

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.02.2019

Version number 3

Revision: 18.02.2019

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Trade name:	<b>Cleaner A</b>
Article number:	45011, 45012, 45013, 45018
CAS Number:	67-64-1
EC number:	200-662-2
Index number:	606-001-00-8
Registration number	01-2119471330-49

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

### Application of the substance / the mixture

Solvents  
Cleaning material/ Detergent

### 1.3 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
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### Further information obtainable from:

Laboratory

### 1.4 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.  
+44 (171) 635 91 91  
National Poison Inform. Centre  
Medical Toxicology Unit  
Avalonley Road  
London SE14 5ER

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008



GHS02 flame

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



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

### 2.2 Label elements

#### Labelling according to Regulation (EC) No 1272/2008

#### Hazard pictograms

The substance is classified and labelled according to the CLP regulation.



GHS02 GHS07

#### Signal word

Danger

#### Hazard-determining components of labelling:

acetone

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- Hazard statements H225 Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.
- 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, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P243 Take action to prevent static discharges.
  - P261 Avoid breathing mist/vapours/spray.
  - P280 Wear protective gloves / eye protection.
  - P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.
  - P337+P313 If eye irritation persists: Get medical advice/attention.
  - P403+P233 Store in a well-ventilated place. Keep container tightly closed.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- Additional information: EUH066 Repeated exposure may cause skin dryness or cracking.
- **2.3 Other hazards**
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

### \* SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- CAS No. Description 67-64-1 acetone
- Identification number(s)
- EC number: 200-662-2
- Index number: 606-001-00-8

### \* SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- General information: Take affected persons out into the fresh air.  
Position and transport stably in side position.  
Immediately remove any clothing soiled by the product.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: If skin irritation continues, consult a doctor.  
Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Rinse out mouth and then drink plenty of water.
- **4.2 Most important symptoms and effects, both acute and delayed**
  - Headache
  - Dizziness
  - Dizziness
  - Nausea
- Information for doctor: Symptoms in intoxication with (aromatic) hydrocarbons (dosis letalis about 30 g)  
a) In acute intoxication: headache, dizziness, euphoria, gastro-intestinal dysfunction, state of excitement, coma.  
b) In chronic intoxication: myelotoxic damage, fatigue, dizziness, emaciation, cardiac palpitation after physical exercise, leucopenia, anemia, leukosis.

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· Hazards

Therapy in hydrocarbons intoxication: In case of inhalation provision of fresh air; in case of peroral intake administration of Carbo medicinalis; only after intubation conduct of gastrolavage in application of Carbo medicinalis; in case of cramps administration of Diazepam 20 mg intravenously.

Danger of impaired breathing.

Danger of disturbed cardiac rhythm.

· **4.3 Indication of any immediate medical attention and special treatment needed**

If swallowed, gastric irrigation with added, activated carbon.

If swallowed or in case of vomiting, danger of entering the lungs.

\* **SECTION 5: Firefighting measures**

· **5.1 Extinguishing media**

· Suitable extinguishing agents:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **5.2 Special hazards arising from the substance or mixture**

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)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

· **5.3 Advice for firefighters**

· Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Do not inhale explosion gases or combustion gases.

· Additional information

Cool endangered receptacles with water spray.

\* **SECTION 6: Accidental release measures**

· **6.1 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.

· **6.2 Environmental precautions:**

Do not allow to penetrate the ground/soil.

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.

· **6.3 Methods and material for containment and cleaning up:**

Dispose of the material collected according to regulations.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

· **6.4 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.

\* **SECTION 7: Handling and storage**

· **7.1 Precautions for safe handling**

Keep receptacles tightly sealed.

Store in cool, dry place in tightly closed receptacles.

Keep away from heat and direct sunlight.

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· Information about fire - and explosion protection:

Use only in well ventilated areas.  
 Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).  
 Ensure good ventilation/exhaustion at the workplace.  
 Prevent formation of aerosols.

Use explosion-proof apparatus / fittings and spark-proof tools.  
 Fumes can combine with air to form an explosive mixture.  
 Keep ignition sources away - Do not smoke.  
 Protect against electrostatic charges.

· **7.2 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.

· Information about storage in one common storage facility:

Store away from oxidising agents.  
 Store away from reducing agents.  
 Store away from foodstuffs.

· Further information about storage conditions:

Store receptacle in a well ventilated area.  
 Keep container tightly sealed.  
 Store in cool, dry conditions in well sealed receptacles.  
 No further relevant information available.

