

Printing date 05/07/2007

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1 Identification of substance

· Product details

- Trade name: **Crystal Clean**
- Article number: 40999
- Application of the substance / the preparation Cleaning agent/ Cleaner
- 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

2 Composition/Data on components

· Chemical characterization

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


· Dangerous components:

	anionische Tenside	Xi; R 36/38	1-5 %
CAS: 67-63-0 EINECS: 200-661-7 EU Number: 603-117-00-0	propan-2-ol	Xi, F; R 11-36-67	12.5-25%
CAS: 139-07-1 EINECS: 205-351-5	benzododecinium chloride	C, Xn, N; R 21/22-34-50	<1%

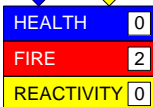
- Additional information: For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- Hazard description: Not applicable.
- Information pertaining to particular dangers for man and environment: Contact with skin and inhalation of aerosols/ vapours of the preparation should be avoided.
The product does not have 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.
- NFPA ratings (scale 0 - 4)



Health = 0
Fire = 2
Reactivity = 0
- HMIS-ratings (scale 0 - 4)



HEALTH 0 Health = 0
FIRE 2 Fire = 2
REACTIVITY 0 Reactivity = 0

4 First aid measures

- General information: Immediately remove any clothing soiled by the product.
Take affected persons out into the fresh air.
Keep warm, position comfortably and cover well.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
If skin irritation continues, consult a doctor.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Do not induce vomiting; immediately call for medical help.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.

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- **Information for doctor:** Symptoms in alcohol intoxication:
 a) acute intoxication: euphoria, inhibitions, disturbances in co-ordination; in severe cases insensibility, respiratory dysfunction.
 b) chronic intoxication: CNS-, hepatic and cardiac dysfunctions with change of personality, alcohol induced hepatitis and reduced cardiac power.
 Therapy in alcohol intoxication:
 In acute intoxication observation of circulatory system, artificial breathing when indicated, gastrolavage, peritoneal or hemodialysis.
- **The following symptoms may occur:** Breathing difficulty
 Headache
 Dizziness
 Dizziness
 Nausea
- **Danger** Danger of impaired breathing.
- **Treatment** If swallowed, gastric irrigation with added, activated carbon.

5 Fire fighting measures

- **Suitable extinguishing agents:** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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)
 Nitrogen oxides (NO_x)
 Hydrogen chloride (HCl)
 In certain fire conditions, traces of other toxic gases cannot be excluded.
- **Protective equipment:** Do not inhale explosion gases or combustion gases.
 Mount respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
 Keep away from ignition sources
 Use respiratory protective device against the effects of fumes/dust/aerosol.
 Particular danger of slipping on leaked/spilled product.
- **Measures for environmental protection:** Do not allow product to reach sewage system or any water course.
 Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Dilute with plenty water.
 Ensure adequate ventilation.
- **Additional information:** 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:**
- **Information for safe handling:** Keep receptacles tightly sealed.
 Store in cool, dry place in tightly closed receptacles.
 Ensure good ventilation/exhaustion at the workplace.
 Keep away from heat and direct sunlight.

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- Information about protection against explosions and fires:

Prevent formation of aerosols.
When diluting, always stir the product into standing water, not water to product.
- Storage:**

Requirements to be met by storerooms and receptacles:

Keep ignition sources away - Do not smoke.
Protect from heat.

Store in a cool location.
Store only in the original receptacle.
Prevent any seepage into the ground.
- Information about storage in one common storage facility:

Do not store together with acids.
Store away from oxidizing agents.
Store away from foodstuffs.
- Further information about storage conditions:

Protect from frost.
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
Store receptacle in a well ventilated area.

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:**67-63-0 propan-2-ol**

PEL	980 mg/m ³ , 400 ppm
REL	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm
BEI	

- Additional information: The lists that were valid during the creation were used as basis.
- Personal protective equipment:**

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.
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 skin.
Avoid contact with the eyes.
Do not eat, drink, smoke or sniff while working.
Apply water proof skin cream before beginning work.
Not required.
- Breathing equipment:
- Protection of hands:

**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
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
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

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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>).

