



SAFETY DATA SHEET

ABC COPPER PLATING SOLUTION

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

1.1. Product identifier

Product name ABC 9712 COPPER PLATING SOLUTION

Product number

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

Identified uses Printed circuit board manufacture Plating agents and metal surface treating agents.

1.3. Details of the supplier of the safety data sheet

Supplier Mega Electronics
The Grip Ind Est
Linton
Cambridge
CB21 4XN
Tel: 01223 893900
sales@megauk.com

1.4. Emergency telephone number

Emergency telephone 01223 893900 (Mon-Fri 8.30-17.00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified

Health hazards Skin Corr. 1A - H314 Eye Dam. 1 - H318

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411

Classification (67/548/EEC or 1999/45/EC) C;R35. N;R51/53.

2.2. Label elements

Pictogram



Signal word Danger

Hazard statements H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

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Precautionary statements	<p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p>
Contains	SULPHURIC ACID
Supplementary precautionary statements	<p>P260 Do not breathe vapour/spray.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P310 Immediately call a POISON CENTER/doctor.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P391 Collect spillage.</p> <p>P501 Dispose of contents/container in accordance with national regulations.</p>

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SULPHURIC ACID 20%		
CAS number: 7664-93-9	EC number: 231-639-5	REACH registration number: 01-2119458838-20-XXXX
Classification Skin Corr. 1A - H314 Eye Dam. 1 - H318	Classification (67/548/EEC or 1999/45/EC) C;R35	
COPPER SULPHATE PENTAHYDRATE 1-5%		
CAS number: 7758-99-8	EC number: 231-847-6	REACH registration number: 01-2119520566-40-XXXX
M factor (Acute) = 10	M factor (Chronic) = 1	
Classification Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC or 1999/45/EC) Xn;R22. Xi;R36/38. N;R50/53.	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Remove affected person from source of contamination. Get medical attention.
Inhalation	Move affected person to fresh air at once. Get medical attention. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

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Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention immediately. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
Skin contact	Remove affected person from source of contamination. Rinse immediately with plenty of water. Remove contaminated clothing. Get medical attention promptly if symptoms occur after washing.
Eye contact	Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

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

Inhalation	May cause respiratory irritation.
Skin contact	This product is strongly corrosive.
Eye contact	May cause chemical eye burns.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Thermal decomposition or combustion products may include the following substances: Very toxic or corrosive gases or vapours.

5.3. Advice for firefighters

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Do not touch or walk into spilled material. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. Inform authorities if large amounts are involved.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

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7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store in closed original container at temperatures between 5°C and 30°C.

Storage class Chemical storage.

7.3. Specific end use(s)

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

COPPER SULPHATE PENTAHYDRATE

Long-term exposure limit (8-hour TWA): 1(Cu) mg/m³

Short-term exposure limit (15-minute): 2(Cu) mg/m³

SULPHURIC ACID (CAS: 7664-93-9)

DNEL Industry - Inhalation; Short term local effects: 0.1 mg/m³
Industry - Inhalation; Long term local effects: 0.05 mg/m³

PNEC - Fresh water; 0.0025 mg/l
- Marine water; 0.00025 mg/l
- STP; 8.8 mg/l
- Sediment (Freshwater); 0.002 mg/kg
- Sediment (Marinewater); 0.002 mg/kg

COPPER SULPHATE PENTAHYDRATE (CAS: 7758-99-8)

PNEC - Fresh water; 7.8 µg/l
- Marine water; 5.2 µg/l
- Soil; 65 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Eye/face protection

The following protection should be worn: Chemical splash goggles or face shield.

Hand protection

Use protective gloves.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station. Do not smoke in work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap and water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

Respiratory protection

Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

ABC COPPER PLATING SOLUTION**SECTION 9: Physical and Chemical Properties****9.1. Information on basic physical and chemical properties**

Appearance	Clear liquid. Liquid.
Colour	Blue.
pH	pH (concentrated solution): <1
Relative density	1.19 @ @ 20°C
Solubility(ies)	Soluble in water.

