

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 01/22/2014

1 Identification

· Product identifier

- Trade name: **Akepox 2030 Component B**
- Article number: 10601, 10614, 10602, 10566, 10612, 10605, 10613, 10565, 10563, 10600, 10603, 10564, 10604
- 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 Tel. +49(0)911-642960
Lechstrasse 28 Fax. +49(0)911-644456
D 90451 Nürnberg 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



GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.



GHS05 Corrosion

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



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

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



Corrosive

Causes severe burns.



Harmful

Harmful by inhalation and if swallowed. Possible risk of irreversible effects.



Irritant

May cause sensitization by skin contact.

· Information concerning particular hazards for human and environment:

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.

· Classification system:

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

· Label elements

· GHS label elements

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

(Contd. on page 2)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 01/22/2014

Trade name: Akepox 2030 Component B (Contd. of page 1)

Hazard pictograms



GHS05 GHS07 GHS08

Signal word

Danger

Hazard-determining components of labeling:

m-phenylenebis(methylamine)
phenol
Aminosilane

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

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.
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.
P337+P313 If eye irritation persists: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)

4	1	0	Health = 4
			Fire = 1
			Reactivity = 0

HMIS-ratings (scale 0 - 4)

HEALTH	*4	Health = *4
FIRE	1	Fire = 1
REACTIVITY	0	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.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 01/22/2014

Trade name: Akepox 2030 Component B

(Contd. of page 2)

· <u>Dangerous components:</u>		
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%
CAS: 1477-55-0 EINECS: 216-032-5	m-phenylenebis(methylamine) ☒ C R35; ☒ Xn R20/22; ☒ Xi R43 R52/53 ⚠ Skin Corr. 1A, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317	<12.5%
CAS: 108-95-2 EINECS: 203-632-7 Index number: 604-001-00-2	phenol ☒ T R23/24/25; ☒ C R34; ☒ Xn R48/20/21/22-68 Muta. Cat. 3 ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ Muta. 2, H341; STOT RE 2, H373; ⚠ Skin Corr. 1B, H314	1-5%
	Aminosilane ☒ Xn R20; ☒ Xi R41-43; ☒ N R51/53 ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H332; Skin Sens. 1, H317	1-5%

· 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: 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: 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: Immediately call a doctor.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- Information for doctor: The symptoms of phenol based poisoning appearances are white coloured mouth scabs, shock condition, insensibility, bradycardia and renal dysfunction and damage of renal tissue. Appropriate therapy measures: Administration of an adequate volume of liquid, gastrolavage in application of carbo medicinalis, sodium sulphate with plenty of water, infusion of glucose solution (5%); maesures against state of shock, hemodialysis.
- Most important symptoms and effects, both acute and delayed Headache
Dizziness
Dizziness
Nausea
Allergic reactions
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

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:

(Contd. on page 4)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 01/22/2014

Trade name: Akepox 2030 Component B

(Contd. of page 3)

- Carbon monoxide (CO)
- Nitrogen oxides (NOx)
- **Advice for firefighters**
- Protective equipment: Wear fully protective suit.
Wear self-contained respiratory protective device.
Mount respiratory protective device.
- 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**
- Environmental precautions: Wear protective equipment. Keep unprotected persons away.
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:** 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 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: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- Storage class: 8 A
- **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.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 01/22/2014

Trade name: Akepox 2030 Component B

(Contd. of page 4)

· Control parameters· Components with limit values that require monitoring at the workplace:**100-51-6 Benzyl alcohol**

WEEL Long-term value: 10 ppm

1477-55-0 m-phenylenebis(methylamine)REL Ceiling limit value: 0.1 mg/m³
SkinTLV Ceiling limit value: 0.1 mg/m³
Skin**108-95-2 phenol**PEL Long-term value: 19 mg/m³, 5 ppm
SkinREL Long-term value: 19 mg/m³, 5 ppm
Ceiling limit value: 60* mg/m³, 15.6* ppm
*15-min; SkinTLV Long-term value: 19 mg/m³, 5 ppm
Skin; BEI· Ingredients with biological limit values:**108-95-2 phenol**BEI 250 mg/g creatinine
Medium: urine
Time: end of shift
Parameter: Phenol with hydrolysis (background, nonspecific)· Additional information: The lists that were valid during the creation were used as basis.**· Exposure controls**· Personal protective equipment:· General protective and hygienic measures:

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.

