

Safety Data Sheet

according to UK REACH Regulation

Silver cleaner

Revision date: 21.06.2022

Product code: 0301

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

Silver cleaner

UFI: 5DMV-6UW9-Q00R-4T8X

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

Cleaning agent

Uses advised against

No further relevant information available.

1.3. Details of the supplier of the safety data sheet

Company name: MARAWE GmbH & Co. KG
Street: Donaustauer Str. 378 - Gebäude 64
Place: D-93055 Regensburg
Telephone: +49 941 / 29020439 Telefax: +49 941 / 29020593
e-mail: info@marawe.de
Contact person: Product safety department
Internet: www.marawe.de

1.4. Emergency telephone number:

+49 941 / 29020439,
Mo-Do 9:00 - 16:00 Uhr; Fr 9:00 - 14:00 Uhr

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

Met. Corr. 1; H290
Skin Irrit. 2; H315
Eye Irrit. 2; H319
Carc. 2; H351
Repr. 2; H361fd
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements**GB CLP Regulation****Hazard components for labelling**

thiourea; thiocarbamide

Signal word: Warning

Pictograms:**Hazard statements**

H290 May be corrosive to metals.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P234	Keep only in original packaging.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container to according to local/national waste disposal regulations.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	Classification (GB CLP Regulation)	
7664-93-9	sulphuric acid	5 - < 10 %
	231-639-5	
	016-020-00-8	
	01-2119458838-20	
	Met. Corr. 1, Skin Corr. 1A, Eye Dam. 1; H290 H314 H318	
62-56-6	thiourea; thiocarbamide	5 - < 10 %
	200-543-5	
	Carc. 2, Repr. 2, Acute Tox. 4, Aquatic Chronic 2; H351 H361fd H302 H411	

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	
7664-93-9	231-639-5	sulphuric acid	5 - < 10 %
		oral: LD50 = 2140 mg/kg Skin Corr. 1A; H314: >= 15 - 100 Skin Irrit. 2; H315: >= 5 - < 15 Eye Irrit. 2; H319: >= 5 - < 15	
62-56-6	200-543-5	thiourea; thiocarbamide	5 - < 10 %
		dermal: LD50 = 2800 mg/kg; oral: LD50 = 1750 mg/kg	

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down. Remove/Take off immediately all contaminated clothing. Be careful with contaminated clothes and shoes of the victim - they could still contain the product.

After inhalation

Provide fresh air. In case of irregular breathing or respiratory arrest provide artificial respiration. If unconscious but breathing normally, place in recovery position and seek medical advice.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

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After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Rinse mouth immediately and drink plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person or a person with cramps.

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

Causes skin burns.

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

Treat symptomatically.

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

CO₂ or powder. Fight bigger fires with water spray jet or alcohol-resistant foam.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable.

Upon heating and in case of fire, the following may be released:
sulfur oxides (SO_x), nitrogen oxides (NO_x).

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.
Do not allow entering drains or surface water.

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

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of release of larger quantities, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up**For containment**

Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Do not use flammable/oxidizable material! Use neutralizing agent.

In case of big amounts: pump out the product.

Collect in closed and suitable containers for disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

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7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Advice on protection against fire and explosion

No special fire protection measures are necessary. The product itself does not burn.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

Hints on joint storage

Don't store together with acids.

7.3. Specific end use(s)

Cleaning agent

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
7664-93-9	sulphuric acid			
	Worker DNEL, acute	inhalation	local	0,1 mg/m ³
	Worker DNEL, long-term	inhalation	local	0,05 mg/m ³
62-56-6	thiourea; thiocarbamide			
	Consumer DNEL, long-term	oral	systemic	0,1 mg/kg bw/day
	Worker DNEL, long-term	dermal	systemic	3,4 mg/kg bw/day
	Consumer DNEL, long-term	dermal	systemic	1,7 mg/kg bw/day
	Worker DNEL, long-term	inhalation	systemic	1 mg/m ³
	Consumer DNEL, long-term	inhalation	systemic	0,2 mg/m ³

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PNEC values

CAS No	Substance	Value
Environmental compartment		
7664-93-9	sulphuric acid	
Freshwater		0,0025 mg/l
Marine water		0,25 mg/l
Freshwater sediment		0,002 mg/kg
Marine sediment		0,25 mg/l
Micro-organisms in sewage treatment plants (STP)		8,8 mg/l
62-56-6	thiourea; thiocarbamide	
Freshwater		0,01 mg/l
Marine water		0,001 mg/l
Freshwater sediment		0,0725 mg/kg
Marine sediment		0,00725 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,38 mg/l
Soil		2,725 mg/kg

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tight sealing protective goggles (DIN EN 166).

