

1 Identification

· Product identifier

· Trade name: **Ceramics Intensive Cleaner**

· Article number: 11920, 11921

· Application of the substance / the mixture Cleaning agent/ Cleaner

· 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. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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



Corrosive

Causes burns.

· 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).

· Hazard pictograms



GHS05 GHS07

· Signal word

Danger

· Hazard-determining components of labeling:

sulfonic acid, C 13-17 sec-alkane- disodiumsalt
disodium metasilicate
2-butoxyethanol
potassium hydroxide

· Hazard statements

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2015

Reviewed on 11/04/2015

Trade name: Ceramics Intensive Cleaner (Contd. of page 1)

- Precautionary statements
 - P260 Do not breathe dusts or mists.
 - P280 Wear eye protection / face protection.
 - P264 Wash thoroughly after handling.
 - P270 Do not eat, drink or smoke when using this product.
 - P303+P361+P353 If on skin (or hair): 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.
 - P310 Immediately call a POISON CENTER/doctor.
 - P321 Specific treatment (see on this label).
 - P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 - P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 - P363 Wash contaminated clothing before reuse.
 - P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
 - P405 Store locked up.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
- NFPA ratings (scale 0 - 4)



- HMS-ratings (scale 0 - 4)



- **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:

	anionic surfactants ☒ Xn R22; ☒ Xi R38-41 ☠ Acute Tox. 3, H301 ☠ Eye Dam. 1, H318 ☠ Skin Irrit. 2, H315	<12,5%
CAS: 111-76-2 EINECS: 203-905-0 Index number: 603-014-00-0	2-butoxyethanol ☒ Xn R20/21/22; ☒ Xi R36/38 ☠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319 Flam. Liq. 4, H227	1-5%
CAS: 6834-92-0 EINECS: 229-912-9 Index number: 014-010-00-8	disodium metasilicate ☠ C R34; ☒ Xi R37 ☠ Skin Corr. 1B, H314 ☠ STOT SE 3, H335	1-5%
CAS: 1310-58-3 EINECS: 215-181-3 Index number: 019-002-00-8	potassium hydroxide ☠ C R35; ☒ Xn R22 ☠ Met. Corr.1, H290; Skin Corr. 1A, H314 ☠ Acute Tox. 4, H302	1-5%

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2015

Reviewed on 11/04/2015

Trade name: Ceramics Intensive Cleaner

(Contd. of page 2)

· 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.
- After inhalation: Supply fresh air.
In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: 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: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- Protective equipment: Do not inhale explosion gases or combustion gases.
Mount respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Particular danger of slipping on leaked/spilled product.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** 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 Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.

(Contd. on page 4)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2015

Reviewed on 11/04/2015

Trade name: Ceramics Intensive Cleaner

(Contd. of page 3)

- 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: Provide acid-resistant floor.
- Information about storage in one common storage facility: Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.
- Further information about storage conditions: Protect from frost.
Keep receptacle tightly sealed.
- Storage class: 8 B
- **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.
- **Control parameters**

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

111-76-2 2-butoxyethanol

PEL	Long-term value: 240 mg/m ³ , 50 ppm Skin
REL	Long-term value: 24 mg/m ³ , 5 ppm Skin
TLV	Long-term value: 97 mg/m ³ , 20 ppm BEI

1310-58-3 potassium hydroxide

REL	Ceiling limit value: 2 mg/m ³
TLV	Ceiling limit value: 2 mg/m ³

- Ingredients with biological limit values:

111-76-2 2-butoxyethanol

BEI	200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid with hydrolysis
-----	--

- 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.
Avoid contact with the eyes and skin.

- Breathing equipment:

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.
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

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2015

Reviewed on 11/04/2015

Trade name: Ceramics Intensive Cleaner

(Contd. of page 4)

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. 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:

Fluorocarbon rubber (Viton)
Vitoject (KCL, Art_No. 890)
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)
Butoject (KCL, Art_No. 897, 898)
Butyl rubber, BR

· 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:

Blue

· Odor:

Ammonia-like

· Odour threshold:

Not determined.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2015

Reviewed on 11/04/2015

Trade name: Ceramics Intensive Cleaner

(Contd. of page 5)

· pH-value at 20 °C (68 °F):	<13
· <u>Change in condition</u>	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	> 999 °C (> 1830 °F)
· <u>Flash point:</u>	Not applicable.
· <u>Flammability (solid, gaseous):</u>	Not applicable.
· <u>Ignition temperature:</u>	
Decomposition temperature:	Not determined.
· <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:	Not determined.
Upper:	Not determined.
· <u>Vapor pressure:</u>	Not determined.
· <u>Density at 20 °C (68 °F):</u>	1.06 g/cm ³ (8.846 lbs/gal)
· <u>Specific gravity:</u>	Not determined.
· <u>Relative density</u>	Not determined.
· <u>Vapour density</u>	Not determined.
· <u>Evaporation rate</u>	Not determined.
· <u>Solubility in / Miscibility with</u>	
Water:	Not miscible or difficult to mix.
· <u>Partition coefficient (n-octanol/water):</u>	Not determined.
· <u>Viscosity:</u>	
Dynamic:	Not determined. Not applicable
Kinematic:	Not determined. Not applicable
· <u>Solvent content:</u>	
Organic solvents:	3.4 %
Solids content:	85.8 %
· Other information	No further relevant information available.

