

Safety Data Sheet

acc. to OSHA HCS

Printing date 03/05/2015

Reviewed on 03/05/2015

1 Identification

· Product identifier

· Trade name: **Akelux Cleaner**

· Article number: 62014
 · CAS Number: 64-17-5
 · EC number: 200-578-6
 · Index number: 603-002-00-5

· Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

· 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



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.

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



Highly flammable

Highly flammable.

· Label elements

· GHS label elements

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

· Hazard pictograms



GHS02

· Signal word

Danger

· Hazard statements

H225 Highly flammable liquid and vapor.

· 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.
 P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P243 Take precautionary measures against static discharge.
 P280 Wear protective gloves / eye protection.
 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.

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P337+P313
P403+P235
P501

IF exposed or concerned: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/
regional/national/international regulations.

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



Health = 0
Fire = 3
Reactivity = 0

- HMIS-ratings (scale 0 - 4)



Health = 0
Fire = 3
Reactivity = 0

- **Other hazards**

- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

* 3 Composition/information on ingredients

- **Chemical characterization: Substances**

- CAS No. Description 64-17-5 ethanol
- Identification number(s)
- EC number: 200-578-6
- Index number: 603-002-00-5
- Description: Cleansing agent

- **Dangerous components:**

CAS: 78-93-3 EINECS: 201-159-0 Index number: 606-002-00-3	butanone	Xi R36; F R11 R66-67 Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336	<1%
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4 First-aid measures

- **Description of first aid measures**

- General information: Take affected persons out into the fresh air.
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. Then consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed** Breathing difficulty
Headache
Dizziness
Dizziness
Nausea
- 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.

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- 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: CO2, 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 arising from the substance or mixture** In case of fire, the following can be released:
Carbon monoxide (CO)
- **Advice for firefighters**
- Protective equipment: Do not inhale explosion gases or combustion gases.
Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation
Keep away from ignition sources
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow product to reach sewage system or any water course.
Prevent seepage into sewage system, workpits and cellars.
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).
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

- **Precautions for safe handling** Keep receptacles tightly sealed.
Store in cool, dry place in tightly closed receptacles.
Keep away from heat and direct sunlight.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Ensure good ventilation/exhaustion at the workplace.
- Information about protection against explosions and fires: Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- Storage:
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
Store in a cool location.

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- Information about storage in one common storage facility: Store away from foodstuffs.
- Further information about storage conditions:
 - Protect from frost.
 - Store receptacle in a well ventilated area.
 - Keep receptacle tightly sealed.
 - Store in cool, dry conditions in well sealed receptacles.
- **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:

64-17-5 ethanol

PEL	Long-term value: 1900 mg/m ³ , 1000 ppm
REL	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV	Short-term value: 1880 mg/m ³ , 1000 ppm

78-93-3 butanone

PEL	Long-term value: 590 mg/m ³ , 200 ppm
REL	Short-term value: 885 mg/m ³ , 300 ppm Long-term value: 590 mg/m ³ , 200 ppm
TLV	Short-term value: 885 mg/m ³ , 300 ppm Long-term value: 590 mg/m ³ , 200 ppm
BEI	

- Ingredients with biological limit values:

78-93-3 butanone

BEI	2 mg/L Medium: urine Time: end of shift Parameter: MEK
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- 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.
 Use skin protection cream for skin protection.
 Do not eat, drink, smoke or sniff while working.
 Apply solvent resistant skin cream before beginning work.
 Clean skin thoroughly immediately after handling the product.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Do not inhale gases / fumes / aerosols.
 Use suitable respiratory protective device when high concentrations are present.
 Short term filter device:
 Filter AX

- 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.

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After use of gloves apply skin-cleaning agents and skin cosmetics.

**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

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.75 mm

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.

- For the permanent contact gloves made of the following materials are suitable:

Nitrile rubber, NBR

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

Nitrile rubber, NBR

- Not suitable are gloves made of the following materials:

Natural rubber, NR

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:

Alcohol-like

- pH-value:

Not determined.

