



## Safety Data Sheet

Information following the respective legal area

**ACMOS 81-400WE**

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

ACMOS 81-400WE

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

Release agent for phenolic resins

**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

The product is intended for professional use.

**1.3. 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	
E-mail:	sds@acmos.com	
Internet:	www.acmos.com	
Responsible Department:	Laboratory (Division: Occupational- / Product security) - see under section 16	

**1.4. Emergency telephone number:**

+44 111 (Emergency information service / official advisory body: National Poisons Information Service - NPIS Birmingham) (<https://www.npis.org>)  
Language(s) of Telephone Service: EN

**Supplier**

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	
E-mail:	sds@acmos.com	
Internet:	www.acmos.com	
Responsible Department:	Laboratory (Division: Occupational- / Product security) - see under section 16	

**1.4. Emergency telephone number:**

+44 111 (Emergency information service / official advisory body: National Poisons Information Service - NPIS Birmingham) (<https://www.npis.org>)  
Language(s) of Telephone Service: EN

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****GB CLP Regulation**

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**Hazard statements**

H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P273 Avoid release to the environment.

**Additional advice on labelling**

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

**2.3. Other hazards**

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-assessment:

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

Endocrine disrupting properties:

See under section 11.2 + 12.6 - Endocrine disrupting properties.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Chemical characterization**

Emulsion of mineral oil and active ingredients in water

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
68439-49-6	alcohols, C16-18, ethoxylated			1 - < 5 %
	Aquatic Acute 1, Aquatic Chronic 3; H400 H412			
1314-13-2	zinc oxide, average particle size 0,8 µm			< 1 %
	215-222-5	030-013-00-7	01-2119463881-32	
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
68439-49-6		alcohols, C16-18, ethoxylated	1 - < 5 %
		oral: LD50 = > 5000 mg/kg	
1314-13-2	215-222-5	zinc oxide, average particle size 0,8 µm	< 1 %
		inhalation: LC50 = > 5,7 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg Aquatic Acute 1; H400: M=1 Aquatic Chronic 1; H410: M=1	

**Further Information**

Exempted according to REACH Article 2(7) and Annex V. Each starting material of the ionic mixture is registered, if required.

**SECTION 4: First aid measures****4.1. Description of first aid measures**



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**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:

Wear personal protection equipment (refer to section 8).

First Aid.

Notes for the doctor:

No special measures are necessary.

**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.

**4.2. Most important symptoms and effects, both acute and delayed**

The following symptoms may occur:

Cough

Allergic reactions

Nausea

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

Treat symptomatically.

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**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Full water jet

Water spray jet

Water mist

Extinguishing powder (ABC-powder)

Foam

Carbon dioxide (CO<sub>2</sub>)



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Fire class: not relevant

**Unsuitable extinguishing media**

None known

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

Hazardous combustion products:

None known

The product itself does not burn.

**5.3. Advice for firefighters**

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.

Special protective equipment for firefighters

not relevant

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Avoid contact with skin, eyes and clothes.

Do not breathe vapour/aerosol.

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.

**6.2. 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.

**6.3. 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**

Large amounts of spillages:

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.

Small amounts of spillages:

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:



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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.

**Other information**

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

Unsuitable material for taking up:  
None known

**6.4. Reference to other sections**

Personal protection equipment: see section 8  
Disposal: see section 13

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**SECTION 7: Handling and storage****7.1. 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 vapours or spray/mists  
Eye contact  
Skin contact

Technical ventilation of workplace  
Use only in a exhaust booth with integrated air filter.  
Use in ventilated spray booths only.  
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.

**Advice on general occupational hygiene**

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.  
Clean spray booth and exhaust hood completely with every product change.  
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.

**Further information on handling**

Environmental precautions:  
Transfer wash-downs in sealed containers.  
Provide for retaining containers, e.g. floor pan without outflow.

**7.2. 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:

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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.  
See also instructions on the label.

**7.3. Specific end use(s)**

Recommendation:  
Possibilities for substitution and references to less hazardous products:  
This product was designed for a special application purpose and optimized appropriately.  
In case of questions regarding product and application, please contact our field service in line with customer service or our technical sales department.  
Observe technical data sheet.

