

**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

ACMOSOL 133-1

Revision date: 24.12.2019

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1. Identification**Product identifier**

ACMOSOL 133-1

Recommended use of the chemical and restrictions on use**Relevant identified uses**

Cleaner

Uses advised against

Consumer uses: Private households (= general public = consumers)

Sector of uses [SU]: 21

Do not use for private purposes (household).

Relevant identified uses - Further information:

Industrial uses: Uses of substances as such or in preparations at industrial sites

Sector of uses [SU]: 3

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Sector of uses [SU]: 22

The product is intended for professional use.

Details of the supplier of the safety data sheet**Manufacturer**

Company name: ACMOS CHEMIE KG
Street: Industriestrasse 49
Place: D-28199 Bremen
Post-office box: 10 10 69
D-28010 Bremen

Responsible Department:

Telefax: +49 (0)421-511415

Laboratory (Division: Occupational- / Product security) - see under section 16
01 149 (0)551 19240 (Emergency information service / official advisory body:
Giftinformationszentrum Nord, Universität Göttingen, 24 h from mo. - su.)
Language(s) of Telephone Service: DE, EN

Emergency phone number:

1-800-424-9300 (CHEMTREC - 24/7 - Within the USA and Canada)
Language(s) of Telephone Service: EN, FR

2. Hazard(s) identification**Classification of the chemical****29 CFR Part 1910.1200**

Corrosive to metals: Met. Corr. 1

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2A

Label elements**29 CFR Part 1910.1200****Signal word:** Warning**Pictograms:****Hazard statements**

May be corrosive to metals

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Causes skin irritation

Causes serious eye irritation

Precautionary statements

Keep only in original container.

Wash hands thoroughly after handling.

Wear protective gloves/protective clothing/eye protection.

If on skin: Wash with plenty of water.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Absorb spillage to prevent material damage.

Store in corrosive resistant container with a resistant inner liner.

Additional advice on labelling

Labeling according to the revised Hazard Communication Standard (HCS 2012) according to 29 CFR 1910.1200(f)

Hazards not otherwise classified

Adverse physicochemical effects:

See section 9 for physical and chemical properties.

Adverse human health effects and symptoms:

See section 11 for toxicological information.

Adverse environmental effects:

See section 12 for environmental information.

Other adverse effects:

Special danger of slipping by leaking/spilling product.

Results of PBT-/vPvB-assesment:

See under section 12.5 - Results of PBT and vPvB assessment.

3. Composition/information on ingredients**Mixtures****Chemical characterization**

Solution of active ingredients in water

Hazardous components

CAS No	Components	Quantity
112-34-5	2-(2-butoxyethoxy)ethanol	3 %
79-33-4	L-(+)-lactic acid	1.36 %
7664-38-2	phosphoric acid ... %	1.105 %
67-63-0	propan-2-ol (isopropanol)	1.1 %
85536-14-7	benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives	1.016 %

4. First-aid measures**Description of first aid measures****General information**

Remove affected person from the danger area and lay down.

Take off immediately all contaminated clothing and wash it before reuse.

Put victim at rest, cover with a blanket and keep warm.

Do not leave affected person unattended.

If a person vomits when lying on his back, place him in the recovery position.

If breathing is irregular or stopped, administer artificial respiration.

If unconscious but breathing normally, place in recovery position and seek medical advice.

Never give anything by mouth to an unconscious person or a person with cramps.

In the event of cardiac arrest immediately perform cardiopulmonary resuscitation.

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Self-protection of the first aider:

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Wear personal protection equipment (refer to section 8).
First Aid.

Notes for the doctor:

Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and badly.

After inhalation

Remove victim out of the danger area.
Provide fresh air.
In case of respiratory tract irritation, consult a physician.

After contact with skin

Wash immediately with:
Water and soap
Subsequently wash off with:
Soda solution, diluted
Rub greasy ointment into the skin.
Do not wash with:
Solvents/Thinner
In case of skin irritation, consult a physician.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
Remove contact lenses, if present and easy to do. Continue rinsing.
If present: Initial treatment with Previn. (Previn is a registered trademark).
Protect uninjured eye.

After ingestion

Do NOT induce vomiting.
Rinse mouth thoroughly with water.
Let water be drunk in little sips (dilution effect). Lime water
Never give anything by mouth to an unconscious person or a person with cramps.
Call a physician immediately.

Most important symptoms and effects, both acute and delayed

The following symptoms may occur:
Cough
Gastrointestinal complaints
Abdominal pain
Gastric perforation
Nausea

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

A suitable eye rinse equipment shall be provided, if required.
Use eye rinse liquid with room temperature, if possible.

