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

### 1.1. Product identifier

Copper activator

UFI: SS00-R000-A004-SW2P

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

**Use of the substance/mixture**

Chemical plating of copper and copper materials (brass, bronze) with palladium as catalyst.

**Uses advised against**

Other uses than those specified in section 1.2 of this safety data sheet are not recommended.

### 1.3. Details of the supplier of the safety data sheet

| | |
|---|---|
| Company name: | Thomas Henning e.K. |
| Street: | Buschurweg 4 |
| Place: | D-76870 Kandel |
| Telephone: | +49 7275 94 78 199 |
| E-mail: | info@drgalva.com |
| Contact person: | Thomas Henning |
| E-mail: | info@drgalva.com |
| Internet: | drgalva.net |

### 1.4. Emergency telephone number:

Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department or the NHS enquiry service.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Regulation (EC) No 1272/2008**

Met. Corr. 1; H290
Skin Corr. 1; H314
Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

**Regulation (EC) No 1272/2008**

**Hazard components for labelling**

sulphuric acid

**Signal word:** Danger

**Pictograms:**

**Hazard statements**

| | |
|---|---|
| H290 | May be corrosive to metals. |
| H314 | Causes severe skin burns and eye damage. |

**Precautionary statements**

| | |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| P260 | Do not breathe dust/vapours/spray. |
| P280 | Wear protective gloves/protective clothing and eye protection/face protection. |

| | |
|---|---|
| P301+P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER/doctor. |
| P501 | Dispose of contents/container to an appropriate recycling or disposal facility. |

### 2.3. Other hazards

The components in this formulation do not meet the criteria for classification as PBT or vPvB.
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Relevant ingredients**

| CAS No | Chemical name | | | Quantity |
|---|---|---|---|---|
| | EC No | Index No | REACH No | |
| | Classification (Regulation (EC) No 1272/2008) | | | |
| 7664-93-9 | sulphuric acid | | | 5 - < 10 % |
| | 231-639-5 | 016-020-00-8 | 01-2119458838-20 | |
| | Met. Corr. 1, Skin Corr. 1A; H290 H314 | | | |

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 % |
| | Skin Corr. 1A; H314: >= 15 - 100 Skin Irrit. 2; H315: >= 5 - < 15 Eye Irrit. 2; H319: >= 5 - < 15 | | |

**Further Information**

The percentages of the ingredients not listed here are all below the level of consideration.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General information**

In case of troubles or persistent symptoms, consult an doctor/physician.

**After inhalation**

Provide fresh air. In case of respiratory tract irritation, consult a physician.
In case of irregular breathing or respiratory arrest, perform artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Call a doctor. Change contaminated clothing. Wash contaminated clothing before reuse.

**After contact with eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. Protect uninjured eye.

**After ingestion**

Rinse mouth, spit liquid again. Do NOT induce vomiting. Let water be drunken in little sips (dilution effect). Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong

corrosive effects).

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

irritation. burnes. gastro-intestinal ailment. Spasms. vomiting. Dyspnoea. Nausea. Stomach perforation. Circulatory collapse. Pulmonary oedema

**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**

Co-ordinate fire-fighting measures to the fire surroundings.
Carbon dioxide (CO2). Extinguishing powder. Atomized water. Foam.

**Unsuitable extinguishing media**

High power water jet.

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

Upon exposure to fire, harmful gases may be emitted.

**5.3. Advice for firefighters**

Co-ordinate fire-fighting measures to the fire surroundings. Wear a self-contained breathing apparatus and chemical protective clothing.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

**General advice**

Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. Wear suitable protective clothing. Avoid contact with skin, eyes and clothes. Wear 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. 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**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Wear personal protection equipment. Treat the recovered material as prescribed in the section on waste disposal.

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**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

**7.1. Precautions for safe handling**

**Advice on safe handling**

Personal precautions: refer to section 8 Persons with a history of skin sensitisation problems should not be employed in any process in which this product is used.
Provide adequate ventilation, especially in confined areas.
Do not empty into drains; dispose of this material and its container in a safe way.

**Advice on general occupational hygiene**

Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

**Further information on handling**

Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff.

### 7.2. Conditions for safe storage, including any incompatibilities

**Requirements for storage rooms and vessels**

Store only in original container. Keep container tightly closed in a cool, well-ventilated place.
Protect from heat/overheating.
Store separately from oxidizing agents.