Industrial sector specific solutions:

Hazardous substance information systems of professional associations:

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****DNEL/DMEL values**

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
1314-13-2	zinc oxide, average particle size 0,8 µm			
Worker DNEL, long-term		dermal	systemic	83 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	5 mg/m³
Consumer DNEL, long-term		oral	systemic	0,83 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	83 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	2,5 mg/m³



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**PNEC values**

CAS No	Substance	
Environmental compartment		Value
1314-13-2	zinc oxide, average particle size 0,8 µm	
Freshwater		0,0206 mg/l
Marine water		0,0061 mg/l
Freshwater sediment		117,8 mg/kg
Marine sediment		56,5 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,1 mg/kg
Soil		35,6 mg/kg

**Additional advice on limit values**

Recommended monitoring procedures:  
not relevant

Exposure limits at intended use:  
not relevant

DNEL-/PNEC-values:  
There are no exposure scenarios attached in the Appendix of this Safety Data Sheet.

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](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 on designing the working process, if available.

**8.2. 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, optimization 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:



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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 must be worn with the CE-label including the four control digits.

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 in accordance to EN 374):

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)





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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 in accordance to EN 374):

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 according to EN 374 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.

**Respiratory protection**

If required according to hazard assessment:

Respiratory protection necessary at:

aerosol or mist formation +

high concentrations / prolonged exposure / insufficient ventilation / insufficient exhaust

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/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).

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:

Particle filtrating half-face mask FFP2 (EN 149)

**Thermal hazards**

No thermal hazards during use of this product.

**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:



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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.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	liquid	
Colour:	light yellow	
Odour:	characteristic	
Odour threshold:	No data available	
		<b>Test method</b>
Melting point/freezing point:	< 0 °C	literature value
Boiling point or initial boiling point and boiling range:	> 100 °C	literature value
Flammability		
Solid/Liquid:	The product is not: Flammable	
Lower explosion limits:	not relevant	
Upper explosion limits:	not relevant	
Flash point:	not applicable	
Auto-ignition temperature:	not relevant	
Decomposition temperature:	Thermally stable.	
pH-Value:	7,3	DIN 19268
Viscosity / kinematic: (at 40 °C)	<= 20,5 mm <sup>2</sup> /s	DIN 53015
Water solubility: (at 20 °C)	emulsifiable	
Solubility in other solvents		
Fat solubility: No data available		
Dissolution rate:	(Nanoform) not relevant	
Partition coefficient n-octanol/water:	not applicable (Mixtures)	
Dispersion stability:	(Nanoform) not relevant	
Vapour pressure: (at 20 °C)	Corresponds to the vapour pressure of water. < 23 hPa	literature value
Vapour pressure: (at 50 °C)	Corresponds to the vapour pressure of water. < 123 hPa	literature value
Density (at 20 °C):	0,96 g/cm <sup>3</sup>	DIN 51757
Relative density:	not determined	
Bulk density:	not applicable (Liquid)	
Relative vapour density:	not determined	
Particle characteristics:	not applicable (Liquid)	

**9.2. Other information**

Explosive properties  
    No flash point up to 100 °C.

Self-ignition temperature

    Solid: Not pyrophoric.

    Gas: Not pyrophoric.

**Other safety characteristics**

Evaporation rate: not determined

Solvent separation test: not applicable

Solvent content: not determined

Solid content: not determined

Sublimation point: not applicable

Softening point: not applicable

Pour point: not applicable

Viscosity / dynamic: not determined

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Flow time:

86 s 3 DIN EN ISO 2431

(at 23 °C)

**Further Information**

Other safety characteristics:

Mechanical sensitivity: No ignition, explosion, self-heating or visible decomposition.

miscibility: Miscible with: Water, Alcohols, aldehydes, Ketone

Conductivity (ASTM D 2624): not determined

Corrosiveness: not applicable

Redox potential: not determined

radical formation potential: not applicable

photocatalytic properties: not applicable

Surface tension: not determined

Molecular weight: not applicable (Mixtures)

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

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.