5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

Full water jet
Water spray jet
Water mist
Extinguishing powder (ABC-powder)
Foam
Carbon dioxide (CO₂)

Fire class: not relevant

Unsuitable extinguishing media

None known

Specific hazards arising from the chemical

Hazardous combustion products:
None known
The product itself does not burn.

Special protective equipment and precautions for fire-fighters

Usual measures of preventive and averting fire protection.

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Co-ordinate fire-fighting measures to the fire surroundings.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Protective equipment and precautions for firefighters
not relevant

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin, eyes and clothes.
Do not breathe vapor or spray.
Prevent further leakage or spillage if safe to do so.
Provide adequate ventilation.
Special danger of slipping by leaking/spilling product.

For non-emergency personnel:
Use personal protection equipment.
Walk out of the danger zone and notify trained personnel.
Emergency procedures:
Keep the factory emergency plan and the information chain.

For emergency responders:
Use personal protection equipment.
The personal protective equipment must be adapted to the situation.
Suitable material:
See under section 8.2 - Personal protection equipment (PPE).

Environmental precautions

Do not allow to enter into surface water or drains.
Do not allow to enter into soil/subsoil.
Ensure waste is collected and contained.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Methods and material for containment and cleaning up

For containment:
Repair leaks if without risk.
Move containers from spill area.
Make sure spills can be contained, e.g. in sump pallets or kerbed areas.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Cover drains.

For cleaning up:
Clean-up methods - large spillage:
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
Shovel into suitable container for disposal.
Local authorities should be advised if significant spillages cannot be contained.
Clean-up methods - small spillage:
Clear spills immediately.
Wipe up with absorbent material (eg. cloth, fleece).
Collect in closed and suitable containers for disposal.
Clear contaminated areas thoroughly.
Recommended cleansing agent:
Clean with detergents. Avoid solvent cleaners.
Retain contaminated washing water and dispose it.
Ensure all waste water is collected and treated via a waste water treatment plant.
Ventilate affected area.

Suitable material for taking up:
Sand
Kieselguhr
Universal binder
Absorbing material, organic

Unsuitable material for taking up:
None known

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Suitable material for diluting or neutralizing:

Lime
Soda

Unsuitable material for diluting or neutralising:

None known

Reference to other sections

Personal protection equipment (PPE): see section 8

Disposal: see section 13

7. Handling and storage**Precautions for safe handling****Advice on safe handling**

Measures to prevent aerosol and dust generation:

All work processes must always be designed so that the following is as low as possible:

Inhalation of vapors or spray/mists

Eye contact

Skin contact

Technical ventilation of workplace

During filling, metering and sampling should be used if possible:

No special measures are necessary.

Recirculation of exhaust air is not recommended.

Always close containers tightly after the removal of product.

Advice on protection against fire and explosion

Measures to prevent fire:

The product is not: Combustible

Usual measures for fire prevention.

Fire-fighting equipment on the basis of class B.

Further information on handling

Environmental precautions:

Transfer wash-downs in sealed containers.

Provide for retaining containers, e.g. floor pan without outflow.

Advices on general occupational hygiene:

Wear personal protection equipment (refer to section 8).

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

General industrial hygiene practice.

Handle in accordance with good industrial hygiene and safety practice.

Working places should be designed to allow cleaning at any time.

Floors, walls and other surfaces in the hazard area must be cleaned regularly.

When using do not eat, drink, smoke, sniff.

Thorough skin-cleansing after handling the product.

Used working clothes should not be worn outside the work area.

Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Suitable floor material:

Floors should be impervious, resistant to liquids and easy to clean.

Protect against:

Heat

Cold

Recommended storage temperature: +10 ... +30 °C

Keep away from:

Food and feedingstuffs

Packaging materials:

Suitable container/equipment material:

Keep/Store only in original container.

Unsuitable container/equipment material:

See under section 8.2 - Hand protection.

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Hints on joint storage

Do not store together with:

Strong alkali

Storage class:

1 (Explosive hazardous substances)

5.1 A (Highly oxidising substances)

5.2 (Organic peroxides and self-reactive substances)

6.2 (Infectious substances)

7 (Radioactive substances)

Further information on storage conditions

Technical measures and storage conditions:

The valid water and zoning ordinances must be observed.

Keep container tightly closed.

Protect containers against damage.

Ensure adequate ventilation of the storage area.

Do not store outside.

See also instructions on the label.