- Change in condition

- Melting point/Melting range:

-114.5 °C (-174 °F)

- Boiling point/Boiling range:

78 °C (172 °F)

- Flash point:

12 °C (54 °F)

- Ignition temperature:

425 °C (797 °F)

- Danger of explosion:

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- Explosion limits:

- Lower:

3.5 Vol %

- Upper:

15 Vol %

- Vapor pressure at 20 °C (68 °F):

59 hPa (44 mm Hg)

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· Density at 20 °C (68 °F):	0.79 g/cm ³ (6.593 lbs/gal)
· Specific gravity at 20 °C (68 °F):	0.79 g/cm ³ (6.593 lbs/gal)
· Solubility in / Miscibility with Water at 20 °C (68 °F):	1 g/l
· Viscosity:	
Dynamic:	Not determined.
Kinematic at 20 °C (68 °F):	8 s (DIN 53211/4)
· Solvent separation test	< 3 %
· Organic solvents:	99.9 %
· Solids content:	0.1 %
· Other information	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.
Violent reaction with concentrated alkali and oxidizing agents.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide
Aldehyde

11 Toxicological information

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

· LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	412500 mg/kg (rat)
Dermal	LD50	2012 mg/kg
Inhalative	LC50/4 h	113 mg/l (rat)

64-17-5 ethanol

Oral	LD50	10470 mg/kg (rat) (OECD 401)
Dermal	LD50	>2000 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4 h	117-125 mg/l (rat) (OECD 401)
	NOAEL-Werte	>3000 mg/m ³ (rat) (OECD 451)
	LC50/48h	12340 mg/l (daphnia magna)
		8150 mg/l (Leuciscus idus)

- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

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· Additional toxicological information:

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

64-17-5 ethanol

1

· NTP (National Toxicology Program)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

12 Ecological information

· **Toxicity**

· Aquatic toxicity:

64-17-5 ethanol

EC0	6500 mg/l (pseudomonas putida) 5000 mg/l (scenedesmus quadricauda)
EC50/48h	9268-14221 mg/l (daphnia magna) 12900 mg/l (Selenastrum capricornutum) (OECD 201)
EC50/72h	275 mg/l (CHV) (OECD 201)
LC50/24h	11200 mg/l (Salmo gairdneri)
LC50/96h	13000 mg/l (Oncorhynchus mykiss) (OECD 203) 15300 mg/l (pimephales promelas)

· **Persistence and degradability**

No further relevant information available.

· **Bioaccumulative potential**

No further relevant information available.

· **Mobility in soil**

No further relevant information available.

· Additional ecological information:

· 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 (Assessment by list): slightly 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:

Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· DOT, ADR, IMDG, IATA

UN1170

· **UN proper shipping name**

· DOT

Ethanol solutions

· ADR

1170 Ethanol solutions (Ethyl alcohol solutions)

· IMDG

ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

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· <u>IATA</u>	ETHANOL SOLUTION
· Transport hazard class(es)	
· <u>DOT</u>	
	
· <u>Class</u>	3 Flammable liquids
· <u>Label</u>	3
· <u>ADR</u>	
	
· <u>Class</u>	3 (F1) Flammable liquids
· <u>Label</u>	3
· <u>IMDG, IATA</u>	
	
· <u>Class</u>	3 Flammable liquids
· <u>Label</u>	3
· Packing group	
· <u>DOT, ADR, IMDG, IATA</u>	II
· Environmental hazards:	
· <u>Marine pollutant:</u>	No
· Special precautions for user	Warning: Flammable liquids
· <u>Danger code (Kemler):</u>	33
· <u>EMS Number:</u>	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· <u>Transport/Additional information:</u>	
· <u>DOT</u>	
· <u>Quantity limitations</u>	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· <u>ADR</u>	
· <u>Excepted quantities (EQ)</u>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <u>IMDG</u>	
· <u>Limited quantities (LQ)</u>	1L
· <u>Excepted quantities (EQ)</u>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <u>UN "Model Regulation":</u>	UN1170, Ethanol solutions (Ethyl alcohol solutions), 3, II

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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):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

78-93-3 butanone

· TSCA (Toxic Substances Control Act):

Substance is listed.

· Proposition 65

· Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

64-17-5 ethanol

· Carcinogenity categories

· EPA (Environmental Protection Agency)

78-93-3 butanone I

· TLV (Threshold Limit Value established by ACGIH)

64-17-5 ethanol A3

· MAK (German Maximum Workplace Concentration)

64-17-5 ethanol 5

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

Substance is not listed.

· GHS label elements

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

· Hazard pictograms



GHS02

· Signal word

Danger

· Hazard statements

H225 Highly flammable liquid and vapor.

· 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.
- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P243 Take precautionary measures against static discharge.
- P280 Wear protective gloves / eye protection.
- 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.

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P308+P313

IF exposed or concerned: Get medical advice/attention.

P337+P313

If eye irritation persists: Get medical advice/attention.

P403+P235

Store in a well-ventilated place. Keep cool.

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

· National regulations:· Water hazard class:

Water hazard class 1 (Assessment by list): slightly hazardous for water.

· VOC USA

789.2 g/l / 6.59 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 SDS:

Laboratory

· Contact:

Dieter Zimmermann

Elke Hake

Fon ++49 (0)911 64296-59

@mail E.Hake@akemi.de

· Date of preparation / last revision

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· 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

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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