Not corrosive to metals. / not applicable

Desensitised explosives

not applicable

**SECTION 10: Stability and reactivity****10.1. Reactivity**

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

**10.2. Chemical stability**

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

**10.3. Possibility of hazardous reactions**



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No hazardous reaction when handled and stored according to provisions.

**10.4. 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.

**10.5. Incompatible materials**

Violent reaction with:

Hazardous substances that release flammable gases when in contact with water

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

**10.6. Hazardous decomposition products**

Does not decompose when used for intended uses.

No known hazardous decomposition products.

Under fire conditions: See under section 5.2 - Special hazards arising from the substance or mixture.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****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 and effects, both 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.

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.

**ATEmix calculated**

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
68439-49-6	alcohols, C16-18, ethoxylated				
	oral	LD50 > 5000 mg/kg	Rat	Supplier	OECD 401
1314-13-2	zinc oxide, average particle size 0,8 µm				
	oral	LD50 > 5000 mg/kg	Rat	ECHA	OECD 401
	dermal	LD50 > 2000 mg/kg	Rat	ECHA	OECD 402
	inhalation (4 h) dust/mist	LC50 > 5,7 mg/l	Rat	ECHA	OECD 403

**Irritation and corrosivity**

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

**Sensitising 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.

**STOT-single exposure**

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

**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.

**Information on likely routes of exposure**

oral: +

Dermal: +

inhalation: +

Eye contact: +

**11.2. Information on other hazards****Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

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

**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)

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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:

No data available

Observe local regulations concerning effluent treatment.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
68439-49-6	alcohols, C16-18, ethoxylated					
	Acute fish toxicity	LC50 > 1 - < 10 mg/l	96 h	Leuciscus idus	Supplier	
	Acute algae toxicity	ErC50 > 0,1 - < 1 mg/l		Algae	Supplier	
	Acute crustacea toxicity	EC50 > 1 - < 10 mg/l	48 h	Daphnia magna	Supplier	
	Crustacea toxicity	NOEC > 0,1 - < 1 mg/l		Daphnia magna	Supplier	
1314-13-2	zinc oxide, average particle size 0,8 µm					
	Acute fish toxicity	LC50 1,793 mg/l	96 h	Danio rerio	ECHA	
	Acute algae toxicity	ErC50 0,136 mg/l	72 h	Pseudokirchneriella subcapitata	ECHA	OECD 201
	Acute crustacea toxicity	EC50 1,7 mg/l	48 h	Daphnia magna	ECHA	OECD 202
	Fish toxicity	NOEC 0,039 mg/l	30 d	Oncorhynchus mykiss	ECHA	OECD 215
	Algae toxicity	NOEC 0,024 mg/l	3 d	Pseudokirchneriella subcapitata	ECHA	OECD 201
	Crustacea toxicity	NOEC 0,048 mg/l	21 d	Daphnia magna	ECHA	OECD 211
	Acute bacteria toxicity	(EC50 > 1000 mg/l)	3 h	Activated sludge	ECHA	OECD 209

**12.2. 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)

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No data available (Substances/Ingredient)

Biodegradation:  
not applicable (Mixtures)

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
68439-49-6	alcohols, C16-18, ethoxylated			
	OECD 301 B	> 60 %	28	Supplier
	readily biodegradable			

**12.3. Bioaccumulative potential**

not applicable (Mixtures)

**12.4. 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)

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

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. 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)

AOX: Product does not contain any organic halogens.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Waste treatment options (Recovery operations / Disposal operations):  
Transfer to an emulsion fission reactor or an emulsion evaporation system, observing official regulations.

Dispose of waste according to applicable legislation.  
Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.  
Hazardous waste according to Directive 2008/98/EC (waste framework directive).  
Properties of waste which render it hazardous:  
Ecotoxic [HP 14]

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.



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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.

The waste code has to be identified in agreement with the disposal company or the competent authority.

List of proposed waste codes/waste designations in accordance with EWC:

**List of Wastes Code - residues/unused products**

070201 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; aqueous washing liquids and mother liquors; hazardous waste

**List of Wastes Code - used product**

070201 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; aqueous washing liquids and mother liquors; hazardous waste

**List of Wastes Code - contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

**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.

The conditions of the regional reconditioning companies have to be observed.

