable.· vPvB: Not applicable.· **Other adverse effects** No further relevant information available.**13 Disposal considerations**· **Waste treatment methods**· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**· Recommendation:

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

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· Recommended cleansing agent: Alcohol

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*** 14 Transport information**

· UN-Number · DOT, ADR, IMDG, IATA	UN2735
· UN proper shipping name · DOT · ADR · IMDG, IATA	Amines, liquid, corrosive, n.o.s. (cycloaliphatic polyamines) 2735 Amines, liquid, corrosive, n.o.s. (cycloaliphatic polyamines) AMINES, LIQUID, CORROSIVE, N.O.S. (cycloaliphatic polyamines)
· Transport hazard class(es) · DOT	
	
· Class · Label	8 Corrosive substances. 8
· ADR	
	
· Class · Label	8 (C7) Corrosive substances 8
· IMDG, IATA	
	
· Class · Label	8 Corrosive substances. 8
· Packing group · DOT, ADR, IMDG, IATA	III
· Environmental hazards: · Marine pollutant:	No
· Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups	Warning: Corrosive substances 80 F-A,S-B Alkalis
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	UN2735, Amines, liquid, corrosive, n.o.s. (cycloaliphatic polyamines), 8, III

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15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- Sara

- Section 355 (extremely hazardous substances):

None of the ingredient is listed.

- Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

- TSCA (Toxic Substances Control Act):

All ingredients are listed.

- Proposition 65

- Chemicals known to cause cancer:

None of the ingredients is listed.

- Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

- Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

- Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

- Carcinogenicity categories

- EPA (Environmental Protection Agency)

None of the ingredients is listed.

- TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

- MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

- NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

- GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms



GHS05 GHS07

- Signal word

Danger

- Hazard-determining components of labeling:

cycloaliphatic polyamines
Benzyl alcohol

- Hazard statements

H302+H312 Harmful if swallowed or in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

- Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.

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P260	Do not breathe vapours.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- National regulations:
- Information about limitation of use: Employment restrictions concerning young persons must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
- Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.
- VOC USA 264.6 g/l / 2.21 lb/gl
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.

- Department issuing MSDS: Laboratory
- Contact: Dieter Zimmermann
Elke Hake
Fon ++49 (0)911 64296-59
@mail E.Hake@akemi.de
- Date of preparation / last revision 01/22/2014 / -
- 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)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
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
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent