

**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

ACMOS 101-5001

Revision date: 05.04.2019

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1. Identification**Product identifier**

ACMOS 101-5001

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

Release agent for white glue

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

Telephone: +49 (0)421-5189-0

Telefax: +49 (0)421-511415

e-mail: acmos@acmos.com

Contact person: Mr. Stephan Dryhaus

Internet: www.acmos.com

Responsible Department: Laboratory (Division: Occupational- / Product security) - see under section 16

Emergency phone number:

01149 (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

Supplier

Company name: ACMOS Inc.

Street: 5000 Stonewood Dr. Suite 200

Place: Wexford, PA 15090 USA

Telephone: 724-220-6644

e-mail: info@acmosinc.com

Contact person: Mr. Mark Hesseling

e-mail: mark@acmosinc.com

Internet: www.acmosinc.com

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**

Flammable liquids: Flam. Liq. 3

Label elements**29 CFR Part 1910.1200****Signal word:**

Warning

Pictograms:**Hazard statements**

Flammable liquid and vapor

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

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Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use Water mist/Extinguishing powder/Foam/Carbon dioxide (CO₂) to extinguish.
Store in a well-ventilated place. Keep cool.
Disposal of contents/container in accordance with local/regional/national/international regulations.

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.
Vapours of flammable solvents can accumulate in the gas phase of closed container, especially during heat treatment.
Therefore keep away from fire and sources of ignition.

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

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

Emulsion of active ingredients in water

Hazardous components

CAS No	Components	Quantity
64-17-5	ethanol (ethyl alcohol)	5.76 %

Further information

none/none

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

Notes for the doctor:
No special measures are necessary.

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After inhalation

Remove victim out of the danger area.
Provide fresh air.
Consult a doctor immediately in the case of inhaling spray mist and show him packing or label.

After contact with skin

Wash immediately with:
Water and soap
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.
Protect uninjured eye.

After ingestion

Do NOT induce vomiting.
Give nothing to eat or drink.
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
Acidosis
Depression of central nervous system
Headache
Nausea
Drowsiness
Dizziness

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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.
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.

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Do not breathe vapor or spray.
In case of warming: Remove all sources of ignition.
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 (e.g. 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

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:
It is recommended to design all work processes always so that the following is excluded:
Inhalation of vapours or spray/mists

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Eye contact
Skin contact

Technical ventilation of workplace
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

The formation of combustible vapors is possible, at temperatures above: +39 °C (Flash point - 15 °C)

Vapors may form explosive mixtures with air.

Only use the material in places where open light, fire and other flammable sources can be kept away.

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, eg. floor pan without outflow.

For restriction of emission on volatile organic compounds (VOC) the solvent vapours should be supplied to exhaust air purification facilities (filter, gas washer, incineration).

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.

Hints on joint storage

Do not store together with:

Storage class:

1 (Explosive hazardous 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.

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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
64-17-5	Ethanol	-	-		TWA (8 h)	ACGIH-2018
		1000			STEL (15 min)	ACGIH-2018
64-17-5	Ethyl alcohol (Ethanol)	1000	1900		TWA (8 h)	REL
64-17-5	Ethyl alcohol	1000	1900		TWA (8 h)	REL
-	Stearates (inhalable particulate matter)		10		TWA (8 h)	ACGIH-2018
-	Stearates (respirable particulate matter)		3		TWA (8 h)	ACGIH-2018

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>) / Occupational Safety and Health Administration - Department of Labourhttp://osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=SATNDARSp_toc_level=0

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

Test tube

Preliminary concentration measurements:

Suitable detector tubes for measuring the current concentration in the air at the workplace: DRÄGER test tubes - short-term tubes (<http://www.gasmesstechnik.de>)DRÄGER test tubes - Short-term tubes - Alcohol 100/a (lower alcohols, measuring range: 100 - 3000 ppm, response time: 90 sec) (<http://www.gasmesstechnik.de>)

Preventive industrial medical examinations are to be offered.

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

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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, optimisation of process / spray robots, 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)

Recommended eye protection articles:

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

Or comparable articles from other companies.

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.

If required according to hazard assessment:

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.

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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)

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

Usually no personal respirative protection necessary.

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.

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

Physical state: gel
Color: light yellow
Odor: characteristic

Test method

pH-Value: 7 DIN 19268

Changes in the physical state

Melting point/freezing point: < 0 °C literature value
Initial boiling point and boiling range: > 78 °C literature value
Sublimation point: not applicable
Softening point: not applicable
Pour point: not applicable
Flash point: 54 °C EN ISO 2719
Sustaining combustion: Not sustaining combustion UN Test L.2

Flammability

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

Explosive properties

Vapour/air-mixtures are explosive at intense warming.

The statements for steam pressure, ignition point and explosion levels apply to the solvent / solvent mixture.

Lower explosion limits: not relevant
Upper explosion limits: not relevant
Ignition temperature: not relevant

Auto-ignition temperature

Solid: Not pyrophoric.
Gas: Not pyrophoric.

Decomposition temperature: not relevant

Oxidizing properties

not relevant

Vapor pressure: Corresponds to the vapour pressure of water. < literature value
(at 20 °C) 23 hPa
Vapor pressure: Corresponds to the vapour pressure of water. < literature value
(at 50 °C) 123 hPa
Density (at 20 °C): (7,928 lbs/gal) 0,95 g/cm³ DIN 51757
Bulk density: not applicable (Liquid)
Water solubility: emulsifiable
(at 20 °C)

Solubility in other solvents

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

Partition coefficient: not applicable (Mixtures)
Viscosity / dynamic: not determined
Viscosity / kinematic: > 20,5 mm²/s DIN 53015
(at 40 °C)
Flow time: > 100 s (3 mm) 3 DIN EN ISO 2431
(at 23 °C)
Vapor density: not determined
Evaporation rate: not determined
Solvent separation test: not applicable
Solvent content: not determined

Other information

Solid content: not determined
Odor threshold: 10 ppm ((ethanol (ethyl alcohol)), literature value)

Surface tension: No data available
Fat solubility (g/L): No data available

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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)

flammable aerosols

Non-flammable. / not applicable (Liquid)

Oxidising gases

Not oxidising. / not applicable (Liquid)

Gases under pressure

not applicable (Liquid)

Flammable liquids

Non-flammable.

In use may form flammable/explosive vapour-air mixture.

UN Recommendations on the Transport of Dangerous Goods -

Manual of Tests and Criteria, Part III, Subsection 32.5.2.

Test temperature of 60.5 °C (UN Test L.2).

Not sustaining combustion

Test temperature of 75 °C (UN Test L.2).

Not sustaining combustion

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.

Not corrosive to metals.

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:

Will not occur

No hazardous reaction when handled and stored according to provisions.

Conditions to avoid

Heat, flames and sparks.

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:

Hazardous substances that release flammable gases when in contact with water

Oxidising agent, strong

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

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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

Toxicokinetics, 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 /

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:

May cause skin irritation in susceptible persons.

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

In case of inhalation:

slightly irritant but not relevant for classification.

In case of eye contact:

slightly irritant but not relevant for classification.

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.

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
64-17-5	ethanol (ethyl alcohol)				
	oral	LD50 10470 mg/kg	Rat	ECHA	OECD 401
	dermal	LD50 (> 2000) mg/kg	Rabbit	Supplier	OECD 402
	inhalation (4 h) vapour	LC50 124,7 mg/l	Rat	ECHA	similar to OECD 403

Irritation and corrosivity

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

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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 (OSHA): None of the ingredients is listed.

Carcinogenicity (IARC): None of the ingredients is listed.

Carcinogenicity (NTP): None of the ingredients is listed.

Aspiration hazard

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

Observations relevant to classification

Acute toxicity :

The following informations are derived from the properties of the individual components.

LD50/oral/rat = > 2000 mg/kg

LD50/dermal/rat = > 2000 mg/kg

LC50/inhalation/4h/rat = > 20 mg/l

Irritant-/corrosive effects :

to skin : None known

to eyes : None known

Sensitizing effects :

After inhalation: : None known

After skin contact: : None known

Subacute to chronic toxicity : None known

Carcinogenic, mutagenic and reproductive toxic effects : None known

Health injuries are not known or expected under normal use. Experience shows no unusual dermatitis hazard from routine handling.

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 aquatic algae and cyanobacteria:

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

Chronic (long-term) toxicity to crustacea:

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.

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)

Chronic earthworm toxicity (reproduction):

No data available (Substances/Ingredient)

Useful insect toxicity:

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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:
No data available
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):
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**

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Advice on disposal

Waste treatment options:

Send to an emulsion splitting or emulsion vapouriser 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:

none/none

Consult the appropriate local waste disposal expert about waste disposal.

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:

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****Proper shipping name:**

Not classified as dangerous in the meaning of transport regulations.

Marine transport (IMDG)**Other applicable information (marine transport)**

Not classified as dangerous in the meaning of transport regulations.

Air transport (ICAO-TI/IATA-DGR)**Other applicable information (air transport)**

Not classified as dangerous in the meaning of transport regulations.

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

Special precautions for user

not relevant

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

not relevant

Other applicable information

not relevant

15. Regulatory information**U.S. Regulations****National regulatory information**

SARA Section 311/312 Hazards:

ethanol (ethyl alcohol) (64-17-5): Fire hazard, Immediate (acute) health hazard

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

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

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: 1
Flammability: 2
Physical Hazard: 0
Personal Protection: B

NFPA Hazard Ratings

Health: 1
Flammability: 2
Reactivity: 0
Unique Hazard: ---

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Changes

Safety data sheet was completely revised.

Abbreviations and acronyms

ATE: Acute Toxicity Estimate.
CAS: Chemical Abstracts Service.
CLP: Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008.
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.
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.
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



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(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.
ISO: A standard of International Standards Organisation.
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.
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.
vPvB: Very persistent and very bioaccumulable.
WoE: Weight of Evidence.

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

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: +49-421-5189-0, Telefax: +49-421-5189-871)

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:

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The information contained herein are, to our knowledge at the time of their creation to be correct and been taken from sources deemed to be reliable. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. The receiver of our product is singularly responsible for adhering to existing laws and regulations. All descriptions are approximate values, they are not specified for construction of specifications. This safety data sheet does not represent any operating instruction according to national chemical regulations. It may be used for creation, but must not replace it. The employer is not relieved from his



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duties. All technical information to occupational protection are directed predominately to experts first (safety engineers, occupational medicines).