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**SECTION 14: Transport information****Land transport (ADR/RID)****Other applicable information (land transport)**

Not classified as dangerous in the meaning of transport regulations.

**Inland waterways transport (ADN)****Other applicable information (inland waterways transport)**

Not classified for this transport carrier.

**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.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

not relevant

**14.7. Maritime transport in bulk according to IMO instruments**

not relevant

**Other applicable information**





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not relevant

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

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

2010/75/EU (VOC): 0 % (0 g/l)

**Additional information**

Authorisations and/or restrictions on use:

Authorisations:

Authorisation of Chemicals (REACH) as regards Annex XIV:

not relevant

Restrictions on use:

Restriction of chemicals (REACH) as regards annex XVII:

No. 3 - Liquid substances or mixtures in decoration objects to create light or color effects or jokes

No. 75 - Substances in mixtures for use in tattooing

Informations on Regulation (EC) No. 1272/2008 - Annex VI, Part 1:

Note L is valid: The harmonised classification as a carcinogen applies unless it can be shown that the substance contains less than 3 % of dimethyl sulphoxide extract as measured by IP 346 ("Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions – Dimethyl sulphoxide extraction refractive index method" Institute of Petroleum, London), in which case a classification in accordance with Title II of this Regulation shall be performed also for that hazard class.

Other regulations (EU):

Regulation (EC) No. 1005/2009 - Substances that deplete the ozone layer:

not relevant

Regulation (EC) No. 648/2004 and No 907/2006 - Detergents:

not relevant

Regulation (EC) No. 649/2012 - Export and import of dangerous chemicals:

not relevant

Regulation (EU) 2019/1021 - Persistent organic pollutants:

not relevant

Regulation (EC) No. 428/2009 and No. 388/2012 and No. 1382/2014 - Control of exports, or transfer, brokering and transit of dual-use goods (Dual-Use Regulation):

not relevant

Regulation (EC) No. 273/2004 - Drug precursors:

not relevant

Regulation (EC) No. 111/2005 - Definition of rules for the monitoring of trade in drug precursors between the Union and third countries:

not relevant

Regulation (EU) 2019/1148 - Marketing and use of precursors for explosives:

Annex I - Restricted explosives precursors:

not relevant

Annex II - Notification requirements for explosives precursors:

not relevant

Directive 2012/18/EC - Control of major accident hazards involving dangerous substances (Seveso III):

not relevant

Directive 2004/42/EC - Use of organic solvents in certain paints and lacquers:

not relevant

Directive 2010/75/EU - Industrial Emissions Directive (Directive IE) - succession to Directive 1999/13/EC - Limitation of emissions of volatile organic compounds (VOC-Directive):

When using this substance / mixture it has to be checked whether the activities are subject to the requirements of IE-RL, Chapter V (installations and activities with the use of organic solvents - VOC).

Aerosol Directive (75/324/):

not relevant

Biocide directive (98/8/EC):



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not relevant

Regulation (EU) No. 528/2012 on biocides

Regulation (EC) No. 111/2005 - Definition of rules for the monitoring of trade in drug precursors between the Union and third countries:

not relevant

Directive 2012/18/EC - Control of major accident hazards involving dangerous substances (Seveso III):

not relevant

Directive 2004/42/EC - Use of organic solvents in certain paints and lacquers:

not relevant

Directive 2010/75/EU - Industrial Emissions Directive (Directive IE) - succession to Directive 1999/13/EC - Limitation of emissions of volatile organic compounds (VOC-Directive):

When using this substance / mixture it has to be checked whether the activities are subject to the requirements of IE-RL, Chapter V (installations and activities with the use of organic solvents - VOC).

Aerosol Directive (75/324/):

not relevant

Biocide directive (98/8/EC):

not relevant

Observe in addition any national regulations!

EC-Chemical inventories: All ingredients are listed in EINECS / ELINCS or excepted from listing.

**National regulatory information**

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

**Additional information**

Other regulations, restrictions and prohibition regulations:

European product inventories (Registration status on mixtures):

Kemikalieinspektionen / Produktregistret / Swedish Chemicals Inspectorate - KemI (<http://www.kemi.se>):

This product was registered.