* 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
 - Reacts with alkali and metals.
 - Reacts with strong oxidizing agents.
 - Reacts with metals forming hydrogen.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Irritant gases/vapors

(Contd. on page 7)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2015

Reviewed on 11/04/2015

Trade name: Ceramics Intensive Cleaner

(Contd. of page 6)

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

Oral	LD50	878 mg/kg
Dermal	LD50	11765 mg/kg (rabbit)
Inhalative	LC50/4 h	324 mg/l

1310-58-3 potassium hydroxide

Oral	LD50	365 mg/kg (rat)
------	------	-----------------

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:
Corrosive
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)

111-76-2	2-butoxyethanol	3
----------	-----------------	---

NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

Toxicity

Aquatic toxicity:

1310-58-3 potassium hydroxide

EC50/48h	40.4 mg/l (daphnia magna)
LC50/96h	45.4 mg/l (rainbow trout)

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:

Must not reach bodies of water or drainage ditch undiluted or unneutralized. Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous. Water hazard class 1 (Self-assessment): slightly hazardous for water

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2015

Reviewed on 11/04/2015

Trade name: Ceramics Intensive Cleaner

· **Other adverse effects** No further relevant information available. (Contd. of page 7)

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.

14 Transport information

UN-Number	UN1719
· DOT, ADR, IMDG, IATA	
UN proper shipping name	Caustic alkali liquids, n.o.s. (Potassium hydroxide)
· DOT	1719 Caustic alkali liquids, n.o.s. (Potassium hydroxide)
· ADR	CAUSTIC ALKALI LIQUID, N.O.S. (POTASSIUM HYDROXIDE)
· IMDG, IATA	
Transport hazard class(es)	
· DOT	
· Class	8 Corrosive substances
· Label	8
· ADR	
· Class	8 (C5) Corrosive substances
· Label	8
· IMDG, IATA	
· Class	8 Corrosive substances
· Label	8
Packing group	III
· DOT, ADR, IMDG, IATA	
Environmental hazards:	
· Marine pollutant:	No
Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Alkalis

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2015

Reviewed on 11/04/2015

Trade name: Ceramics Intensive Cleaner (Contd. of page 8)

<ul style="list-style-type: none"> · <u>Stowage Category</u> · <u>Segregation Code</u> 	<p>A</p> <p>SG22 Stow "away from" ammonium salts SG35 Stow "separated from" acids.</p>
<ul style="list-style-type: none"> · <u>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</u> 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · <u>Transport/Additional information:</u> · <u>DOT</u> · <u>Quantity limitations</u> · <u>Remarks:</u> 	<p>to handle similar to packing group II</p> <p>On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L</p> <p>to handle similar to packing group II</p>
<ul style="list-style-type: none"> · <u>ADR</u> · <u>Excepted quantities (EQ)</u> · <u>Remarks:</u> 	<p>Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml</p> <p>to handle similar to packing group II</p>
<ul style="list-style-type: none"> · <u>IMDG</u> · <u>Limited quantities (LQ)</u> · <u>Excepted quantities (EQ)</u> · <u>Remarks:</u> 	<p>5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml</p> <p>to handle similar to packing group II</p>
<ul style="list-style-type: none"> · <u>IATA</u> · <u>Remarks:</u> 	<p>to handle similar to packing group II</p>
<ul style="list-style-type: none"> · <u>UN "Model Regulation":</u> 	<p>UN 1719 CAUSTIC ALKALI LIQUIDS, N.O.S. (POTASSIUM HYDROXIDE), 8, III</p>

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):

111-76-2	2-butoxyethanol
----------	-----------------

1336-21-6	ammonia
-----------	---------

- TSCA (Toxic Substances Control Act):

111-76-2	2-butoxyethanol
----------	-----------------

6834-92-0	disodium metasilicate
-----------	-----------------------

1310-58-3	potassium hydroxide
-----------	---------------------

1336-21-6	ammonia
-----------	---------

- 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.

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2015

Reviewed on 11/04/2015

Trade name: Ceramics Intensive Cleaner

(Contd. of page 9)

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenicity categories

· EPA (Environmental Protection Agency)

111-76-2 | 2-butoxyethanol

NL

· TLV (Threshold Limit Value established by ACGIH)

111-76-2 | 2-butoxyethanol

A3

· MAK (German Maximum Workplace Concentration)

111-76-2 | 2-butoxyethanol

4

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

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:

sulfonic acid, C 13-17 sec-alkane- disodiumsalt
disodium metasilicate
2-butoxyethanol
potassium hydroxide

· Hazard statements

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

· Precautionary statements

P260 Do not breathe dusts or mists.
P280 Wear eye protection / face protection.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P303+P361+P353 If on skin (or hair): 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.
P310 Immediately call a POISON CENTER/doctor.
P321 Specific treatment (see on this label).
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P363 Wash contaminated clothing before reuse.
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
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.

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

· VOC USA 36.0 g/l / 0.30 lb/gl

(Contd. on page 11)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2015

Reviewed on 11/04/2015

Trade name: Ceramics Intensive Cleaner

(Contd. of page 10)

· **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 SDS:** Laboratory

· **Contact:** Dieter Zimmermann

· **Date of preparation / last revision** 11/04/2015 / 2

· **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 Organisation
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (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
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Flam. Liq. 4: Flammable liquids, Hazard Category 4
 Met. Corr. 1: Corrosive to metals, Hazard Category 1
 Acute Tox. 3: Acute toxicity, Hazard Category 3
 Acute Tox. 4: Acute toxicity, Hazard Category 4
 Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
 Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
 Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

US