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\* **1 Identification of substance**

· Product details

- Trade name: **Hardener B-Liquid**
- Article number: 30423
- Application of the substance / the preparation Hardening agent/ Curing agent
- 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

\* **2 Composition/Data on components**

· Chemical characterization

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

· Dangerous components:

CAS: 131-11-3	dimethyl phthalate	25-50%
EINECS: 205-011-6		
CAS: 1338-23-4	2-Butanone, peroxide	25-50%
EINECS: 215-661-2	C, E; R 2-7-22-34	
CAS: 7722-84-1	hydrogen peroxide solution	1-5%
EINECS: 231-765-0	C, O; R 8-20/22-34	
EU Number: 008-003-00-9		
CAS: 78-93-3	butanone	1-5%
EINECS: 201-159-0	Xi, F; R 11-36-66-67	
EU Number: 606-002-00-3		

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

\* **3 Hazards identification**

- Hazard description: C Corrosive  
O Oxidizing
- Information pertaining to particular dangers for man 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.  
May cause fire.  
Harmful if swallowed.  
Causes burns.
- Classification system: The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- NFPA ratings (scale 0 - 4) Health = 3  
Fire = 3  
Reactivity = 0  
The substance possesses oxidizing properties.
- HMIS-ratings (scale 0 - 4) Health = 3  
Fire = 3  
Reactivity = 0

**4 First aid measures**

- General information: Immediately remove any clothing soiled by the product.
- After inhalation: Take affected persons into fresh air and keep quiet.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.  
Call a doctor immediately.
- After swallowing: Rinse out mouth and then drink plenty of water.

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Immediately call a doctor.

### 5 Fire fighting measures

- Suitable extinguishing agents: CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards caused by the material, its products of combustion or resulting gases: 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)
- Protective equipment: Wear self-contained respiratory protective device.
- Additional information Cool endangered receptacles with water spray.

### 6 Accidental release measures

- Person-related safety precautions: Keep away from ignition sources  
Wear protective equipment. Keep unprotected persons away.
- Measures for environmental protection: Do not allow to enter sewers/ surface or ground water.
- Measures for cleaning/collecting: Send for recovery or disposal in suitable receptacles.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

### 7 Handling and storage

- Handling:
- Information for safe handling: Keep away from heat and direct sunlight.  
Do not refill residue into storage receptacles.
- Information about protection against explosions and fires: Keep ignition sources away - Do not smoke.  
Protect from heat.
- Storage:
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- Information about storage in one common storage facility: Store away from reducing agents.
- Further information about storage conditions: Protect from heat and direct sunlight.  
Keep receptacle tightly sealed.
- Storage class: 5.2

### 8 Exposure controls and personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Components with limit values that require monitoring at the workplace:

#### 131-11-3 dimethyl phthalate

PEL 5 mg/m<sup>3</sup>  
REL 5 mg/m<sup>3</sup>  
TLV 5 mg/m<sup>3</sup>

#### 1338-23-4 2-Butanone, peroxide

REL Short-term value: C 1.5 mg/m<sup>3</sup>, C 0.2 ppm  
TLV Short-term value: C 1.5 mg/m<sup>3</sup>, C 0.2 ppm

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**7722-84-1 hydrogen peroxide solution**PEL 1.4 mg/m<sup>3</sup>, 1 ppmREL 1.4 mg/m<sup>3</sup>, 1 ppmTLV 1.4 mg/m<sup>3</sup>, 1 ppm**78-93-3 butanone**PEL 590 mg/m<sup>3</sup>, 200 ppmREL Short-term value: 885 mg/m<sup>3</sup>, 300 ppmLong-term value: 590 mg/m<sup>3</sup>, 200 ppmTLV Short-term value: 885 mg/m<sup>3</sup>, 300 ppmLong-term value: 590 mg/m<sup>3</sup>, 200 ppm

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- Additional information: The lists that were valid during the creation were used as basis.
- 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.
  - Avoid contact with the eyes and skin.
- Breathing equipment: Use suitable respiratory protective device in case of insufficient ventilation.
- Protection of hands: Protective gloves
- Material of gloves: PVA gloves
  - 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: The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection: Tightly sealed goggles
- Body protection: Protective work clothing

**9 Physical and chemical properties**· General Information

<u>Form:</u>	Fluid
<u>Color:</u>	Colorless
<u>Odor:</u>	Specific type

· Change in conditionMelting point/Melting range: Undetermined.Boiling point/Boiling range: Undetermined.· Flash point: Not applicable.· Ignition temperature:· Decomposition temperature: > +60°C (> +140°F) (SADT)· Auto igniting: Product is not selfigniting.· Danger of explosion: Product does not present an explosion hazard.· Density at 20°C (68°F): 1.15 g/cm<sup>3</sup>· Solubility in / Miscibility with Water: Insoluble.**10 Stability and reactivity**· Thermal decomposition / conditions to be avoided:

Rapid decomposition by heating (e. g. direct sunlight or heater).