8. Exposure controls/personal protection**Control parameters****Exposure limits**

CAS No.	Substance	ppm	mg/m ³	f/cc	Category	Origin
67-63-0	2-Propanol	200			TWA (8 h)	ACGIH-2020
		400			STEL (15 min)	ACGIH-2020
112-34-5	Diethylene glycol monobutyl ether (inhalable fraction and vapor)	10			TWA (8 h)	ACGIH-2020
56-81-5	Glycerin (mist) Respirable fraction	-	5		TWA (8 h)	PEL
56-81-5	Glycerin (mist) Total dust	-	15		TWA (8 h)	PEL
67-63-0	Isopropyl alcohol	400	980		TWA (8 h)	PEL
		400	980		TWA (8 h)	REL
		500	1225		STEL (15 min)	REL
7664-38-2	Phosphoric acid	-	1		TWA (8 h)	PEL
		-	1		TWA (8 h)	REL
		-	3		STEL (15 min)	REL
7664-38-2	Phosphoric acid		1		TWA (8 h)	ACGIH-2020
			3		STEL (15 min)	ACGIH-2020

Biological Exposure Indices (BEI-ACGIH)

CAS No.	Substance	Determinant	Value	Test material	Sampling time
67-63-0	2-PROPANOL	Acetone	40 mg/L	urine	End of shift at end of workweek

Additional advice on limit values

Country information (EU)

<http://www.dguv.de/ifa/fachinfos/occupational-exposure-limit-values/foreign-and-eu-limit-values/index.jsp>Country information (USA) (https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9992&p_text_version=FALSE)National Institute for Occupational Safety and Health - NIOSH (<http://cdc.gov/niosh/pel88/pelstart.html>) / OccupationalSafety and Health Administration - Department of Labour (http://osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=SATNDARSp_toc_level=0)

Source of law:

Source of law:

Recommended monitoring procedures:

Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical

and biological agents (BS EN 14042):

Personal air monitoring

Room air monitoring

Biological monitoring

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Exposure limits at intended use:
See under section 8.1 - Occupational exposure limit values.

DNEL-/PNEC-values:

Risk management measures according to used control banding approach:
Control banding for chemicals according to the ILO CHEMICAL CONTROL TOOLKIT (ICCT): ICCT-Guidelines and Control Guidance Sheets (http://www.ilo.org/legacy/english/protection/safework/ctrl_banding/toolkit/main_guide.pdf)

Used model:
Consider appropriate model solutions according to good engineering practices while designing the work process if available.

Exposure controls**Appropriate engineering controls**

Substance/mixture related measures to prevent exposure during identified uses:

Technical measures to prevent exposure:

Design of appropriate work processes and engineering controls and the use of adequate materials (physical cut-off of man and machine, model solutions as certified working methods, working appliance according to the state of the art, working appliance for prevention of skin contact, models of working times).

Organisational measures to prevent exposure:

Execution of collective protection measures at source and appropriate organisational measures (local exhaust ventilation, ventilation by technical means, general ventilation, measures on averting a danger at breakdowns / at emergencies / after accidents, first aid measures, manner related measures: operating instruction / instruction of employees, occupational medicine health precaution).

Structural measures to prevent exposure:

Execution of individual and personnel protection measures (personal protective equipment - PPE).

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Technical measures and the application of suitable work processes have priority over personal protection equipment.

References for design of technical equipment:

See under section 7.1 - Precautions for safe handling.

Summary of the risk management measures for exposure scenario:

Use only the following product amount per time unit:

No information available.

Minimum room-width and room-height for handling/application:

No information available.

Minimum room ventilation rate for handling/application (air changes per hour):

No information available.

Individual protection measures, such as personal protective equipment**Eye/face protection**

If required according to hazard assessment:

Suitable eye protection:

Eye glasses with side protection (EN 166)

goggles (EN 166)

Face protection shield

Recommended eye protection articles:

UVEX I-VO / UVEX I-3 / UVEX SUPER OTG

UVEX ULTRASONIC / UVEX ULTRAVISION

Or comparable articles from other companies.

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Hand protection

Skin protection:

Preventive skin protection.:

Draw up skin protection programme.

Before starting work, apply water-resistant skincare preparations.

e.g. saniwip®, dualin® (PETER GREVEN PHYSIODERM)

Wash hands before breaks and after work.

e.g. ecosan®, topscrub® soft / topscrub® extra / topscrub® nature (PETER GREVEN PHYSIODERM)

After cleaning apply high-fat content skin care cream.

e.g. physioderm® creme, cura soft® / cUrea soft (PETER GREVEN PHYSIODERM)

Apply skin care products after work.

When handling with chemical substances, protective gloves should be worn.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Decrease wearing protection gloves to an inevitable degree to avoid skin rash.

Technical and organizational protective actions have to be preferred.

Breakthrough times and swelling properties of the material must be taken into consideration.

Check leak tightness/impermeability prior to use.

Wear cotton undermitten if possible.

Change preventive gloves once by hour or use special skin-protective preparations for protective gloves carrier,

e.g. physioderm® proGlove (PETER GREVEN PHYSIODERM)

Take recovery periods for skin regeneration.

Do not wear gloves near rotary machines and tools.