· **7.3 Specific end use(s)**

**SECTION 8: Exposure controls/personal protection**

· Additional information about design of technical facilities:

No further data; see item 7.

· **8.1 Control parameters**

· Ingredients with limit values that require monitoring at the workplace:

**67-64-1 acetone**

WEL Short-term value: 3620 mg/m<sup>3</sup>, 1500 ppm  
 Long-term value: 1210 mg/m<sup>3</sup>, 500 ppm

· DNELs

**67-64-1 acetone**

Oral	DNEL (Langzeit-wiederholt)	62 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	186 mg/kg bw/day (ARB)
		62 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	2,420 mg/m <sup>3</sup> Air (ARB)
	DNEL (Langzeit-wiederholt)	1,210 mg/m <sup>3</sup> Air (ARB)
		200 mg/m <sup>3</sup> Air (BEV)

· PNECs

**67-64-1 acetone**

PNEC (wässrig)	100 mg/l (KA)
	1.06 mg/l (MW)
	10.6 mg/l (SW)
	21 mg/l (WAS)
PNEC (fest)	29.5 mg/kg Trockengew (BO)
	3.04 mg/kg Trockengew (MWS)
	30.4 mg/kg Trockengew (SWS)

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· Additional information:

The lists valid during the making were used as basis.

· **8.2 Exposure controls**· Personal protective equipment:· General protective and hygienic measures:

Do not eat, drink, smoke or sniff while working.  
 Use skin protection cream for skin protection.  
 Clean skin thoroughly immediately after handling the product.  
 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.  
 Avoid contact with the eyes and skin.

· Respiratory protection:

Filter AX

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Use suitable respiratory protective device in case of insufficient ventilation.

· 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.

Skin protection agent recommendation for preventive skin shelter without use of protective gloves:

STOKODERM (<http://www.stoko.com>)

Skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:

STOKO EMULSION (<http://www.stoko.com>)

Skin protection recommendation for skin cleaning after product handling:

FRAPANTOL (<http://www.stoko.com>)

Skin protection agent recommendation for skin aftercare:

STOKO VITAN (<http://www.stoko.com>)

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 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.

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

Butyl rubber, BR

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 materialValue for the permeation: Level  $\leq 6$ , 480

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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- For the permanent contact gloves made of the following materials are suitable:  
Butyl rubber, BR  
Butoject (KCL, Art\_No. 897, 898)
- As protection from splashes gloves made of the following materials are suitable:  
Butyl rubber, BR  
Butoject (KCL, Art\_No. 897, 898)
- Not suitable are gloves made of the following materials:  
Fluorocarbon rubber (Viton)  
Nitrile rubber, NBR  
Leather gloves  
Strong material gloves
- Eye protection:  
 Tightly sealed goggles
- Body protection:  
Solvent resistant protective clothing

**SECTION 9: Physical and chemical properties****· 9.1 Information on basic physical and chemical properties****· General Information****· Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Fruit-like

· <u>pH-value:</u>	Not determined. Not applicable
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· <u>Change in condition</u>	
Melting point/freezing point:	94.7 °C
Initial boiling point and boiling range:	55 °C

· <u>Flash point:</u>	-19 °C
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· <u>Ignition temperature:</u>	465 °C
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· <u>Explosive properties:</u>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
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· <u>Explosion limits:</u>	
Lower:	2.6 Vol %
Upper:	13 Vol %

· <u>Vapour pressure at 20 °C:</u>	233 hPa
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· <u>Density at 20 °C:</u>	0.79 g/cm <sup>3</sup>
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· <u>Solubility in / Miscibility with water:</u>	Fully miscible.
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· <u>Viscosity:</u>	
Dynamic at 20 °C:	32 mPas
Kinematic:	Not determined.
Organic solvents:	100.0 %
· <b>9.2 Other information</b>	No further relevant information available.

**SECTION 10: Stability and reactivity**

· <b>10.1 Reactivity</b>	No further relevant information available.
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**10.2 Chemical stability**

Thermal decomposition /  
conditions to be avoided:

No decomposition if used and stored according to specifications.

**10.3 Possibility of hazardous reactions**

Reacts with strong oxidising agents.

Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.

**10.4 Conditions to avoid**

No further relevant information available.

**10.5 Incompatible materials:**

No further relevant information available.

