

Printing date 01/07/2008

Reviewed on 01/07/2008

1 Identification of substance
Product details

- **Trade name:** **Akelux Cleaner**
- **Article number:** 62014
- **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
Dieter Zimmermann
@mail_D.Zimmermann@akemi.de
- **Emergency information:** 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 Composition/Data on components

- **Chemical characterization:**
- **CAS No. Description** 64-17-5 ethanol
- **Identification number(s)**
- **EINECS Number:** 200-578-6
- **EU Number:** 603-002-00-5
- **Chemical characterization**
- **Description:** Cleansing agent

Dangerous components:

CAS: 78-93-3	butanone	Xi, F; R 11-36-66-67	<1%
EINECS: 201-159-0		Danger: 2.6/2	
EU Number: 606-002-00-3		Warning: 3.3/2A, 3.8/3	

3 Hazards identification
Hazard description:


F Highly flammable

Information pertaining to particular dangers for man and environment:

Highly flammable.

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 = 3
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 3
Reactivity = 0
GHS label elements


Danger

Prevention:

2.6/2 - Highly flammable liquid and vapour.
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting/ equipment.

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- Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.
Rinse skin with water/shower.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- Response:
 - Storage:
 - Disposal:

4 First aid measures

- General Information: Immediately remove any clothing soiled by the product.
Take affected persons out into the fresh air.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
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: Do not induce vomiting; immediately call for medical help.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- 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.
- For safety reasons unsuitable extinguishing agents: Water
- Special hazards caused by the material, its products of combustion or resulting gases: Can form explosive gas-air mixtures.
In case of fire, the following can be released:
Carbon monoxide (CO)
Do not inhale explosion gases or combustion gases.
Wear self-contained respiratory protective device.
- Protective equipment:

6 Accidental release measures

- Person-related safety precautions: Wear protective equipment. Keep unprotected persons away.
Remove persons from danger area.
Ensure adequate ventilation
Keep away from ignition sources

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Measures for environmental protection:

Use respiratory protective device against the effects of fumes/dust/aerosol.
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.
Dilute with plenty of water.
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).

Additional information:

Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
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.
Prevent formation of aerosols.
Keep away from heat and direct sunlight.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Protect from heat.
Prevent impact and friction.

Storage:

Requirements to be met by storerooms and receptacles:

Store in a cool location.
Store only in the original receptacle.

Information about storage in one common storage facility:

Do not store together with acids.
Do not store together with oxidizing and acidic materials as well as heavy-metal compounds.
Store away from foodstuffs.

Further information about storage conditions:

Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from frost.
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:

64-17-5 ethanol

PEL	1900 mg/m ³ , 1000 ppm
REL	1900 mg/m ³ , 1000 ppm
TLV	1880 mg/m ³ , 1000 ppm

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78-93-3 butanone

PEL	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	

- 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.
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Do not inhale gases / fumes / aerosols.
 - Avoid close or long term contact with the skin.
 - Avoid contact with the eyes.
 - 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.
- Breathing equipment: Use suitable respiratory protective device when high concentrations are present.
Short term filter device:
Filter AX
- 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.
- Material of gloves Nitrile rubber, NBR
- Penetration time of glove material Recommended thickness of the material: ≥ 0.75 mm
- For the permanent contact gloves made of the following materials are suitable: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- As protection from splashes gloves made of the following materials are suitable: Nitrile rubber, NBR
- Not suitable are gloves made of the following materials: Nitrile rubber, NBR
- Eye protection: Natural rubber, NR
Leather gloves
Strong gloves
- Body protection:  Tightly sealed goggles
Protective work clothing

9 Physical and chemical properties

General Information

Form: Fluid

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Color:	Colorless
Odor:	Alcohol-like
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	78°C (172°F)
Flash point:	12°C (54°F)
Ignition temperature:	400°C (752°F)
Auto igniting:	Product is not selfigniting.
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)
Density at 20°C (68°F):	0.79 g/cm ³
Solubility in / Miscibility with	
Water at 20°C (68°F):	1 g/l
Viscosity:	
Kinematic at 20°C (68°F):	8 s (DIN 53211/4)
Solvent separation test	< 3 %
Organic solvents:	100 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** Strong exothermic reaction with acids.
Violent reaction with concentrated alkali and oxidizing agents.
- **Dangerous products of decomposition:** Carbon monoxide and carbon dioxide
Aldehyde

11 Toxicological Information· **Acute toxicity:**

· LD/LC50 values that are relevant for classification:

64-17-5 ethanol

Oral	LD50	7060 mg/kg (rat)
Inhalative	LC50/4 h	20000 mg/l (rat)

78-93-3 butanone

Oral	LD50	3300 mg/kg (rat)
Dermal	LD50	5000 mg/kg (rbt)

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

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12 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

13 Disposal considerations

- **Product:**
- **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information· **DOT regulations:**

- **Hazard class:** 3
- **Identification number:** UN1170
- **Packing group:** II
- **Proper shipping name (technical name):** ETHANOL
- **Label:** 3

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

- **ADR/RID class:** 3 (F1) Flammable liquids
- **Danger code (Kemler):** 33
- **UN-Number:** 1170
- **Packaging group:** II
- **Description of goods:** 1170 ETHANOL (ETHYL ALCOHOL)

· **Maritime transport IMDG:**

- **IMDG Class:** 3
- **UN Number:** 1170
- **Label:** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-E
- **Marine pollutant:** No
- **Propper shipping name:** ETHANOL (ETHYL ALCOHOL)

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



· ICAO/IATA Class: 3
 · UN/ID Number: 1170
 · Label: 3
 · Packaging group: II
 · Proper shipping name: ETHANOL

· **UN "Model Regulation":**

UN1170; ETHANOL (ETHYL ALCOHOL); 3; II

* **15 Regulations**

· Sara

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

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

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· **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

· **Carcinogen categories**

· **EPA (Environmental Protection Agency)**

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D

· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

A4

· **MAK (German Maximum Workplace Concentration)**

5

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

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

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Hazard symbols:

F Highly flammable

Risk phrases:

Highly flammable.

Safety phrases:

Keep out of the reach of children.
 Keep container in a well-ventilated place.
 Keep away from sources of ignition - No smoking.
 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.
 After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.
 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point
 Take precautionary measures against static discharges.
 Wear suitable protective clothing, gloves and eye/face protection.
 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 (Assessment by list): slightly hazardous for water.

VOC USA

789.2 g/l / 6.59 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:

Dr. Christian Schelle
 Fon ++49 (0)911 64296-59
 @mail C.Schelle@akemi.de

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Règlement internationale concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organization
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMS: Hazardous Materials Identification System (USA)
 GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent

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