

RCT Sianol-ZE

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

1.1. Product identifier

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

Use of the substance/mixture

Detergents and cleaning agents (including solvent-based products).

1.3. Details of the supplier providing the safety data sheet

Company name: Reisacher Chemie & Technik GmbH
Street: Hermann-Krum-Str. 7
Place: 88319 Aitrach (Germany)
Phone: +49 7565 942687 - 0 Telefax: +49 7565 942687 - 90
E-Mail: info@rct-germany.de
Contact person: Dr. Rockermaier
E-Mail: m.rockermaier@rct-germany.de
Homepage: www.rct-germany.de
Informing department: Laboratory

1.4. Emergency phone number:

+49 7565 942687 - 0

The emergency number is only available on weekdays (Mon-Fri) from 8:30 to 16:00 (CET).

SECTION 2: Possible hazards

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Skin corrosion/irritation: Skin cor. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Hazard statements:

Causes severe skin burns and eye damage.

Causes severe eye damage.

2.2. Label elements:

Regulation (EC) No. 1272/2008

Hazard-determining components of labeling

Formic acid (10 - 90 %)

Signal word: Danger

Pictograms:



Hazard statements

H314 Causes severe skin burns and eye damage.

Safety advice

P280 Wear protective gloves and eye/face protection.

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove any contact lenses if possible. Continue to rinse.

P310 Immediately call a POISON CENTER/doctor.

2.3. Other hazards

No special hazards to be mentioned. In any case, please observe the information in the safety data sheet.

SECTION 3: Composition/Information on ingredients

3.1. Mixtures

Chemical characterization

Acid in aqueous solution.

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Hazardous ingredients

CAS-No.	Designation			Proportion
	EC-No.	Index-No.	REACH-No.	
	GHS classification			
64-18-6	Formic acid ... %			25 - 50 %
	200-579-1	607-001-00-0	01-2119491174-37	
	Skin Corr. 1A; H314			

Wording of H and EUH phrases: see section 16.

Specific concentration limits, M-factors and ATE

CAS-No.	Designation	Proportion
EC-No.	Specific concentration limits, M-factors and ATE	
64-18-6	Formic acid ... %	25 - 50 %
200-579-1	Skin Corr. 1A; H314: >= 90 - 100 Skin Corr. 1B; H314: >= 10 - < 90 Skin Irrit. 2; H315: >= 2 - < 10 Eye Irrit. 2; H319: >= 2 - < 10	

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

Change soiled, soaked clothing.

After inhalation

Remove affected person to fresh air and keep warm and quiet.
Seek medical advice if symptoms occur or in case of doubt.

After contact with skin

After contact with skin, wash immediately with plenty of soap and water.
In case of skin reactions, seek medical advice.

After contact with eyes

Immediately rinse cautiously and thoroughly with eye wash or with water.
In case of eye irritation, consult an ophthalmologist.

After ingestion

Immediately rinse mouth and drink plenty of water. Do not induce vomiting.
Seek medical attention immediately. Do not allow neutralizer to drink.

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

Causes burns. Irritating to eyes, respiratory system and skin. Risk of serious eye damage.
If swallowed, there is a risk of perforation of the esophagus and stomach (strong corrosive effect).

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

Symptomatic treatment.

SECTION 5: Fire fighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), water mist, foam, extinguishing powder.

Unsuitable extinguishing media

Full jet of water

5.2. Special hazards arising from the substance or mixture

In the event of fire, the following can be produced: Carbon dioxide (CO₂), carbon monoxide (CO).

5.3. Advice for fire fighting

Wear self-contained breathing apparatus and chemical protective suit.
Use water spray to protect persons and to cool containers in the danger area.
Collect contaminated extinguishing water separately. Do not allow to enter sewage system or bodies of water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Do not inhale gas/vapor. Avoid contact with skin, eyes and clothing.
Use personal protective equipment.

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6.2. Environmental precautions

Do not allow to enter drains or water courses.
Do not allow to enter subsoil/soil.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid binders, universal binders). Handle absorbed material according to disposal section.

6.4. Reference to other sections

Safe handling, see section 7.
Personal protective equipment see section 8.
Disposal, see section 13.

SECTION 7: Handling and storage

7.1. Protective measures for safe handling

Precautions for safe handling

Ensure adequate ventilation. Do not inhale gas/vapor/aerosol. Avoid contact with skin, eyes and clothing.
Use personal protective equipment.

Notes on general hygiene measures at the workplace

Change soiled, saturated clothing. Wash hands before breaks and at the end of work. Do not eat or drink while working.

Further handling information

Further information: See section 8

7.2. Conditions for safe storage taking into account incompatibilities

Requirements for storage rooms and containers

Keep container tightly closed and store in a cool, well-ventilated place.
Storage temperature: 5 - 30 °C

Information on storage in one common storage facility

Do not store together with: Pyrophoric or self-heating hazardous materials, oxidizing agents.
Keep away from food, beverages and animal feed.