Dispose preventive gloves after defect or expiry of wearing time. Replace when worn.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

Wearing time with permanent contact:

Suitable gloves type

Gloves with long cuffs

Recommended glove articles:

Suitable materials at long term, direct contact (Recommended: Preventive index 6, accordingly > 480 min. permeation time):

Nitrile rubber / NBR (KCL-CAMATRIL VELOURS® - Art. No. 730) - Layer thickness: 0,4 mm

Or comparable articles from other companies.

Unsuitable material:

NR (natural rubber, natural latex)

Wearing time with occasional contact (splashes):

Suitable gloves type

Disposable gloves

Recommended glove articles:

Suitable materials at short term contact or splash (Recommended: Preventive index 3, accordingly > 60 min. permeation time):

Disposable gloves of special nitrile rubber / NBR (KCL-DERMATRIL® P - Art. No. 743) - Layer thickness: 0,2 mm

Or comparable articles from other companies.

The statements are based on self-tests, literary reference and information of glove manufacturers or have been derived from similar substances by analogy.

Source: CHEMIKALIEN-MANAGER - KCL-software for hand protection.

It has to be noticed, that daily time of use of chemical protective gloves may be quite shorter in practice because of many factors of influence (e.g. thermal and mechanical stress as well as special conditions on the floor) than the permeation time determined in accordance to EN 374.

The respective permeation time doubles/halves at about 1,5 times larger/lower layer thickness.

Declared permeation times are not carried out under practical conditions. Therefore a maximum wearing time up to 50 % of breakthrough time is recommended.

They relate to the pure solvent as mean component.

Barrier creams are not substitutes for body protection.

Skin protection

If required according to hazard assessment:

Suitable protective clothing:

Overall, Natural fibres (e.g. cotton) (EN 340)

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Chemical resistant safety shoes with conductible sole (EN ISO 20345)

Wash contaminated clothing prior to re-use.

Used working clothes should not be worn outside the work area.

Street clothing should be stored separately from work clothing.

Thermal hazards:

No thermal hazards during use of this product.

Respiratory protection

If required according to hazard assessment:

Respiratory protection necessary at:

exceeding exposure limit values +

high concentrations / prolonged exposure / insufficient ventilation / insufficient exhaust

Use only respiratory protection equipment with CE-symbol including four digit test number.

Filter types: A, B, E, K. Class 1: Maximum permitted contaminant concentration in inhaled air = 1000 mL/m³ (0.1 % by vol.); class 2: maximum permitted contaminant concentration in inhaled air = 5000 mL/m³ (0.5 % by vol.); class 3:

maximum permitted contaminant concentration in inhaled air = 10000 mL/m³ (1.0 % by vol.)

The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may

arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus

(BGR 190).

The use of filter equipment requires a minimum oxygen content of 17 Vol-% in the surrounding atmosphere and that the

maximum permitted gas concentration - normally 0,5 Vol-% - is not exceeded.

Suitable respiratory protection apparatus:

Half-face mask or quarter facepiece: maximum use concentration for substances with exposure limits: P1 filter: up to a

max. of 4 times the exposure limit. P2 filter: up to a max. of 10 times the exposure limit. P3 filter: up to a max. of 30 times

the expo.

Recommended respiratory protection articles:

Half mask or quarter mask with combination filter A1P1/A2P2 for gases, vapors and particles. (EN 140, EN 14387)

Filtering half mask or quarter mask with combination filter FFA1 P1/FFA2P2 for gases, vapors and particles. (EN 405)

Gas filtering Half-face mask FFA (EN 405)

Model 4251 (FFA1P1 - 1000 ml/m³) / 4255 (FFA2P2SL - 5000 ml/m³) (3M)

Half-face mask or Quarter-face mask with gas filter (EN 140, EN 14387)

Filter type 6051 (A1 - 1000 ml/m³) / 6055 (A2 - 5000 ml/m³) (3M)

Full-face mask with gas filter (EN 136, EN 14387)

Gas filter type: A, Indication colour: brown

Or comparable articles from other companies.

Environmental exposure controls

Environmental exposure controls:

Technical measures to prevent exposure:

Discharge exhaust air only with suitable separators to atmosphere.

Organisational measures to prevent exposure:

Should not be released into the environment.

Structural measures to prevent exposure:

Use the following recovery and/or abatement technique for cleaning waste gases:

Exhaust air scrubber

Adsorption

Further information see under section 6.2 - Environmental precautions.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state:	liquid
Color:	colorless
Odor:	characteristic

pH-Value:

Changes in the physical state

Test method

2,1 DIN 19268

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Melting point/freezing point: < 0 °C literature value
Boiling point or initial boiling point and boiling range: > 100 °C literature value
Sublimation point: not applicable
Softening point: not determined
Pour point: not determined
Flash point: not applicable

Flammability

Solid: not applicable (Liquid)
Gas: not applicable (Liquid)

Explosive properties

No flash point up to 100 °C.

