Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.02.2019 Version number 4 Revision: 19.02.2019

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

· **1.1 Product identifier**

· Trade name:	**Cleaner I**
· Article number:	45014, 45015, 45016
· CAS Number:	67-63-0
· EC number:	200-661-7
· Index number:	603-117-00-0
· Registration number	01-2119457558-25-xxxx
· **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
· 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 The substance is classified and labelled according to the CLP regulation.

· Hazard pictograms

GHS02 GHS07

· Signal word Danger

· Hazard-determining components of labelling: propan-2-ol

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.02.2019 Version number 4 Revision: 19.02.2019

Trade name: Cleaner I

(Contd. of page 1)

· 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.
P302+P352	IF ON SKIN: Wash with plenty of water.
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.

· **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 67-63-0 propan-2-ol
· Identification number(s)
· EC number: 200-661-7
· Index number: 603-117-00-0
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components: Void
· Additional information: For the wording of the listed hazard phrases refer to section 16.

*
SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· General information: 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**
Dizziness
Nausea
Headache
· 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, artifical breathing when

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.02.2019 Version number 4 Revision: 19.02.2019

Trade name: Cleaner I

(Contd. of page 2)

indicated, gastrolavage, peritoneal or hemodialysis.

· Hazards: Danger of impaired breathing.

· **4.3 Indication of any immediate medical attention and special treatment needed**: No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· Suitable extinguishing agents: CO_2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **5.2 Special hazards arising from the substance or mixture**: Carbon monoxide (CO)

· **5.3 Advice for firefighters**

· Protective equipment: Wear self-contained respiratory protective device.
Wear fully protective suit.

· 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.
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:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

· **6.4 Reference to other sections**: See Section 13 for disposal information.

*
SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**: Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.

· Information about fire - and explosion protection: 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 in a cool location.

· Information about storage in one common storage facility: Store away from oxidising agents.

· Further information about storage conditions: Store receptacle in a well ventilated area.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.02.2019 Version number 4 Revision: 19.02.2019

Trade name: Cleaner I

(Contd. of page 3)

Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

· **7.3 Specific end use(s)** No further relevant information available.

*

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:

67-63-0 propan-2-ol

WEL	Short-term value: 1250 mg/m³, 500 ppm Long-term value: 999 mg/m³, 400 ppm

· DNELs

67-63-0 propan-2-ol

Oral	DNEL (Langzeit-wiederholt)	26 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	888 mg/kg bw/day (ARB)
		319 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	500 mg/m³ Air (ARB)
		89 mg/m³ Air (BEV)

· PNECs

67-63-0 propan-2-ol

PNEC (wässrig)	2,251 mg/l (KA)
	140.9 mg/l (MW)
	140.9 mg/l (SW)
	140.9 mg/l (WAS)
PNEC (fest)	28 mg/kg Trockengew (BO)
	552 mg/kg Trockengew (MWS)
	552 mg/kg Trockengew (SWS)

· 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.

· 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)

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.02.2019 Version number 4 Revision: 19.02.2019

Trade name: Cleaner I

(Contd. of page 4)

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 anylyses 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
Nitrile rubber, NBR
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:
Nitrile rubber, NBR
Camatril (KCL, Art_No. 730, 731, 732, 733)
Butyl rubber, BR
Butoject (KCL, Art_No. 897, 898)
Fluorocarbon rubber (Viton)
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:
Natural rubber, NR
Leather gloves
Strong material gloves

· Eye protection:

Tightly sealed goggles

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.02.2019 Version number 4 Revision: 19.02.2019

Trade name: Cleaner I

(Contd. of page 5)

· 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:	Clear
· Odour:	Characteristic
· pH-value:	Not determined.
· Change in condition	
Melting point/freezing point:	-89.5 °C
Initial boiling point and boiling range:	82 °C
· Flash point:	13 °C
· Ignition temperature:	425 °C
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	2 Vol %
Upper:	12 Vol %
· Vapour pressure at 20 °C:	43 hPa
· Density at 20 °C:	0.79 g/cm³
· Solubility in / Miscibility with	
water at 20 °C:	1 g/l
· Viscosity:	
Dynamic at 20 °C:	2.43 mPas
Kinematic:	Not determined.
Organic solvents:	100.0 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

· **10.2 Chemical stability**

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions** Reacts with strong oxidising agents.
Reacts with various metals.
Reacts with amines.
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.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.02.2019 Version number 4 Revision: 19.02.2019

Trade name: Cleaner I

(Contd. of page 6)

* **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:

67-63-0 propan-2-ol

Oral	LD50	>2,000 mg/kg (rabbit)
		5,840 mg/kg (rat) (OECD 401)
	NOAEL-Werte	400 mg/kg (rat)
Dermal	LD50	13,900 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/8h	47.5 ppm (rat)
	LC50/4 h	30-46.5 mg/l (rat)
	LC50	25,000 mg/m3 (rat)
	LC50/48h	>100 mg/l (Leuciscus idus)

· 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 (carcinogenity, 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:

67-63-0 propan-2-ol

EC50/24h	9,714 mg/l (daphnia magna)
EC50	>1,000 mg/l (BES)
LC50/24h	9,714 mg/l (daphnia magna)
EC50/15min	22,000 mg/l (Photobac. phosphoreum)
IC50/72h	>1,000 mg/l (Desmodesmus subspicatus)
EC10/18h	5,175 mg/l (pseudomonas putida) (DIN 38412)
EC50/48h	13,299 mg/l (daphnia magna)
EC50/72h	>1,000 mg/l (green alge)
	>100 mg/l (Scenedesmus subspicatus)
LC50/96h	6,550 mg/l (piscis)
	9,640 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

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.02.2019 Version number 4 Revision: 19.02.2019

Trade name: Cleaner I

(Contd. of page 7)

· **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 UN1219

· **14.2 UN proper shipping name**
· ADR 1219 ISOPROPANOL (ISOPROPYL ALCOHOL) solution
· IMDG, IATA ISOPROPANOL (ISOPROPYL ALCOHOL) solution

· **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

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.02.2019 Version number 4 Revision: 19.02.2019

Trade name: Cleaner I

(Contd. of page 8)

· Stowage Category	B
· **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 1219 ISOPROPANOL (ISOPROPYL ALCOHOL) SOLUTION, 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
· 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	785.0 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
· 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) ICAO: International Civil Aviation Organisation 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

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.02.2019 Version number 4 Revision: 19.02.2019

Trade name: Cleaner I

(Contd. of page 9)

IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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)
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