· Materials to be avoided:

Rapid decomposition by dirt, rust, chemicals in particular concentrated acids, alkalis and accelerators (e. g. heavy-metal compounds and amines).

· Dangerous reactions

Self accelerating decomposition above &gt; + 60 °C.

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- Reacts with reducing agents.
  - Reacts with heavy metals.
  - Reacts with amines.
  - Reacts with acids, alkalis and oxidizing agents.
  - Hydrocarbons, carbondioxide and -monoxid.
- Dangerous products of decomposition:

**11 Toxicological information**

- Acute toxicity:
- Primary irritant effect:
- on the skin: Caustic effect on skin and mucous membranes.
- on the eye: Strong caustic effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information: The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Corrosive  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**12 Ecological information**

- General notes: Do not allow product to reach ground water, water course or sewage system.  
Water hazard class 1 (Self-assessment): slightly hazardous for water

**13 Disposal considerations**

- Product:
- Recommendation: Must be specially treated adhering to official regulations.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.  
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

**\* 14 Transport information**

- DOT regulations:
- Hazard class: 5.2
- Identification number: UN3105
- Packing group: -
- Proper shipping name (technical name): ORGANIC PEROXIDE TYPE D, LIQUID (HYDROGEN PEROXIDE, STABILIZED)
- Label 5.2
- Land transport ADR/RID (cross-border):
- ADR/RID class: 5.2 (P1) Organic peroxides
- Danger code (Kemler): 558
- UN-Number: 3105
- Packaging group: -
- Description of goods: 3105 ORGANIC PEROXIDE TYPE D, LIQUID (HYDROGEN PEROXIDE, AQUEOUS SOLUTION, STABILIZED)
- Maritime transport IMDG:
- IMDG Class: 5.2
- UN Number: 3105
- Label 5.2
- Packaging group: -
- EMS Number: F-A,S-Q

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- Marine pollutant: No
- Propper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID (HYDROGEN PEROXIDE, STABILIZED)
  
- Air transport ICAO-TI and IATA-DGR:
- ICAO/IATA Class: 5.2
- UN/ID Number: 3105
- Label 5.2
- Packaging group: -
- Propper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID (HYDROGEN PEROXIDE, STABILIZED)

## \* 15 Regulations

- Sara
- Section 355 (extremely hazardous substances):  
7722-84-1 hydrogen peroxide solution
- Section 313 (Specific toxic chemical listings):  
131-11-3 dimethyl phthalate  
  
78-93-3 butanone
- 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.
- Cancerogenity categories
- EPA (Environmental Protection Agency)  
131-11-3 dimethyl phthalate: D  
  
78-93-3 butanone: D
- IARC (International Agency for Research on Cancer)  
7722-84-1 hydrogen peroxide solution: 3
- NTP (National Toxicology Program)  
None of the ingredients is listed.
- TLV (Threshold Limit Value established by ACGIH)  
7722-84-1 hydrogen peroxide solution: A3
- 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.
- Product related hazard informations: The product has been classified and marked in accordance with directives on hazardous materials.
- Hazard symbols: C Corrosive  
O Oxidizing
- Hazard-determining components of labelling: 2-Butanone, peroxide  
hydrogen peroxide solution
- Risk phrases: May cause fire.  
Harmful if swallowed.  
Causes burns.

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- Safety phrases:
  - Keep locked up and out of the reach of children.
  - Keep container tightly closed in a cool place
  - Keep away from acids, reducing agents and flammable materials
  - Do not breathe fumes
  - Avoid contact with skin and eyes.
  - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  - Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point
  - Wear suitable protective clothing, gloves and eye/face protection.
  - In case of accident or if you feel unwell, seek medical advice immediately.
  - Do not mix with ... .
  - Use only in well-ventilated areas.
- National regulations:
- Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

**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
- \* Data compared to the previous version altered.