

DATA SHEET IMMERSIVE TIN POWDER

13-2006 90 grams for 1 litre

13-2007 450 grams for 5 litres

Description

A powder for making an immerse tin solution for plating a smooth even surface of tin on copper circuits at room temperature. A tin plated circuit protects the circuit from oxidisation and greatly improves solderability.

Mixing

Although used at room temperature, the powder must be dissolved with hot (50°C-60°C) distilled water. If using the 13-2006 90g for 1 litre Put 0.25 litres of cold water into the bottle and then fill to the top with nearly boiling water from a kettle. Screw the cap back on tightly and then shake vigorously. Leave for 5 minutes and then shake again. Once dissolved the liquid can be poured into a clean tray and allowed to cool before using at room temperature. If the 13-2007 450g for 5 litre mix is being used the hot water should be added to a suitable clean container or directly to a Vero heated process tank and add cold water and set the temperature to 50-60°C. Set to 50°C and when up to temperature the powder slowly poured in whilst stirring constantly. When dissolved the temperature should be set to room temperature (minimum 20°C) or in the case of Labstations or Bench Lines, the heater turned off and the liquid allowed to cool before using.

Usage

Firstly it is important that the copper is perfectly clean and free from oxidisation. After the photoresist has been stripped from the circuit and it has been washed and dried it should be scrubbed clean with a PC182 scrubbing block (part no. 13-2008). Then bang the board and rub with a hard clean cloth to remove any particles left by the scrubbing block and immediately immerse in the tin.

With fresh solution, after 20 seconds a coating of 0.2 microns will be plated, 0.8-1.0 microns after 5 minutes and 4-5 microns after 3 hours. When the initial area of copper has been plated the tin will begin to plate tin on tin. It is therefore uneconomical to leave a board immersed for too long, overnight for instance. For optimum results the board should be immersed in cold water as soon as it is removed from the tin. This will stop the tinning process, the board should then be washed in hot water (40°C+) and rubbed dry with a clean cloth before air drying with a hair dryer or other hot air blower.

Capacity and Shelf Life

1 litre of fresh solution will plate 30-40 complete copper Eurocards with 1-1.5 microns of tin or 10 Eurocards with 5 microns. As an average etched circuit has 30% copper a figure of 100-135 and 35 Eurocards respectively is a more accurate figure. The solution will have up to six months shelf life if used in a Mega process tank.

Health and Safety

Full health and safety details are on the associated MSDS sheet. A report by an occupational hygienist concluded that, under the test conditions, NO LOCAL EXHAUST VENTILATION IS REQUIRED using this tin in our processing tanks.

Associated Products

A range of associated products for use with this tin are detailed in our free product catalogue. Please telephone us for your copy, view or download via our web site:



Unit 25 Solent Ind. Estate Shamblehurst Lane Hedge End Southampton
Hants : SO30 2FY . Tel No.: 01489 776930 Fax: 01489-776938
web site: www.verotl.co.uk and www.verodirect.com

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BELIEVED TO BE ACCURATE - HOWEVER NO GUARANTEE OR WARRANTY EXPRESSED OR IMPLIED IS GIVEN

SECTION 1 PRODUCT

IDENTIFICATION AND MANUFACTURE

NAME: PC168 IMMERSION TIN POWDER
PART NUMBERS 13-2006 AND 13-2007
SUPPLIERS NAME, REGISTERED ADDRESS
AND EMERGENCY TEL NO:
VERO TECHNOLOGIES LTD, UNIT25
SOLENT INDUSTRIAL ESTATE,
SHAMBLEHURST LANE, HEDGE END,
HANTS. SO30 2FY. 01489776930
ORGANISATIONS NAME & ADDRESS AT
WHICH MANUFACTURED:
KEPETS GMBH
NORDSTR 24
D35641 SCHOFFENGRUND
GERMANY
TEL NO: (0049) 6445 5023/4

SECTION 2

COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT %BY WT CAS & EEC NOS:
HAZARD R PHRASE NOS:
THIOUREA 27 62-56-6 XN R22 & R40
200-543-5
STANNOUS 15 7772-99-8
CHLORIDE EEC: NCC

SECTION 3 HAZARDS

IDENTIFICATION

HARMFUL. HAZARDOUS TO HEALTH IF SWALLOWED. INORGANIC SUBSTANCE. AVOID ENTRY INTO DRAINAGE SYSTEM.

SECTION 4 FIRST AID MEASURES

INHALATION: REMOVE FROM EXPOSURE TO FRESH AIR.
SKIN CONTACT: WASH IMMEDIATELY WITH PLENTY OF WATER.
EYE CONTACT: IRRIGATE THOROUGHLY WITH WATER. SEEK MEDICAL ADVICE.
INGESTION: WASH OUT MOUTH THOROUGHLY WITH WATER AND GIVE WATER TO DRINK.
MEDICAL NOTES:

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
WATER SPRAY, FOAM, DRY POWDER, CO2.
COMBUSTION PRODUCTS
SO2 RELEASED IN CASE OF FIRE.
FIRE/EXPLOSION SCENARIOS
NONE REQUIRED.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: NONE

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTION
WEAR RESPIRATORY PROTECTION. PREVENT SKIN AND EYE CONTACT.
ENVIRONMENTAL PRECAUTIONS
PREVENT ENTRY INTO DRAINAGE SYSTEM.
WORKPLACE PRECAUTIONS
DO NOT EAT, DRINK OR SMOKE.
METHODS FOR CLEARING UP
DRY: COLLECT AND PUT INTO SUITABLE CONTAINER FOR DISPOSAL. LIQUID: ABSORB IN SAND OR OTHER INERT MATERIAL AND PUT INTO SUITABLE CONTAINER FOR DISPOSAL.