Lower explosion limits: not relevant
Upper explosion limits: not relevant
Auto-ignition temperature: not relevant

Self-ignition temperature

Solid: Not pyrophoric.
Gas: Not pyrophoric.

Decomposition temperature: not relevant

Oxidizing properties

not relevant

Vapor pressure: Corresponds to the vapor pressure of water. < 23 hPa literature value
(at 20 °C)Vapor pressure: Corresponds to the vapor pressure of water. < 123 hPa literature value
(at 50 °C)Density (at 20 °C): 1,02 g/cm³ DIN 51757

Bulk density: not applicable (Liquid)

Water solubility: easily soluble
(at 20 °C)**Solubility in other solvents**

miscible with most organic solvents (Alcohols, aldehydes, Ketone)

Partition coefficient n-octanol/water: not applicable (Mixtures)

Viscosity / dynamic: not determined

Viscosity / kinematic: <= 20,5 mm²/s DIN 53015
(at 40 °C)Flow time: 23 s 3 DIN EN ISO 2431
(at 23 °C)

Relative vapour density: not determined

Evaporation rate: not determined

Solvent separation test: not applicable

Solvent content: not determined

Other information

Solid content: not determined

Odor threshold: No data available

Surface tension: No data available

Fat solubility: No data available

Calculated oxidation potential of the mixture (OP): not relevant

Substance group relevant properties:

Data relevant with regard to physical hazard classes (supplemental):

Explosives
not applicable

Flammable gases

Non-flammable. / not applicable (Liquid)

Aerosols

Non-flammable. / not applicable (Liquid)

Oxidising gas

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Not oxidising. / not applicable (Liquid)
Gases under pressure
not applicable (Liquid)
Flammable liquids
Non-flammable.
flammable solids
Non-flammable. / not applicable (Liquid)
Self-reactive substances and mixtures
not applicable
Pyrophoric liquids
Not pyrophoric.
Pyrophoric solids
Not pyrophoric. / not applicable (Liquid)
self-heating substances and mixtures
not applicable
Substances or mixtures which, in contact with water, emit flammable gases
not applicable
Oxidising liquids
Not oxidising.
Oxidising solids
Not oxidising. / not applicable (Liquid)
Organic peroxides
not applicable
Corrosive to metals.
May be corrosive to metals (H290)
UN Recommendations on the Transport of Dangerous Goods -
Manual of Tests and Criteria, Part III, Subsection 37.4.1.
Corrosion rate (mm steel/year) < 6,25 mm/a / < - 13,5 % (4,91 mm/a / - 10,60 %)
Corrosion rate (mm aluminium/year) < 6,25 mm/a / < - 13,5 % (4,77 mm/a / - 10,30 %)
Local corrosion (e.g. pitting corrosion, shallow pit corrosion). (> 120 µm)

10. Stability and reactivity**Reactivity**

The product is chemically stable under recommended conditions of storage, use and temperature.

Chemical stability

Stability: Stable

The product is chemically stable under recommended conditions of storage, use and temperature.

Possibility of hazardous reactions

Hazardous reactions: May occur

No hazardous reaction when handled and stored according to provisions.

Conditions to avoid

Further information see under section 7.2 - Conditions for safe storage, including any incompatibilities.

Further information see under section 10.5 - Incompatible materials.

Incompatible materials

Violent reaction with:

Alkali (lye), concentrated

Further information see under section 7.1 - Precautions for safe handling.

Hazardous decomposition products

Does not decompose when used for intended uses.

No known hazardous decomposition products.

Under fire conditions: See under section 5.2 - Specific hazards arising from the chemical.

11. Toxicological information**Information on toxicological effects****Route(s) of Entry**

Inhalation: X

Skin: X

Ingestion: X

Toxicocinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

The product has not been tested.

Information on likely routes of exposure /

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Symptoms related to the physical, chemical and toxicological characteristics:
See under section 4.2 - Most important symptoms/effects, acute and delayed.

Exposure route:

In case of ingestion:

Ingestion causes nausea, weakness and central nervous system effects.

In case of skin contact:

irritant.

erythema (redness)

In case of inhalation:

slightly irritant but not relevant for classification.

In case of eye contact:

irritant.

Conjunctival redness.

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

Not relevant

Interactive effects:

Not relevant

Absence of specific data:

No data is available on the product itself. Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several components.

However, some data are not complete regarding particular main components. Nevertheless according to the experience of the manufacturer there are no other hazards expected than those which are already mentioned on the label.