Hand protection

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. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

If there can be contact with skin, wear protective clothes impermeable by this solution.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
 Colour: colourless

Changes in the physical state

Melting point/freezing point: not determined
 Boiling point or initial boiling point and boiling range: >100 °C

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Flash point:	not determined
Flammability	
Solid/liquid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Self-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined
pH-Value (at 25 °C):	0
Water solubility:	easily soluble
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not determined
Density (at 20 °C):	1,10 g/cm ³
Relative vapour density:	not determined

9.2. Other information**Information with regard to physical hazard classes**

Oxidizing properties
Not oxidising.

Other safety characteristics

Solid content: not determined
Evaporation rate: not determined

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

Corrosive to metals. Possibility of hazardous reactions. React violently with bases. May cause strong formation of hydrogen by contact with amphoteric metals (e.g. alumina, lead, zinc) - danger of explosion.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Exothermic reaction with: Base, Peroxides, Oxidizing agent. React violently with bases.

10.4. Conditions to avoid

none

10.5. Incompatible materials

Keep away from: Base, Oxidizing agent, Peroxides. Corrosive to metals.

10.6. Hazardous decomposition products

Hydrogen sulphide (H₂S), sulfur oxides (SO_x), nitrogen oxides (NO_x).

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

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Acute toxicity

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

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
7664-93-9	sulphuric acid					
	oral	LD50 mg/kg	2140	Rat	GESTIS	OECD 401
62-56-6	thiourea; thiocarbamide					
	oral	LD50 mg/kg	1750	Rat	Manufacturer	
	dermal	LD50 mg/kg	2800	Rabbit	Manufacturer	

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing cancer. (thiourea; thiocarbamide)

Suspected of damaging fertility. Suspected of damaging the unborn child. (thiourea; thiocarbamide)

Germ cell mutagenicity: 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.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Special hazards arising from the substance or mixture!

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7664-93-9	sulphuric acid					
	Acute fish toxicity	LC50 mg/l	16 - 28	96 h	Lepomis macrochirus (Bluegill)	
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Desmodesmus subspicatus	OECD 201
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna (Big water flea)	OECD 202
62-56-6	thiourea; thiocarbamide					
	Acute fish toxicity	LC50 mg/l	>600	96 h	Pimephales promelas (fathead minnow)	Manufacturer
	Acute algae toxicity	ErC50	6,8 mg/l	96 h	Scenedesmus subspicatus	Manufacturer
	Acute bacteria toxicity	(EC50 mg/l)	3100	0,5 h	Photobacterium phoshoreum	Manufacturer

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
62-56-6	thiourea; thiocarbamide				
	BSB5	0,013 g/g	5		
	Poorly biodegradable.				

12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

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

The product has not been tested.

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

No information available.

Further information

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

200129 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents containing hazardous substances; hazardous waste

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List of Wastes Code - used product

200129 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents containing hazardous substances; hazardous waste

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: UN 2796
14.2. UN proper shipping name: SULPHURIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8



Classification code: C1
 Limited quantity: 1 L
 Excepted quantity: E2
 Transport category: 2
 Hazard No: 80
 Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 2796
14.2. UN proper shipping name: Sulphuric acid
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8



Classification code: C1
 Limited quantity: 1 L
 Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 2796
14.2. UN proper shipping name: SULPHURIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8



Special Provisions: -
 Limited quantity: 1 L
 Excepted quantity: E2
 EmS: F-A, S-B
 Segregation group: 1 - acids

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Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 2796
14.2. UN proper shipping name:	SULPHURIC ACID
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8



Limited quantity Passenger:	0.5 L	
Passenger LQ:	Y840	
Excepted quantity:	E2	
IATA-packing instructions - Passenger:		851
IATA-max. quantity - Passenger:		1 L
IATA-packing instructions - Cargo:		855
IATA-max. quantity - Cargo:		30 L

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

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

Additional information

Regulation (EC) No. 648/2004 [Detergents regulation].

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.

Water hazard class (D): 3 - highly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

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%

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

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Carc. 2; H351	Calculation method
Repr. 2; H361fd	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further Information

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 receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)