Further information on storage conditions

Keep away from food, beverages and animal feed.
Storage class according to TRGS 510: 8B (Non-flammable corrosive hazardous substances).

7.3. Specific end use

No identified use(s).

SECTION 8: Exposure controls/personal protection

8.1. Parameters to be monitored

Occupational exposure limits (TRGS 900)

CAS-No.	Designation	ppm	mg/m ³	F/m ³	Peak limit.	Art
64-18-6	Formic acid	5	9,5		2(II)	

DNEL / DMEL values

CAS-No.	Designation	Exposure route	Effect	Value
64-18-6	Formic acid ... %			
	Worker DNEL, long-term	inhalation	local	9,5 mg/m ³
	Consumer DNEL, long-term	inhalation	local	3 mg/m ³

PNEC values

CAS-No.	Designation	Value
64-18-6	Formic acid ... %	
	Fresh water	2 mg/l
	Fresh water (intermittent release)	1 mg/l
	Seawater	0,2 mg/l
	Seawater (intermittent release)	1,34 mg/kg
	Freshwater sediment	13,4 mg/kg
	Microorganisms in wastewater treatment plants	7,2 mg/l

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Soil

1,5 mg/kg

8.2. Exposure controls and monitoring



Suitable technical control equipment

Provide adequate ventilation. Eyebrows are provided and their location conspicuously marked.

Eye/face protection

Tightly fitting safety goggles. (DIN EN 166).

Hand protection

Suitable glove type: gauntlet gloves. (DIN EN 374)

For short-term hand contact: Disposable gloves.

Suitable material:

- NBR (nitrile rubber): material thickness: 0.35 mm, breakthrough time: > 480 min.

The design of chemical protective gloves must be selected specifically for the workplace, depending on the concentration and quantity of hazardous substances.

Body protection

Wear only suitable, comfortably fitting and clean protective clothing.

Respiratory protection

If technical extraction or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Suitable respiratory protection: Filtering half mask (DIN EN 149), Filter: AP2

Environmental exposure controls

Do not allow to enter drains or water courses. Do not allow to enter underground/soil.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:		liquid
Color:		colorless
Odor:		pungent
pH value:		< 1
Melting point:		not determined
Initial boiling point and boiling range:		100 °C
Flash point:		> 70 °C
Flammability solid:		not applicable
Flammability gas:		not applicable
Explosion hazards:		not explosive according to EU A.14
Lower explosion limit:		not applicable
Upper explosion limit:		not applicable
Ignition temperature:		not determined
Auto-ignition temperature solid:		not applicable
Auto-ignition temperature gas:		not applicable
Decomposition temperature:		not determined
Oxidizing properties:		non-flammable (oxidizing)
Vapor pressure:		not determined
Density:	(at 20 °C)	approx. 1.1 g/cm ³ ISO 2811
Solubility in water:	(at 21 °C)	completely miscible
Solubility in other solvents:		not determined
Partition coefficient:		not determined
Run-out time:	(at 21 °C)	11 s 4 DIN 53211
Vapor density:		not applicable
Evaporation rate:		not applicable

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9.2. Other information

Odor threshold:	no information available
Solvent content (%):	0.0
Solids content (%):	not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Acid.

10.2. Chemical stability

The product is stable when stored at normal ambient temperatures.

10.3. Possibility of hazardous reactions

There are no known hazardous reactions.

10.4. Conditions to avoid

none

10.5. Incompatible materials

Oxidizing agents, alkalis (lyes), amines.

10.6. Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Akute toxicity

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

Irritant and corrosive effect

Causes severe skin burns and eye damage.

Causes severe eye damage.

Sensitizing effects

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

Carcinogenic, mutagenic and toxic for reproduction effects

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

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity in case of repeated exposure

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

Aspiration hazard

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

Other test information

Classification of mixtures and assessment method used according to Regulation (EC) No 1272/2008 [CLP].

There are no data for the preparation/mixture itself.

There is no information available

SECTION 12: Environmental information

12.1. Toxicity

No data are available for the mixture. The ecotoxicological properties of this mixture are determined by the ecotoxicological properties of the individual components (see section 3).

CAS-No.	Designation					
Aquatic toxicity	Dose	[h] [d]	Species	Source	Method	
64-18-6	Formic acid ... %					
Acute fish toxicity	LC50	130 mg/l	96 h	Danio rerio (zebra danio)	ECHA	
Acute algal toxicity	ErC50	1240 mg/l	72 h	Pseudokirchneriella subcapitata	ECHA	
Acute crustacean toxicity	EC50	365 mg/l	48 h	Daphnia magna (Greater water flea)	ECHA	

12.2. Persistence and degradability

No information available.