· Breathing equipment:

Avoid contact with the eyes and skin.
Not necessary if room is well-ventilated.
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 respiratory protective device that is independent of circulating air.
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

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 01/22/2014

Trade name: Akepox 2030 Component B

(Contd. of page 5)

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

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:

Butyl rubber, BR

Butoject (KCL, Art No. 897, 898)

Nitrile rubber, NBR

Dermatril (Art No. 740, 741, 742)

Camatril (KCL, Art No. 730, 731, 732, 733)

Chloroprene rubber, CR

Camapren (KCL, Art No. 720, 722, 726)

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

Butyl rubber, BR

Butoject (KCL, Art No. 897, 898)

Nitrile rubber, NBR

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

· 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:

Pasty

Color:

Grey

· Odor:

Characteristic

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 01/22/2014

Trade name: Akepox 2030 Component B (Contd. of page 6)

· <u>pH-value:</u>	Not applicable
· <u>Change in condition</u>	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	205 °C (401 °F)
· <u>Flash point:</u>	101 °C (214 °F)
· <u>Ignition temperature:</u>	435 °C (815 °F)
· <u>Auto igniting:</u>	Product is not selfigniting.
· <u>Danger of explosion:</u>	Product does not present an explosion hazard.
· <u>Explosion limits:</u>	
Lower:	1.3 Vol %
Upper:	13.0 Vol %
· <u>Vapor pressure at 20 °C (68 °F):</u>	0.1 hPa
· <u>Density at 20 °C (68 °F):</u>	1.5 g/cm ³ (12.518 lbs/gal)
· <u>Specific gravity at 20 °C (68 °F):</u>	1.5 g/cm ³ (12.518 lbs/gal)
· <u>Solubility in / Miscibility with Water:</u>	Not miscible or difficult to mix.
· <u>Viscosity:</u>	
Dynamic at 20 °C (68 °F):	80000 mPas
· <u>Solvent content:</u>	
Organic solvents:	11.2 %
Solids content:	56.9 %
· <u>Other information</u>	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used 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

11 Toxicological information

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

· LD/LC50 values that are relevant for classification:

1477-55-0 m-phenylenebis(methylamine)

Oral	LD50	930 mg/kg (rat)
	NOEL	150 mg/kg (rat)
Dermal	LD50	3100 mg/kg (rabbit)

108-95-2 phenol

Oral	LD50	300 mg/kg (mouse)
------	------	-------------------

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 01/22/2014

Trade name: Akepox 2030 Component B

(Contd. of page 7)

		414 mg/kg (rat)
Dermal	LD50	670 mg/kg (rat)
Inhalative	LC50/4 h	316 mg/l (rat)

- Primary irritant effect:
- on the skin: Strong 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:
 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)		
14807-96-6	Talc (Mg3H2(SiO3)4)	2B
108-95-2	phenol	3

· <u>NTP (National Toxicology Program)</u>		
None of the ingredients is listed.		

12 Ecological information

· **Toxicity**

· <u>Aquatic toxicity:</u>		
1477-55-0 m-phenylenebis(methylamine)		
EC50/48h	15.2 mg/l (daphnia magna)	
EC50/72h	12 mg/l (Scenedesmus subspicatus)	
	20.3 mg/l (selenastrum capricornutum)	
LC50/96h	>100 mg/l (Zebrabärbling)	

- **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.

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 01/22/2014

Trade name: Akepox 2030 Component B

(Contd. of page 8)

· Uncleaned packagings:**· Recommendation:**

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

14 Transport information**· UN-Number****· DOT, ADR, IMDG, IATA**

UN2735

· UN proper shipping name**· DOT****· ADR****· IMDG, IATA**

Polyamines, liquid, corrosive, n.o.s. (m-phenylenebis(methylamine))
 2735 Polyamines, liquid, corrosive, n.o.s. (m-phenylenebis(methylamine))
 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine))

· 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, Polyamines, liquid, corrosive, n.o.s. (m-phenylenebis(methylamine)), 8, III

(Contd. on page 10)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 01/22/2014

Trade name: Akepox 2030 Component B

(Contd. of page 9)

15 Regulatory information

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

- Sara

- Section 355 (extremely hazardous substances):

108-95-2 phenol

- Section 313 (Specific toxic chemical listings):

108-95-2 phenol

- 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)

7727-43-7 barium sulphate, natural

D, CBD(inh), NL(oral)

108-95-2 phenol

D, I

- TLV (Threshold Limit Value established by ACGIH)

14807-96-6 Talc (Mg₃H₂(SiO₃)₄)

A4

108-95-2 phenol

A4

- MAK (German Maximum Workplace Concentration)

14807-96-6 Talc (Mg₃H₂(SiO₃)₄)

3B

108-95-2 phenol

3B

- 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 GHS08

- Signal word

Danger

- Hazard-determining components of labeling:

m-phenylenebis(methylamine)

phenol

Aminosilane

- Hazard statements

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H341 Suspected of causing genetic defects.

(Contd. on page 11)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 01/22/2014

Trade name: Akepox 2030 Component B

(Contd. of page 10)

- 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.
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.
P337+P313	If eye irritation persists: Get medical advice/attention.
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 168.0 g/l / 1.40 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
- 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)
 - ICAO: International Civil Aviation Organization
 - 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

USA