**Hints on joint storage**

Keep away from food, drink and animal feedingstuffs.

### 7.3. Specific end use(s)

Chemical plating of copper and copper materials (brass, bronze) with palladium as catalyst.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Occupational exposure limits**

| CAS No | Substance | ppm | mg/m³ | fib/cm³ | Category | Origin |
|---|---|---|---|---|---|---|
| 7664-93-9 | Sulphuric acid | - | 0.05 | | TWA (8 h) | |

**Additional advice on limit values**

According to the currently valid lists, there are not further binding work place safety values.

### 8.2. Exposure controls

**Appropriate engineering controls**

Do not breathe gas/fumes/vapour/spray. Provide protection equipment (eye wash bottles, etc.).

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Tightly sealed safety glasses.

**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.

Suitable material:: Butyl rubber.
Thickness of glove material: >0,5 mm
penetration time (maximum wearing period): >480 min.

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**

Protective clothing: Chemical resistant safety shoes
The design of personal protective equipment must be selected specifically for the job, depending on the concentration and quantity of hazardous substances. The chemical resistance of the protective agents should be clarified with their suppliers.

**Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Protective respiration apparatus not using surrounding air (breathing apparatus) (DIN EN 133).

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | | |
|---|---|---|
| Physical state: | liquid | |
| Colour: | colourless | |
| Odour: | characteristic | |
| Melting point/freezing point: | | no data available |
| Boiling point or initial boiling point and boiling range: | | ca.100 °C |
| Flammability: | | no data available |
| Lower explosion limits: | | no data available |
| Upper explosion limits: | | no data available |
| Flash point: | | not applicable |
| Auto-ignition temperature: | | no data available |
| Decomposition temperature: | | no data available |
| pH-Value (at 20 °C): | | 1 |
| Viscosity / kinematic: | | no data available |
| Water solubility: | | no data available |

Solubility in other solvents

no data available

| | |
|---|---|
| Dissolution rate: | no data available |
| Partition coefficient n-octanol/water: | no data available |
| Dispersion stability: | no data available |
| Vapour pressure: | no data available |
| Vapour pressure: | no data available |
| Density: | 1,0-1,1 g/cm³ |
| Relative density: | no data available |
| Bulk density: | no data available |
| Relative vapour density: | no data available |
| Particle characteristics: | no data available |

### 9.2. Other information

**Information with regard to physical hazard classes**

Explosive properties

not Explosive.

Self-ignition temperature

Solid: no data available

Oxidizing properties

no data available

**Other safety characteristics**

Viscosity / dynamic: no data available

**Further Information**

no data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Substances or mixtures corrosive to metals.

### 10.2. Chemical stability

The product is stable under normal environmental conditions (room temperature).

### 10.3. Possibility of hazardous reactions

No dangerous reactivity under regular conditions.

### 10.4. Conditions to avoid

Protect against contaminations.

### 10.5. Incompatible materials

Oxidising substances
Base

### 10.6. Hazardous decomposition products

In case of fire hazardous decomposition products may be formed.
Carbon dioxide (CO2). Carbon monoxide. Sulfur oxides. Hydrogen chloride (HCl).

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

**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

**Irritation and corrosivity**

Skin corrosion/irritation: Causes severe skin burns and eye damage. (On basis of test data)
Serious eye damage/eye irritation: Causes serious eye damage. (On basis of test data)

**Sensitising effects**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: 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.
If swallowed danger of perforation of the esophagus and the stomach ( strong corrosive effects).

### 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

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

### 12.2. Persistence and degradability

No data available.

### 12.3. Bioaccumulative potential

No data available.