- Material of gloves Nitrile rubber, NBR
Butyl rubber, BR
Fluorocarbon rubber (Viton)
- Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Value for the permeation: Level \geq 6, 480 min
- For the permanent contact gloves made of the following materials are suitable: Camatril (KCL, Art No. 730, 731, 732, 733)
Butoject (KCL, Art No. 897, 898)
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)
- Not suitable are gloves made of the following materials: Leather gloves
Strong gloves
Natural rubber, NR
- Eye protection: Goggles recommended during refilling.
- Body protection: Protective work clothing

9 Physical and chemical properties

· General Information

Form:	Fluid
Color:	Colorless
Odor:	Characteristic

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	82°C (180°F)

· **Flash point:** > 55°C (> 131°F)

· **Ignition temperature:** 425°C (797°F)

· **Auto igniting:** Product is not selfigniting.

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

· Explosion limits:

Lower:	2.0 Vol %
Upper:	12.0 Vol %

· **Vapor pressure at 20°C (68°F):** 43 hPa (32 mm Hg)

· **Density at 20°C (68°F):** 0.982 g/cm³

· Solubility in / Miscibility with

Water:	Fully miscible.
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· **pH-value at 20°C (68°F):** 7.5· **Solvent content:**

Organic solvents: 14.3 %

10 Stability and reactivity· **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

No decomposition if used and stored according to specifications.

· **Dangerous reactions**

Reacts with strong acids.

· **Dangerous products of decomposition:**

No dangerous decomposition products known.

11 Toxicological information· **Acute toxicity:**

· LD/LC50 values that are relevant for classification:

67-63-0 propan-2-ol

Oral LD50 4570 mg/kg (rat)

Dermal LD50 13400 mg/kg (rabbit)

Inhalative LC50/4 h 30 mg/l (rat)

69227-20-9 Fettalkoholethoxylat

Oral LD50 >2000 mg/kg (rat)

139-07-1 benzododecinium chloride

Oral LD50 240 mg/kg (rat)

LC50/48h < 1 mg/l (daphnia magna)

5064-31-3 trisodium nitrilotriacetate

Oral LD50 3900 mg/kg (rat)

32210-23-4 4-tert-butylcyclohexyl acetate

Oral LD50 5000 mg/kg (rat)

106-22-9 Citronellool

Oral LD50 3450 mg/kg (rat)

Dermal LD50 2650 mg/kg (rbt)

· **Primary irritant effect:**

· on the skin:

No irritant effect.

· on the eye:

No irritating effect.

· Sensitization:

No sensitizing effects known.

· **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information· **Ecotoxic effects:**· **Acquatic toxicity:****67-63-0 propan-2-ol**

EC50/15min 22000 mg/l (Photobac. phosphoreum)

EC50/48h 13299 mg/l (daphnia magna)

IC50/72h > 1000 mg/l (Desmodesmus suspicatus)

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LC50/96h | 9640 mg/l (Pimephales promelas)

139-07-1 benzododecinium chloride

LC50/96h | 1-10 mg/l (Leuciscus idus)

5064-31-3 trisodium nitrilotriacetate

EC50/48h | >100 mg/l (literature)

EC50/72h | >100 mg/l (green alga)

LC50/96h | > 500 mg/l (Leuciscus idus)

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

13 Disposal considerations

- **Product:**
- **Recommendation:** Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.
- **Uncleaned packagings:**
- **Recommendation:** Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information· **DOT regulations:**

- **Hazard class:** -
- **Label:** -

· **Land transport ADR/RID (cross-border):**

- **ADR/RID class:** -

· **Maritime transport IMDG:**

- **IMDG Class:** -
- **Marine pollutant:** No

· **Air transport ICAO-TI and IATA-DGR:**

- **ICAO/IATA Class:** -

15 Regulations· **Sara**· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

67-63-0 | propan-2-ol

· **TSCA (Toxic Substances Control Act):**

7732-18-5 | water, distilled, conductivity or of similarpurity

67-63-0 | propan-2-ol

139-07-1 | benzododecinium chloride

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· 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.

· IARC (International Agency for Research on Cancer)

67-63-0 | propan-2-ol

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· NTP (National Toxicology Program)

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.

· **Product related hazard informations:**

Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations according to directives on hazardous materials.

· Safety phrases:

Keep out of the reach of children.
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.
Take off immediately all contaminated clothing.
Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point
If swallowed, seek medical advice immediately and show this container or label.
Use only in well-ventilated areas.

· **National regulations:**· Water hazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

· VOC USA

140.9 g/l / 1.18 lb/gl

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.**