

Fine Etch Crystals

Part Number: 600-014 - 5 litre mix

Part Number: 600-033- 2 litre mix

Description

Fine etch crystals for producing a clean, non staining, solution for etching copper printed circuit boards.

Preparation

BEFORE HANDLING WEAR PROTECTIVE CLOTHING AND READ THE HEALTH AND SAFETY INFORMATION ON THE REAR OF THIS SHEET.

The powder will make 5 litres of etching solution. Add 4.5 litres of hot, 45°C – 50°C water to a suitable container. Slowly stir in the crystals until dissolved. add the remaining hot water to make up the 5 litres of etching solution. Finally transfer the liquid to a suitable etching tank such as Mega's PA series tanks.

Usage

For safe and efficient etching, always use at approximately 45°C in a Mega temperature controlled Bubble Etch Tank. Normally copper PCB laminate will etch in 5 – 10 minutes. Depending on usage the etching solution will last between 3 and 8 weeks in a tank. When the etching time becomes particularly long either replace the liquid or alternatively the solution life can be slightly extended by adding some more crystals.

Health and Safety

Always wear protective clothing. Full Health and Safety details are on the rear of this instruction sheet. A report by an occupational hygienist concluded that under the test conditions, **NO LOCAL VENTILATION IS REQUIRED** using this etchant in Mega's PCB processing tanks. Copies of the report are available on request.

Associated Products

A range of associated products for use with this etchant are featured in our free product catalogue. Please telephone us for your free copy.



Mega Electronics Limited

Mega House, Grip Industrial Estate,
Linton, Cambridge, CB21 4XN. England.

Telephone: +44 (0) 1223 893900 Fax: +44 (0) 1223 893894
email: sales@megauk.com Web: www.megauk.com

SECTION 1 PRODUCT IDENTIFICATION & MANUFACTURE

NAME: SENO 3207 FINE ETCH CRYSTALS. PART Nos.: 600-014 – 5 LITRES
600-033 – 2 LITRES

MANUFACTURER'S/SUPPLIERS NAME, REGISTERED ADDRESS AND EMERGENCY TEL NO:

MEGA ELECTRONICS LTD., TELEPHONE: +0044 01223 893900
THE GRIP INDUSTRIAL ESTATE,
LINTON, CAMBRIDGE.
ENGLAND, CB21 4XN

ORGANISATIONS NAME & ADDRESS AT WHICH MANUFACTURED

KEPETS GMBH. TEL: 0049 6445 5810
NORDSTRASSE 24
D-35641 SCHÖFFENGRUND
LAUFDORF.
GERMANY.

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT %BY WT CAS & EEC Nos.: HAZARD R PHRASE NOS:

di-SODIUM	7775-27-1	Xn	8 22 36/37/38
PEROXODISULPHATE	231-892-1	O.	
HEXAHYDRATE			

SECTION 3 HAZARDS IDENTIFICATION

HAZARDOUS IF SWALLOWED. IRRITATING TO EYES AND SKIN.
DANGER OF DECOMPOSITION IN EXTREME HEAT.

SECTION 4 FIRST AID MEASURES

INHALATION:
MOVE TO FRESH AIR AND KEEP AT REST. IF SYMPTOMS OF COUGHING AND IRRITATED MUCOUS MEMBRANE PERSIST SEEK MEDICAL ATTENTION.

SKIN CONTACT:
REMOVE CONTAMINATED CLOTHING. WASH AFFECTED AREA WITH SOAP AND WATER. IF IRRITATION OCCURS AND PERSISTS, SEEK MEDICAL ATTENTION.

EYE CONTACT:
FLUSH WITH WATER FOR 15 MINUTES. SEEK MEDICAL ATTENTION

INGESTION:
RINSE MOUTH OUT WITH WATER. DO NOT INDUCE VOMITING. SEEK MEDICAL ATTENTION.

MEDICAL NOTES: IF USED SOLUTION CONTAINING COPPER HAS BEEN INGESTED, CHECK KIDNEY FUNCTION.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
WATER, FOAM, POWDER

COMBUSTION PRODUCTS
N/A

FIRE/EXPLOSION SCENARIOS
PRODUCT IS AN OXIDISING AGENT
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS
SELF CONTAINED BREATHING APPARATUS SHOULD BE WORN.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTION
REFER TO SECTION 8; PERSONAL PROTECTION

ENVIRONMENTAL PRECAUTIONS
AVOID ENTRY INTO DRAINS & WATERWAYS.

WORKPLACE PRECAUTIONS N/A

METHODS FOR CLEARING UP: SWEEP AND GATHER PRODUCT; AVOID GENERATION OF DUST.