Mixture versus substance information:

Not relevant

Acute toxicity

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



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CAS No	Components				
	Exposure route	Dose	Species	Source	Method
112-34-5	2-(2-butoxyethoxy)ethanol				
	oral	LD50 2410 mg/kg	Mouse [male]	ECHA	OECD 401
	dermal	LD50 2764 mg/kg	Rabbit [male]	Supplier / ECHA	OECD 402
79-33-4	L-(+)-lactic acid				
	oral	LD50 3543 mg/kg	Rat female	ECHA	EPA OPP 81-1
	dermal	LD50 > 2000 mg/kg	Rabbit	ECHA	EPA OPP 81-2
	inhalation (4 h) aerosol	LC50 > 7,94 mg/l	Rat	ECHA	OECD 403
7664-38-2	phosphoric acid ... %				
	oral	ATE 500 mg/kg			
	dermal	LD50 2740 mg/kg	Rabbit	Supplier	
	inhalation vapour	LC50 850 mg/l	Rat [2 h]	Supplier	
67-63-0	propan-2-ol (isopropanol)				
	oral	LD50 5840 mg/kg	Rat	ECHA	OECD 401
	dermal	LD50 16400 mg/kg	Rabbit	ECHA	OECD 402
	inhalation vapour	LC50 > 25 mg/l	Rat	Supplier	OECD 402 [6 h]
85536-14-7	benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives				
	oral	LD50 1470 mg/kg	Rat	ECHA	OECD 401
	dermal	LD50 > 2000 mg/kg	Rat	ECHA	OECD 402

Irritation and corrosivity

Causes skin irritation

Causes serious eye irritation

Sensitizing effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

Specific target organ toxicity (STOT) - single exposure

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

Specific target organ toxicity (STOT) - repeated exposure

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

Carcinogenicity (IARC):

Isopropyl alcohol (CAS 67-63-0) is listed in group 3.

Aspiration hazard

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

12. Ecological information**Ecotoxicity**

Aquatic toxicity:

Acute (short-term) fish toxicity:

There are no data available on the preparation/mixture itself. The product has not been tested.

Acute (short-term) toxicity to crustacea:

There are no data available on the preparation/mixture itself. The product has not been tested.

Acute (short-term) toxicity to algae and cyanobacteria:

There are no data available on the preparation/mixture itself. The product has not been tested.

Chronic (long-term) toxicity to aquatic invertebrate:

There are no data available on the preparation/mixture itself. The product has not been tested.

Chronic (long-term) fish toxicity:

There are no data available on the preparation/mixture itself. The product has not been tested.

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Toxicity to other aquatic plants/organisms:
No data available (Substances/Ingredient)

Terrestrial toxicity:

Acute and subchronic bird toxicity:
No data available (Substances/Ingredient)

Bird reproduction toxicity:
No data available (Substances/Ingredient)

Acute earthworm toxicity:
No data available (Substances/Ingredient)

Chronical earthworm toxicity (reproduction):
No data available (Substances/Ingredient)

Useful insect toxicity:
No data available (Substances/Ingredient)

Acute plant toxicity:
No data available (Substances/Ingredient)

Chronic plant toxicity:
No data available (Substances/Ingredient)

Toxicity to soil macroorganisms except of arthropods:
No data available (Substances/Ingredient)

Effects on soil microorganisms:
No data available (Substances/Ingredient)

Behaviour in waste water treatment plants:

The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

Observe local regulations concerning effluent treatment.

Persistence and degradability

Abiotic degradation:

Physicochemical elimination:

Oxidation:

not applicable (Mixtures)
No data available (Substances/Ingredient)

Hydrolysis:

not applicable (Mixtures)
No data available (Substances/Ingredient)

Photochemical elimination:

Photolysis:

not applicable (Mixtures)
No data available (Substances/Ingredient)

Ozonolysis:

not applicable (Mixtures)
No data available (Substances/Ingredient)

Biodegradation:

not applicable (Mixtures)

Bioaccumulative potential

not applicable (Mixtures)

Mobility in soil

Surface tension:

See under section 9.1 - Information on basic physical and chemical properties.

Distribution:

Water-air (volatility rate, Henry-constant):
not applicable (Mixtures)
No data available (Substances/Ingredient)

Soil-Water (Adsorption coefficient):
not applicable (Mixtures)
No data available (Substances/Ingredient)

Soil-Air (volatility rate):
not applicable (Mixtures)
No data available (Substances/Ingredient)

Other adverse effects

Ozone depletion potential (ODP):

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No data available (Substances/Ingredient)
Photochemical ozone creation potential (POCP):
No data available (Substances/Ingredient)
Global warming potential (GWP):
No data available (Substances/Ingredient)
Endocrine disrupting potential
No data available

AOX: Product does not contain any organic halogens.