SECTION 7 HANDLING AND STORAGE

HANDLING PRECAUTIONS
HARMFUL IF SWALLOWED. ALWAYS WEAR SUITABLE PROTECTIVE CLOTHING. NO LOCAL EXHAUST VENTILATION IS REQUIRED.
STORAGE INCLUDING ANY SPECIAL REQUIREMENTS (TEMPERATURE, VENTILATION, ETC)
STORE ONLY IN SUITABLE POLYETHYLENE CONTAINERS ENSURING THEY ARE TIGHTLY CLOSED. STORE AT ROOM TEMPERATURE. KEEP FROM FREEZING WHEN MIXED. NO LOCAL EXHAUST VENTILATION REQUIRED.

SECTION 8 EXPOSURE

CONTROL/PERSONAL PROTECTION
ENGINEERING CONTROLS/VENTILATION
NO LOCAL EXHAUST VENTILATION
REQUIRED IF USED ACCORDING TO
INSTRUCTIONS.

RESPIRATORY PROTECTION
PROTECTIVE MASK REQUIRED WHEN
MIXING.

EYE PROTECTION
WEAR SAFETY GLASSES.

HAND PROTECTION
WEAR RUBBER GLOVES.

SKIN PROTECTION
ALWAYS OBSERVE ALL USUAL
PRECAUTIONS WHEN HANDLING
CHEMICALS. DO
NOT EAT, DRINK OR SMOKE WHEN
HANDLING.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: POWDER (SOLID) COLOUR:
WHITE TO LIGHT BROWN

ODOUR: WEAK OF HYDROGEN SULPHIDE
ACIDITY/ALKALINITY PH: 1.5 AT 20°C
(90GR/LTR) (H2O)

BOILING POINT°C: MELTING POINT °C:

FLASH POINT °C (OPEN/CLOSED CUP):

AUTOIGNITION TEMP °C:

THERMAL DECOMPOSITION TEMP °C:

OXIDISING PROPERTIES:

EXPLOSIVE PROPERTIES:

EXPLOSIVE LIMITS AT AT 25°C (% VOL IN
AIR) LOWER: UPPER:

RELATIVE DENSITY: 0.87G/CM³ SOLID
CONTENT %:

SOLUBILITY IN WATER: AT 20°C
100G/LITRE SOLUBILITY IN ORGANIC
SOLVENTS:

WATER AT 20°C 100G/LITRE

WATER AT 60°C 220GLITRE

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:

MATERIALS TO AVOID:

ALKALINE SOLUTIONS.

HAZARDOUS DECOMPOSITION
PRODUCTS:

IN CASE OF FIRE SO₂.

HAZARDOUS POLYMERISATION -
MAY/WILL/NOT OCCUR - STATE
CONDITION TO AVOID
WILL NOT OCCUR.

SECTION 11 TOXICOLOGICAL INFORMATION

EFFECT OF EYE CONTACT:

IRRITATING EFFECT, NO ACUTE
TOXICITY.

EFFECT OF SKIN CONTACT:

IRRITATING EFFECT, NO ACUTE
TOXICITY.

EFFECT OF INHALATION:

IRRITATING EFFECT, NO ACUTE
TOXICITY.

EFFECT OF INGESTION:

HARMFUL EFFECT.

ANY KNOWN DATA ON SENSITISATION
CARCINOGENICITY, MUTAGENICITY,
TERATOGENICITY, OR NARCOSIS.

THIOUREA IS CURRENTLY ON THE
SUSPECTED CARCINOGEN LIST.

IRREVERSIBLE

EFFECTS ARE POSSIBLE.

SECTION 12 ECOLOGICAL INFORMATION

NO ACUTE TOXICITY BUT AVOID ENTRY
INTO DRAINAGE SYSTEM/GROUND.

INORGANIC SUBSTANCE.

SECTION 13 DISPOSAL CONSIDERATIONS

SOLUTIONS AND UNUSED POWDERS
SHOULD BE DISPOSED OF ACCORDING
TO

LOCAL GOVERNMENT REGULATIONS VIA
AUTHORISED WASTE DISPOSAL
AGENCIES. TREAT AS WEAK ACID.

SECTION 14 TRANSPORT INFORMATION

UN-NR: 2811 IATA CLASS: 6.1 PACKING
GROUP: III

SECTION 15 REGULATORY INFORMATION

PRODUCT LABEL DETAILS - PER CHIP
REGULATION 9

PRODUCT TRADE NAME/DESIGNATION:
IMMERSE TIN POWDER

CONTAINS: THIOUREA.

HAZARD SYMBOL: XN

RISK PHRASE NOS & WORDS:

R22 HARMFUL IF SWALLOWED. R40
POSSIBLE RISK OF IRREVERSIBLE
EFFECTS.
SAFETY PHRASE NOS & WORDS:
S22 DO NOT BREATHE DUST. S41 IN
CASE OF FIRE AND/OR EXPLOSION DO
NOT BREATHE FUMES. S24/25 AVOID
CONTACT WITH SKIN AND EYES. S36
WEAR SUITABLE PROTECTIVE CLOTHING.
S26 IN CASE OF CONTACT WITH EYES,
RINSE

IMMEDIATELY AND SEEK MEDICAL
ADVICE. S28 AFTER CONTACT WITH
SKIN, WASH IMMEDIATELY WITH PLENTY
OF SOAP AND WATER.

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RECOMMENDATIONS CONTAINED HEREIN
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EXPRESSED OR IMPLIED IS GIVEN.
VERSION 01/02 (UPDATED 0509)