### 12.4. Mobility in soil

No data 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**

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 data available.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

**Disposal recommendations**

Disposal according to official regulations.
Consult the local waste disposal expert about waste disposal. According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

**Contaminated packaging**

Non-contaminated packages may be recycled. 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 3264 |
| **14.2. UN proper shipping name:** | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid) |
| **14.3. Transport hazard class(es):** | 8 |
| **14.4. Packing group:** | II |
| Hazard label: | 8 |


| | |
|---|---|
| Classification code: | C1 |
| Special Provisions: | 274 |
| 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 3264 |
| **14.2. UN proper shipping name:** | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid) |
| **14.3. Transport hazard class(es):** | 8 |
| **14.4. Packing group:** | II |
| Hazard label: | 8 |


| | |
|---|---|
| Classification code: | C1 |
| Special Provisions: | 274 |
| Limited quantity: | 1 L |
| Excepted quantity: | E2 |

**Marine transport (IMDG)**

| | |
|---|---|
| **14.1. UN number or ID number:** | UN 3264 |

**14.2. UN proper shipping name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid )

**14.3. Transport hazard class(es):** 8

**14.4. Packing group:** II

Hazard label: 8

Special Provisions: 274
Limited quantity: 1 L
Excepted quantity: E2
EmS: F-A, S-B
Segregation group: acids

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 3264

**14.2. UN proper shipping name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid)

**14.3. Transport hazard class(es):** 8

**14.4. Packing group:** II

Hazard label: 8

Special Provisions: A3 A803
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

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No special precautions known.

**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 75

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

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

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

**Additional information**

Regulation (EC) No. 1907/2006 (REACH)

Regulation (EC) No. 648/2004 [Detergents regulation]: not applicable
Regulation (EC) No. 1005/2009 on substances that lead to the depletion of the ozone layer: not applicable
Regulation (EC) No 2019/1021 on persistent organic pollutants: not applicable
Regulation (EC) No 649/2012 of the European Parliament and of the Council concerning the export and import of dangerous chemicals: This mix contains no chemicals that are subject to the export notification procedures (annex 1).
This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: none
This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH: none

**National regulatory information**

Water hazard class (D): 1 - slightly hazardous to water

**Additional information**

Observe in addition any national regulations!

**15.2. Chemical safety assessment**

For the following substances of this mixture a chemical safety assessment has been carried out:
sulphuric acid

## SECTION 16: Other information

**Changes**

Version 1,00 - 24.03.2021 - first creation
Version 1,01 - 28.09.2023 - General update
Version 1,02 - 02.07.2025 - Adjustments in sections 2

**Abbreviations and acronyms**

Met. Corr. 1: Corrosive to metals, hazard category 1
Skin Corr. 1A: Skin corrosion, sub-category 1A
Eye Dam. 1: Serious eye damage, hazard category 1
ADR: Accord européen sur le transport des marchandises dangereuses par Route ( European Agreement concerning the International Carriage of Dangerous Goods by Road)
BImSchV (Fed.Imm.Prot.Act): Directive on the Implementation of the Federal Immission Protection Act
CAS: Chemical Abstracts Service
DIN: Norm of the Deutsche Institut für Normung (German Institute for Standardization)
EC: Effective Concentration
EG: European Community (Europäische Gemeinschaft)
EN: European Norm
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of ships carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IMDG: International Maritime Code for Dangerous Goods
ISO: Norm of the International Standards Organization
CLP: Classification, Labeling, Packaging
IUCLID: International Uniform ChemicaL Information Database
LC: Lethal concentration
LD: Lethal dose
log Kow: Octanol/water partition coefficient
MARPOL: Maritime Pollution Convention = Convention for the Prevention of Maritime Pollution from Ships
OECD: Organisation for Economic Co-operation and Development
PBT: Persistent, bio-cumulative, toxic
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail
TRGS: Technische Regeln für Gefahrstoffe
UN: United Nations
VOC: Volatile Organic Compounds
vPvB: very persistent and very bio-cumulative
VwVwS: Administrative Regulation for Water Pollutants
WGK: German Water Hazard Class
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
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration
TLV: Threshold Limiting Value
STOT: Specific Target Organ Toxicity

**Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]**

| Classification | Classification procedure |
|---|---|
| Met. Corr. 1; H290 | On basis of test data |
| Skin Corr. 1; H314 | On basis of test data |
| Eye Dam. 1; H318 | On basis of test data |

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

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

**Further Information**

The information given in this safety data sheet is to describe the product's safety regulations. It is not for guaranteeing certain characteristics and is based on today's knowledge. The safety data sheet was generated upon information of pre-suppliers by:

asseso AG, Ottostraße 1, 63741, Aschaffenburg, Germany
Phone: +49 (0)6021 - 1 50 86-0, Fax: +49 (0)6021 - 1 50 86-77, E-Mail: eu-sds@asseso.eu, www.asseso.eu

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