

**CUPRABASE 50**

Version 1.0

SDS\_SG

SDS Number: 1760495

Revision Date: 11.11.2016

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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : CUPRABASE 50

Product code : 1760495

**Manufacturer or supplier's details**

Company : Atotech Deutschland GmbH

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Prepared by  
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Emergency telephone : Emergency Contact# +6531581074

**Recommended use of the chemical and restrictions on use**Recommended use : **Plating agents and metal surface treating agents**  
**Surface treatment**

Restrictions on use : For industrial use only.

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**2. HAZARDS IDENTIFICATION****GHS Classification**

Corrosive to Metals : Category 1

Skin corrosion/irritation : Category 1

Serious eye damage/eye irritation : Category 1

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Acute aquatic toxicity : Category 1

Chronic aquatic toxicity : Category 1

**GHS label elements**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**  
P234 Keep only in original container.  
P264 Wash skin thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
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/shower.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
P363 Wash contaminated clothing before reuse.  
P390 Absorb spillage to prevent material damage.  
P391 Collect spillage.

**Storage:**  
P405 Store locked up.  
P406 Store in corrosive resistant container with a resistant inner liner.

**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards which do not result in classification**

No information available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

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Chemical nature : Aqueous solution

**Hazardous ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
Copper Sulfate	7758-98-7	$\geq 10$ - $< 25$
Sulfuric acid	7664-93-9	$\geq 5$ - $< 10$

The remaining 100% of the recipe consists of non-hazardous and/or confidential components.

**4. FIRST AID MEASURES**

- General advice : Call a physician or poison control center immediately.  
Show this safety data sheet to the doctor in attendance.
- If inhaled : Call a physician or poison control center immediately.  
Move to fresh air.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.  
Take off all contaminated clothing immediately.  
Consult a physician.
- In case of eye contact : Consult a physician.  
In case of contact, immediately flush eyes with plenty of water for at least 30 minutes.
- If swallowed : Never give anything by mouth to an unconscious person.  
Call a physician or poison control center immediately.  
Do not induce vomiting without medical advice.
- Most important symptoms and effects, both acute and delayed : Causes serious eye damage.  
Causes severe burns.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
- Notes to physician : For specialist advice physicians should contact the Poisons Information Service.

**5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : No information available.
- Hazardous combustion products : Sulphur oxides
- Specific extinguishing method : Use a water spray to cool fully closed containers.

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ods Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment : In the event of fire, wear self-contained breathing apparatus.  
for fire-fighters

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Avoid contact with skin, eyes and clothing.  
Prevent unauthorized access.

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Avoid formation of aerosol.  
Soak up with inert absorbent material.  
Keep in suitable, closed containers for disposal.  
Clean contaminated surface thoroughly.  
Dispose of in accordance with local regulations.

**7. HANDLING AND STORAGE**

Advice on safe handling : For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Dispose of rinse water in accordance with local and national regulations.  
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
May be corrosive to metals.

Recommended storage temperature : -5 - 40 °C

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Sulfuric acid	7664-93-9	PEL (long term)	1 mg/m <sup>3</sup>	SG OEL
		PEL (short	3 mg/m <sup>3</sup>	SG OEL

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		term)		
		TWA (Thoracic fraction)	0.2 mg/m <sup>3</sup>	ACGIH

**Personal protective equipment**

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

In case of insufficient ventilation, wear suitable respiratory equipment.

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**Hand protection**

Material : Nitrile rubber  
Break through time : 480 min  
Glove thickness : 0.4 mm  
Manufacturer : e.g. KCL  
Recommendation : e.g. KCL Camatril® Velours 730

Material : Chloroprene  
Break through time : 480 min  
Glove thickness : 0.65 mm  
Manufacturer : e.g. KCL  
Recommendation : e.g. KCL Camapren® 720

Remarks : The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it. The information is based on our own tests, on data from literature and information from protective glove producers or is based on data obtained from similar substances.  
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature). Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Tightly fitting safety goggles  
Face-shield  
Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Protective measures / Engineering measures : Ensure adequate ventilation, especially in confined areas.