Schweizerische Eidgenossenschaft - Bundesamt für Gesundheit - BAG (<http://www.bag.admin.ch>) / AnmeldestelleChemikalien (<http://www.cheminfo.ch>) / Informationssystem für gefährliche und umweltrelevante Stoffe - IGS(<http://igs.naz.ch/index.html>):

This product was registered.

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

**15.2. Chemical safety assessment**

For this mixture a chemical safety assessment has been carried out.

**SECTION 16: Other information****Changes**

This version replaces all former issues.

Changes made in this revision see section: 2, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16.

**Abbreviations and acronyms**



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ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.  
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
ATE: Acute Toxicity Estimate.  
CAS: Chemical Abstracts Service.  
CEN: Comité Européen de Normalisation (European Committee for Standardisation).  
CLP: Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008.  
C&L: Classification & Labeling.  
DNEL: Derived No-Effect Level.  
EAK: European Waste Catalogue (replaced by LoW – see below).  
EC50: Effective concentration, 50 percent.  
ECHA: European Chemicals Agency.  
EC: European community.  
EINECS: European Inventory of Existing Commercial Chemical Substances.  
ELINCS: European List of Notified Chemical Substances.  
EN: European standard.  
EWC: European Economic Community.  
EEA: European Economic Area (EU + Iceland, Liechtenstein and Norway).  
EU: European Union.  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.  
IATA-DGR: International Air Transport Association Dangerous Goods Regulations.  
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: International Maritime Dangerous Goods.  
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.  
LoW: List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>).  
MARPOL: Maritime Pollution Convention (Convention for the Prevention of Pollution from Ships).  
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.  
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals; Regulation (EC) No 1907/2006.  
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.  
RMM: Risk Management Measure.  
STEL: Short time exposure limit.  
SVHC: Substances of Very High Concern.  
STOT - RE: Specific Target Organ Toxicity - Repeated Exposure.  
STOT - SE: Specific Target Organ Toxicity - Single Exposure.  
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>

**Key literature references and sources for data**



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

Other public accessible sources:

Regulation (EC) No. 1907/2006 (REACH) in the valid version in each case

Regulation (EC) No. 1272/2008 (CLP) in the valid version in each case

Further information and practical guides on the internet:

European Chemicals Agency - ECHA (<http://echa.europa.eu>)

ECHA - Information on Chemicals (<http://echa.europa.eu/information-on-chemicals>)

ECHA - Candidate List of Substances of Very High Concern for Authorisation

(<http://echa.europa.eu/de/candidate-list-table>)

ECHA - List of restrictions table

(<http://echa.europa.eu/de/addressing-chemicals-of-concern/restrictions/list-of-restrictions/list-of-restrictions-table>)

ECHA - Authorisation List

(<http://echa.europa.eu/hr/addressing-chemicals-of-concern/authorisation/recommendation-for-inclusion-in-the-authorisation-list/authorisation-list>)

ECHA - C&L Inventory (<http://echa.europa.eu/en/web/guest/regulations/clp/cl-inventory>)

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

The access to European Union law - EUR-Lex (<http://eur-lex.europa.eu>)

Health and Safety Executive (<http://www.hse.gov.uk>) / Control of Substances Hazardous to Health Regulations - COSHH

(<http://www.coshh-essentials.org.uk/Home.asp>)

Pollution Prevention and Control Act and Pollution Prevention and Control Regulations

**Classification for mixtures and used evaluation method according to GB CLP Regulation**

Classification	Classification procedure
Aquatic Chronic 3; H412	Calculation method

**Relevant H and EUH statements (number and full text)**

- |      |   |
|------|---|
| H400 | Very toxic to aquatic life.                           |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects.    |

**Further Information**

Full text of all R-, H-, EUH-phrases which are referred to in section 2 and 3 of this safety data sheet - see previous list. These (this) R-, H-, EUH-phrases/R-, H-, EUH-phrase apply/applies to the substance(s) of content, however, it does not necessarily show the classification of the product.

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 operating 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 the present level of our knowledge. It does not, however, give assurance 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 duties. All technical information to occupational protection are directed predominately to experts



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first (safety engineers, occupational medicines).