13. Disposal considerations**Waste treatment methods****Disposal recommendations**

Waste treatment options:
Send to an emulsion splitting or emulsion vaporiser facility under observation of official regulations

Dispose of waste according to applicable legislation.
Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Properties of waste which render it hazardous:
Irritant — skin irritation and eye damage

Evidence for disposal must be provided.
Consult the appropriate local waste disposal expert about waste disposal.
Waste for recycling is to be classified and labelled.
For recycling, contact recycling exchanges.
May not be disposed or deposited together with domestic garbage.
Do not mix with other wastes.
Do not flush into surface water or sanitary sewer system.
Do not dispose of waste into sewer.
Before discharge in public drains (e.g. residues of washing- and rinsing liquids) please observe the relevant regulations. In case of further questions please contact your waste- or environmental representative or the responsible authority.
Clean IBCs or drums at approved facility only.
The waste producer is responsible for correct coding and designation of his wastes.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
List of proposed waste codes/waste designations in accordance with EWC:

RCRA Hazardous wastes (Resource Conservation and Recovery Act)

D002 Corrosivity

Contaminated packaging

Other disposal recommendations:
Contaminated packages must be completely emptied and can be re-used following proper cleaning.
Cleaning by recycling company.
Recommended cleansing agent:
Clean with detergents. Avoid solvent cleaners.

Handle contaminated packages in the same way as the substance itself.
Non-contaminated packages may be recycled.
Packing which cannot be properly cleaned must be disposed of.
As well uncleaned (empty) containers remain contaminated by product residues and may be hazardous by vapours. They have to be disposed by specialists or have to be supplied to a licensed reconditioning.
The conditions of the regional reconditioning companies have to be observed.

14. Transport information**US DOT 49 CFR 172.101**

UN/ID number:	UN1805
Proper shipping name:	PHOSPHORIC ACID, SOLUTION
Transport hazard class(es):	8
Packing group:	III
Hazard label:	8



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Marine transport (IMDG)

UN number:	UN1805
UN proper shipping name:	PHOSPHORIC ACID SOLUTION
Transport hazard class(es):	8
Packing group:	III
Hazard label:	8
	
Marine pollutant:	--
Special Provisions:	223
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B
Segregation group:	IMDG-Code segregation group 1 - Acids

Other applicable information (marine transport)

Exception(s): Not applicable

Air transport (ICAO-TI/IATA-DGR)

UN number:	UN1805
UN proper shipping name:	PHOSPHORIC ACID, SOLUTION
Transport hazard class(es):	8
Packing group:	III
Hazard label:	8



Special Provisions:	A3 A803
Limited quantity Passenger:	1 L
Passenger LQ:	Y841
Excepted quantity:	E1
IATA-packing instructions - Passenger:	852
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	856
IATA-max. quantity - Cargo:	60 L

Other applicable information (air transport)

ERG Kodex: 8L

The state variations in chapter 2.8.1 and the operator variations in chapter 2.8.3 for shipping of dangerous goods in limited quantities according to chapter 2.7 of the valid ICAO/IATA Dangerous Goods Regulations have to be observed.

The rulings for dangerous goods by air mail according to chapter 2.4 of the valid ICAO/IATA Dangerous Goods Regulations and the conventions of the Universal Postal Union (UPU) as well as the clauses of the relevant National Postal Administration have to be observed. Airmail: prohibited.

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

Special precautions for user

Further information see under section 6, 7, 8.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No bulk transport in accordance with IBC code.
It is sold exclusively in traffic legally authorized and appropriate packaging.

Other applicable information

Postal, express and courier services:
Postal service (national):
Refer to your National Postal Administration.
Express freight / special delivery:
Refer to your National Postal Administration.

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Courier service (national):

The general conditions of business of the particular courier service have to be observed.

15. Regulatory information**U.S. Regulations****National Inventory TSCA**

All intentional used ingredients of this product are listed in the TSCA-inventory or correspond to TSCA-exceptions on polymers according to 40 CFR 723.

National regulatory information

SARA Section 304 CERCLA:

Phosphoric acid (7664-38-2): Reportable quantity = 5,000 (2270) lbs. (kg)

SARA Section 311/312 Hazards:

2-(2-butoxyethoxy)ethanol (112-34-5): Immediate (acute) health hazard

L-(+)-lactic acid (79-33-4): Immediate (acute) health hazard

Phosphoric acid (7664-38-2): Immediate (acute) health hazard

Isopropyl alcohol (mfg-strong acid process) (67-63-0): Fire hazard, Immediate (acute) health hazard

benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives (85536-14-7): Immediate (acute) health hazard

SARA Section 313 Toxic release inventory:

Isopropyl alcohol (mfg-strong acid process) (67-63-0): De minimis limit = 1.0 %, Reportable threshold = Standard

Clean Air Act Section 112(b):

Phosphoric acid (7664-38-2)

State Regulations**Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)**

WARNING: This product can expose you to chemicals including Diethanolamine (cancer); Methanol (developmental); Methanol (developmental), which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Additional information