SECTION 7 HANDLING AND STORAGE

HANDLING PRECAUTIONS
STORE IN COOL DRY PLACE, AVOID DAMP AND EXTREME HEAT. AVOID DUST CREATION WHEN MIXING.

STORAGE INCLUDING ANY SPECIAL REQUIREMENTS (TEMPERATURE, VENTILATION, ETC)
AVOID COMBUSTIBLES. KEEP AWAY FROM ALKALINE

SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS/ VENTILATION
ENSURE ADEQUATE VENTILATION WHEN USING.

RESPIRATORY PROTECTION
WEAR MASK WHEN MIXING. RECOMMENDED TYPE EN149 2001 FFP2

EYE PROTECTION
RECOMMENDED: PROTECTIVE GOGGLES

HAND PROTECTION
RECOMMENDED IMPERVIOUS GLOVES e.g. NITRILE.

SKIN PROTECTION
WEAR SUITABLE PROTECTIVE CLOTHING

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: POWDER **COLOUR:** WHITE

ODOUR: WEAK OF OXYGENE/ OZONE **ACIDITY/ALKALINITY pH:** 4.3
(Molar aqueous solution)

BOILING POINT Im1-°C:
MELTING POINT °C: 180°C

FLASH POINT °C (Open/Closed Cup): N.A.
AUTOIGNITION TEMP °C: N.A.

THERMAL DECOMPOSITION TEMP °C:
OXIDISING PROPERTIES:

EXPLOSIVE PROPERTIES: NON FLAMMABLE
EXPLOSIVE LIMITS AT 25°C (% VOL IN AIR)

LOWER: **UPPER:**

RELATIVE DENSITY: 2.59gr / ccm AT 20°C **SOLID CONTENT** %:

SOLUBILITY IN WATER: 556g / L IN WATER AT 20°C
ph VALUE: 4.3 AT 20°C MIXED 250g / 1 litre WATER

VOLATILE CONTENT

VAPOUR PRESSURE mmHg at 20°C
RELATIVE VAPOUR DENSITY (air = 1):
(of principle component and name):

EVAPORATION RATE **CONDUCTIVITY:**
(n-butyl acetate = 1):

SECTION 10 STABILITY AND REACTIVITY PROPERTIES

CONDITIONS TO AVOID: AVOID EXTREME HEAT AND DAMPNES

MATERIALS TO AVOID:

HAZARDOUS DECOMPOSITION PRODUCTS:
INCLUDE SULPHUR DIOXIDE AND TRIOXIDE

SECTION 11 TOXICOLOGICAL INFORMATION

EFFECT OF EYE CONTACT:
IRRITATION.
EFFECT OF SKIN CONTACT:
SLIGHT IRRITATION WHEN IN REPEATED CONTACT WITH SKIN, REPEATED CONTACT CAN CAUSE DEGREASING AND LEAD TO DERMATITIS
EFFECT OF INHALATION:
HIGH CONCENTRATIONS MAY LEAD TO LOSS OF CONSCIOUSNESS
EFFECT OF INGESTION: HARMFUL – SEEK IMMEDIATE MEDICAL ATTENTION

SECTION 12 ECOLOGICAL INFORMATION

Possible environmental effects and behaviour/ODP/aquatic toxicity.
EC50 357 mg /L
LC50 323 mg / L

SECTION 13 DISPOSAL CONSIDERATIONS

Safe disposal of product, its residues and packaging materials:
In accordance with local regulations via licensed contractor.
See also Sections 7 & 8 for handling precautions and personal protection where applicable.

SECTION 14 TRANSPORT INFORMATION

UN Nr: 1505 PACKING GROUP III
HAZARD CATEGORY: 5.1

SECTION 15 REGULATORY INFORMATION

HAZARD SYMBOL: Xn – HARMFUL.
O – OXIDISING
CONTAINS: SODIUMPERSUPLHATE)

RISK PHRASE Nos. & WORDS:
8 Contact with combustible materials may cause fire.
22 Harmful if swallowed.
36/37/38 Irritating to eyes respiratory system and skin.
42/43 May cause sensitisation by inhalation and skin contact

SAFETY PHRASE Nos. & WORDS:
S17 Keep away from combustible material.
S22 Do not breathe dust
S26 In case of contact with eyes / rinse immediately with plenty of water and seek medical advice
S37 Wear suitable gloves

OTHER INFORMATION

EEC Guideline 91/155/EEC refers
Publication refs: Compiled in accordance with CHIP Regulation 2002. HSC approved Code of Practice, Document L37

SECTION 16 OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

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