**10.6 Hazardous decomposition products:**

No dangerous decomposition products known.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

**67-64-1 acetone**

Oral	LD50	5,800 mg/kg (rat) (OECD 401)
	NOEL	900 mg/kg (rat)
	NOAEL-Werte	22,500 mg/kg (rat)
Dermal	LD50	15,688 mg/kg (rat)
		>15,800 mg/kg (rbt)
Inhalative	LC50/4 h	76 mg/l (rat)
	LC50/48h	2,262 mg/l (daphnia magna)

Primary irritant effect:

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

May cause drowsiness or dizziness.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information****12.1 Toxicity**

Aquatic toxicity:

**67-64-1 acetone**

EC50/96h	8,300 mg/l (piscis)
	8,300 mg/l (lepomis macrochirus)
	7,500 mg/l (selenastrum capricornutum)
EC50	1,700 mg/l (bacteria)
LC50	6,368 mg/l (piscis)
EC5/16h	1,700 mg/l (pseudomonas putida)
EC5/72h	28 mg/l (Entosiphon sulcatum)
EC5/8d	530 mg/l (Microcystis aeruginosa)
IC5/8d	7,500 mg/l (Scenedesmus quadricauda)

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EC50/48h	3,400 mg/l (green alge)
	8,800 mg/l (daphnia magna)
NOEC	1,700 mg/kg (pseudomonas putida)
	4,740 mg/kg (selenastrum capricornutum)
NOELR/28d	2,212 mg/l (daphnia magna)
EC50/48h	12,600 mg/l (Danio rerio.)
	6,100 mg/l (daphnia magna)
LC50/96h	8,300 mg/l (lem)
	8,300 mg/l (lepomis macrochirus)
	7,500 mg/l (Leuciscus idus)
	5,540 mg/l (Oncorhynchus mykiss)
	8,120 mg/l (Pimephales promelas)

• **12.2 Persistence and degradability**

No further relevant information available.

• **12.3 Bioaccumulative potential**

No further relevant information available.

• **12.4 Mobility in soil**

No further relevant information available.

• **Additional ecological information:**

• **General notes:**

Do not allow product to reach ground water, water course or sewage system.  
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

• **12.5 Results of PBT and vPvB assessment**

• **PBT:**

Not applicable.

• **vPvB:**

Not applicable.

• **12.6 Other adverse effects**

No further relevant information available.

### SECTION 13: Disposal considerations

• **13.1 Waste treatment methods**

• **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

• **European waste catalogue**

20 00 00	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01 00	separately collected fractions (except 15 01)
20 01 13*	solvents

• **Uncleaned packaging:**

• **Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

• **Recommended cleansing agents:**

Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

• **14.1 UN-Number**

• **ADR, IMDG, IATA**

UN1090

• **14.2 UN proper shipping name**

• **ADR**

1090 ACETONE

• **IMDG, IATA**

ACETONE

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**14.3 Transport hazard class(es)**

· ADR



· Class 3 (F1) Flammable liquids.  
 · Label 3

· IMDG, IATA



· Class 3 Flammable liquids.  
 · Label 3

**14.4 Packing group**

· ADR, IMDG, IATA II

**14.5 Environmental hazards:**

· Marine pollutant: No

**14.6 Special precautions for user**

Warning: Flammable liquids.  
 · Danger code (Kemler): 33  
 · EMS Number: F-E,S-D  
 · Stowage Category E

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· Transport/Additional information:

· ADR  
 · Limited quantities (LQ) 1L  
 · Excepted quantities (EQ) Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml  
 · Transport category 2  
 · Tunnel restriction code D/E

· IMDG  
 · Limited quantities (LQ) 1L  
 · Excepted quantities (EQ) Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation": UN 1090 ACETONE, 3, II

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· Directive 2012/18/EU  
 · Named dangerous substances - ANNEX I Substance is not listed.  
 · Seveso category P5c FLAMMABLE LIQUIDS

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- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- National regulations:
- Waterhazard class: Water hazard class 1 (Assessment by list): slightly hazardous for water.
- VOC EU 788.0 g/l
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 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.

- Recommended restriction of use refer to Technical Data Sheet (TDS)
- Department issuing SDS: Laboratory
- Contact: Dieter Zimmermann  
Elke Hake  
Fon ++49 (0)911 64296-59  
@mail E.Hake@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)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 2: Flammable liquids – Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- **\* Data compared to the previous version altered.** Adaptation in accordance with REACH directive 1907/2006/EC

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