Delaware - Air Quantity Management List: No data available

Idaho - Air Pollutants List: No data available

Maine - Hazardous Air Pollutants List: No data available

Massachusetts - Hazardous Substances: No data available

Michigan - Critical Materials: No data available

Minnesota - Hazardous Substances: No data available

New Jersey - Right-to-Know (RTK) Hazardous Substances, TCPA EHS List: No data available

New York - List of Hazardous Substances: No data available

Pennsylvania - Hazardous Substances: No data available

Washington - Permissible Exposure Limits for Air Contaminants: No data available

West Virginia - Toxic Air Pollutant List: No data available

Other regulations, restrictions and prohibition regulations:

International chemical inventories (Registration status on substances): No data available

16. Other information**Hazardous Materials Information Label (HMIS)**

Health:	2
Flammability:	1
Physical Hazard:	0
Personal Protection:	H

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NFPA Hazard Ratings

Health:	2
Flammability:	1
Reactivity:	0
Unique Hazard:	ACID
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**Changes**

This version replaces all former issues.

Changes made in this revision see section: 9, 14, 15, 16.

Abbreviations and acronyms

ATE: Acute Toxicity Estimate.
CAS: Chemical Abstracts Service.
CLP: Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008.
CMR: Carcinogen, Mutagen, or Reproductive Toxicant.
C&L: Classification & Labeling.
DNEL: Derived No-Effect Level.
EC50: Effective concentration, 50 percent.
ECHA: European Chemicals Agency.
EINECS: European Inventory of Existing Commercial Chemical Substances.
ELINCS: European List of Notified Chemical Substances.
FDA: US-Food and Drug Administration.
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.
HSPA: Hydrocarbon Solvents Producers Association.
IARC: International Agency for Research on Cancer.
IATA: International Air Transport Association.
IBC-Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).
IC50 / ErC50: Inhibitory concentration, 50 percent.
ICAO-TI: International Civil Aviation Organization Technical Instruction.
IMDG-Code: International Maritime Dangerous Goods Code.
IMSBC: International Maritime Solid Bulk Cargoes.
ISO: A standard of International Standards Organisation.
IUCLID: International Uniform Chemical Information Database.
IUPAC: International Union for Pure and Applied Chemistry.
LC50: Lethal concentration, 50 percent.
LD50: Lethal Dose, 50 percent.
log Kow (Pow): octanol-water partition coefficient.
LQ: Limited Quantities.
MARPOL: Maritime Pollution Convention (Convention for the Prevention of Pollution from Ships).
NTP: National Toxicity Program.
OC: Operational Conditions.
OECD: Organisation for Economic Co-operation and Development.
OSHA: Occupational Safety and Health Agency.
PBT: Persistent, bioaccumulabe and toxic.
PEC: Predicted Effect Concentration.
PNEC: Predicted No-Effect Concentration.
PPE: Personal Protection Equipment.
(Q)SAR: Quantitative-Structure-Activity-Relationship.
RMM: Risk Management Measure.
SARA: Superfund Amendments and Reauthorization Act.
STEL: Short time exposure limit.
STOT - RE: Specific Target Organ Toxicity - Repeated Exposure.
STOT - SE: Specific Target Organ Toxicity - Single Exposure.
TSCA: Toxic Substances Control Act.
TWA: Time weighted average.
UN: United Nations.
UVCB: Substances of Unknown or Variable composition, Complex reaction products or Biological materials.
vPvB: Very persistent and very bioaccumulable.
WoE: Weight of Evidence.

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For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Other data**Key literature references and sources for data:**

The classification corresponds to current EC-lists, but is completed by statements of technical literature and company data.

Other public accessible sources:

Hazard Communication Standard (HCS 2012) according to 29 CFR 1910.1200 in the valid version in each case (<https://www.ecfr.gov/>)

Further information and practical guides on the internet:

eChemPortal (<http://www.echemportal.org>)

Environmental Protection Agency - EPA (<http://www.epa.gov>) / ECOTOX-Database (<http://cfpub.epa.gov/ecotox>)

Recommended restriction of application:

See under section 1.2 - Uses advised against.

Use this product only for intended purpose in accordance with our product informations.

Please refer to our internet website for more information (<http://www.acmos.com>).

Training advice:

Yearly briefing and instruction of employees by means of of operation instructions according to article 8 of EC-directive 98/24/EC.

Inquiry office: Laboratory (Division: Occupational- /Product security)

Contact person: Mr. Dryhaus (Telephone: 01149-421-5189-0, Telefax: 01149-421-5189-871)

Office hours: Mo - Th from 7.30 - 16.15 h and Fr from 7.30 - 13.30 h. Out of office hours no call diversion.

Disclaimer:

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