CAS-No.	Designation
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	Method	Value	d	Source
	Evaluation			
64-18-6	Formic acid ... %			
		92 %	28	ECHA
	Readily biodegradable (according to OECD criteria)			

12.3. Bioaccumulative potential

No information available.

CAS-No.	Designation	Log Pow
64-18-6	Formic acid ... %	-0,54

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No information is available.

Further information

Classification of mixtures and assessment method used according to Regulation (EC) No 1272/2008 [CLP] No data are available for the mixture. The ecotoxicological properties of this mixture are determined by the ecotoxicological properties of the individual components (see section 3).

SECTION 13: Disposal considerations

13.1. Waste treatment procedures

Recommendation

Do not allow to enter drains or water courses. Do not allow to enter subsoil/earth.
Dispose of in accordance with official regulations.

Waste code Product

070199 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from production, formulation, distribution and use (MFSU) of basic organic chemicals; wastes not otherwise specified

Waste code uncleaned packaging

150102 WASTES FROM PACKAGING, SUPPLIES, WIPING CLOTHES, FILTER MATERIALS AND PROTECTIVE CLOTHING (N.O.S.); packaging (including separately collected municipal packaging waste); plastic packaging

Disposal of uncleaned packaging and recommended cleaning agents.

Wash off with copious amounts of water. Completely emptied packaging can be sent for recycling.

SECTION 14: Transport information

Land transport (ADR/RID)

UN number: UN 3412
UN proper shipping name: FORMIC ACID, solution
Transport hazard class: 8
Packing group: II
Hazard label: 8
Classification Code: C3
Limited quantity (LQ): 1 L
Exempted quantity: E2
Transport category: 2
Hazard number: 80
Tunnel Restriction Code: E

Inland waterway transport (ADN)

UN number: UN 3412
UN proper shipping name: FORMIC ACID, solution
Transport hazard class: 8
Packing group: II

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Hazard label: 8
Classification Code: C3
Limited quantity (LQ): 1 L
Exempted quantity: E2

Marine transport (IMDG)

UN number: UN 3412
UN proper shipping name: FORMIC ACID, SOLUTION
Transport hazard class: 8
Packing group: II
Hazard label: 8
Special provisions: -
Limited Quantity (LQ): 1 L
Exempted quantity: E2
EmS: F-A, S-B

Air transport (ICAO)

UN number: UN 3412
UN proper shipping name: FORMIC ACID, SOLUTION
Transport hazard classes: 8
Packing group: II
Hazard label: 8
Limited Quantity (LQ) Passenger: 0.5 L
Passenger LQ: Y840
Exempted quantity: E2
IATA packing instruction - Passenger: 851
IATA Maximum Quantity - Passenger: 1 L
IATA packing instruction - Cargo: 855
IATA Maximum Quantity - Cargo: 30 L

14.5. Environmental hazards

DANGEROUS FOR THE ENVIRONMENT: no

14.6. Special precautions for user

Keep away from food, drink and animal feeding stuffs.

14.7. Bulk transport according to Annex II of the MARPOL Convention and according to the IBC Code

not applicable

SECTION 15: Legislation

15.1. Safety, health and environmental regulations/specific legislation for the substance or mixture

EU regulations

Restrictions on use (REACH, Annex XVII): Entry 3
Information on VOC Directive 2004/42/EC: VOC value: 0.0 g/L (0 %)

National regulations

Employment restrictions: Observe employment restrictions for young people (§ 22 JArbSchG).
Observe employment restrictions for expectant and nursing mothers (§§ 11 and 12 MuSchG).
Water hazard class: 1 - slightly hazardous to water.
Status: Mixture rule according to Annex 1 No. 5 AwSV

Additional information

Information of the Employer's Liability Insurance Association (DGUV Information):
213-070 "Acids and alkalis",
213-080 "Occupational safety measures for activities involving hazardous substances".

15.2. Chemical safety assessment

A chemical safety assessment has been carried out for the following substances in this mixture:
Formic acid ... %

SECTION 16: Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

ATE: acute toxicity estimates

ECHA: european chemicals agency

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

GESTIS: Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung

(<http://dguv.de/ifa/GESTIS/GESTIS-Stoffdatenbank/index.jsp>)

MSDS:

The data of the hazardous ingredients were taken from the latest safety data sheet of the supplier.

Classification of mixtures and assessment method used according to Regulation (EC) No 1272/2008 [CLP].

Classification	Classification method
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method

Wording of H and EUH phrases (number and full text)

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

Further information

The data of the hazardous ingredients were taken from the latest safety data sheet of the supplier. The information is based on our present knowledge, but does not constitute a guarantee of product properties and does not establish a contractual legal relationship.