Hygiene measures : Avoid contact with skin, eyes and clothing.  
When using do not eat or drink.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: liquid
Color	: blue
Odor	: No information available.
Odor Threshold	: No data available
pH	: < 2
Melting point/range	: not determined
Boiling point/boiling range	: not determined
Flash point	: Not applicable
Evaporation rate	: No data available
Flammability (solid, gas)	: Not applicable
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapor pressure	: ca. 23 hPa (20 °C)
Relative vapor density	: No data available
Density	: 1.12 - 1.22 g/cm <sup>3</sup>
Bulk density	: No data available
Solubility(ies)	
Water solubility	: completely miscible
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Oxidizing properties	: Not applicable

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**10. STABILITY AND REACTIVITY**

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Reactivity	:	May be corrosive to metals.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Gives off hydrogen by reaction with metals. Potential for exothermic hazard
Conditions to avoid	:	To avoid thermal decomposition, do not overheat.
Incompatible materials	:	Bases Metals
Hazardous decomposition products	:	Sulfur oxides

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**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

Not classified based on available information.

**Product:**

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

**Ingredients:****Copper Sulfate:**

Acute oral toxicity : LD50 Oral (Rat): 308 mg/kg

**Skin corrosion/irritation**

Causes severe burns.

**Product:**

Remarks: Extremely corrosive and destructive to tissue.

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Product:**

Remarks: May cause irreversible eye damage.

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

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**Reproductive toxicity**

Not classified based on available information.

**STOT-single exposure**

Not classified based on available information.

**STOT-repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

**Further information****Product:**

Remarks: No data available

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**12. ECOLOGICAL INFORMATION****Ecotoxicity****Ingredients:****Copper Sulfate:**

Toxicity to fish : LC50: 0.11 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50: 0.02 mg/l  
aquatic invertebrates Exposure time: 48 h

M-Factor (Chronic aquatic : 10  
toxicity)

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects****Product:**

Additional ecological infor- : An environmental hazard cannot be excluded in the event of  
mation unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

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**13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with chemi-



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cal or used container.

Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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**14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

UN number : UN 3264  
Proper shipping name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
Technical name(s) : (Sulfuric acid, Copper Sulfate)  
Class : 8  
Packing group : III  
Labels : 8

**IATA-DGR**

UN/ID No. : UN 3264  
Proper shipping name : Corrosive liquid, acidic, inorganic, n.o.s.  
Technical name(s) : (Sulfuric acid, Copper Sulfate)  
Class : 8  
Packing group : III  
Labels : Corrosive  
Packing instruction (cargo aircraft) : 856  
Packing instruction (passenger aircraft) : 852

**IMDG-Code**

UN number : UN 3264  
Proper shipping name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
Technical name(s) : (Sulfuric acid, Copper Sulfate)  
Class : 8  
Packing group : III  
Labels : 8  
EmS Code : F-A, S-B  
Marine pollutant : yes

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

Not applicable for product as supplied.

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**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations:** This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.

Environmental Protection and Management Act and : Not applicable  
Environmental Protection and Management (Hazard-

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ous Substances) Regulations

**Substances currently restricted by WEEE/RoHS (European Directive 2012/19/EC , 2011/65/EC) or ELV (European Directive 2000/53/EC):**

PBDE	PBB	CrVI	Hg	Pb	Cd
-	-	-	-	-	-

Please note: Current legislation restricting the use of certain substances applies to „homogeneous material“ in finished articles being supplied to the market. Substances deposited during surface finishing may have a composition (weight percent) higher than the weight percent of the substance in the operating solution from which the deposit is made. Atotech encourages its customers to implement systems to ensure their finished products comply with the regulations in force.

**16. OTHER INFORMATION****Full text of other abbreviations**

(Q)SAR - (Quantitative) Structure Activity Relationship; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; OECD - Organization for Economic Cooperation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TDG - Transportation of Dangerous Goods; UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

Date format : dd.mm.yyyy

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SG / EN