9.2. Other information**SECTION 10: Stability and reactivity****10.1. Reactivity****10.2. Chemical stability**

Stability	Stable at normal ambient temperatures.
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10.3. Possibility of hazardous reactions**10.4. Conditions to avoid**

Conditions to avoid	Avoid contact with the following materials: Strong alkalis.
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10.5. Incompatible materials**10.6. Hazardous decomposition products**

Hazardous decomposition products	None at ambient temperatures.
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SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity - oral**

ATE oral (mg/kg)	10,416.67
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Inhalation	May cause respiratory system irritation.
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Ingestion	May cause chemical burns in mouth and throat.
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Skin contact	Causes burns.
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Eye contact	Causes burns. Risk of serious damage to eyes.
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Acute and chronic health hazards	Swallowing concentrated chemical may cause severe internal injury. RESPIRATORY SYSTEM. Serious damage to the lining of nose, throat and lungs.
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Toxicological information on ingredients.**SULPHURIC ACID****Acute toxicity - oral**

Acute toxicity oral (LD ₅₀ mg/kg)	2,140.0
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Species	Rat
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ATE oral (mg/kg)	2,140.0
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COPPER SULPHATE PENTAHYDRATE

Acute toxicity - oral

**Acute toxicity oral (LD₅₀
mg/kg)** 300.0

Species Rat

Inhalation Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Skin contact Harmful in contact with skin.

Eye contact Irritating to eyes.

Acute and chronic health hazards May cause respiratory system irritation. Irritating to skin. The product irritates mucous membranes and may cause abdominal discomfort if swallowed.

SECTION 12: Ecological Information

Ecotoxicity The product contains substances which are toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Ecological information on ingredients.

COPPER SULPHATE PENTAHYDRATE

Ecotoxicity The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Toxicity Concentrations which give low pH may be fatal to fish and aquatic organisms

Ecological information on ingredients.

SULPHURIC ACID

Acute toxicity - fish LC₅₀, 96 hours: 794 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 24 hour: 29 mg/l, Daphnia magna

COPPER SULPHATE PENTAHYDRATE

Toxicity Very toxic to aquatic organisms.

Acute aquatic toxicity

LE(C)₅₀ 0.01 < L(E)C₅₀ ≤ 0.1

M factor (Acute) 10

Acute toxicity - fish LC₅₀, 96 hours: 0.39 mg/l, Fish

Chronic aquatic toxicity

NOEC 0.01 < NOEC ≤ 0.1

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Degradability Non-rapidly degradable

M factor (Chronic) 1

12.2. Persistence and degradability

12.3. Bioaccumulative potential

Ecological information on ingredients.

SULPHURIC ACID

Bioaccumulative potential The product is not bioaccumulating.

12.4. Mobility in soil

Mobility The product is soluble in water.

Ecological information on ingredients.

SULPHURIC ACID

Mobility The product is soluble in water.

COPPER SULPHATE PENTAHYDRATE

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 3264

UN No. (IMDG) 3264

UN No. (ICAO) 3264

14.2. UN proper shipping name

Proper shipping name (ADR/RID) CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

Proper shipping name (IMDG) CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

Proper shipping name (ICAO) CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

Proper shipping name (ADN) CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

14.3. Transport hazard class(es)

ADR/RID class 8

ADR/RID subsidiary risk

ADR/RID label 8

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IMDG class 8

IMDG subsidiary risk

ICAO class/division 8

ICAO subsidiary risk

Transport labels

**14.4. Packing group**

ADR/RID packing group II

IMDG packing group II

ICAO packing group II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

**14.6. Special precautions for user**

EmS F-A, S-B

Emergency Action Code 2X

Hazard Identification Number 80
(ADR/RID)

Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

National regulations Health and Safety at Work etc. Act 1974 (as amended).
The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).

Guidance Workplace Exposure Limits EH40.

15.2. Chemical safety assessment**SECTION 16: Other information**

Key literature references and sources for data Dangerous Properties of Industrial Chemicals, N.Sax, Croner's: Dangerous Substances. Croner's: Emergency Spillage Guide. Croner's: Substances Hazardous to Health. Material Safety Data Sheet, Misc. manufacturers.

Revision date 19/02/2016

Revision 1

Supersedes date 18/02/2009

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Risk phrases in full

R22 Harmful if swallowed.

R35 Causes severe burns.

R36/38 Irritating to eyes and skin.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazard statements in full

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.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.