CLARK INTERNATIONAL
PROMOTING EXCELLENCE IN THE ELECTRONICS INDUSTRY

PRODUCT DATA SHEET

PC 421 THERMAL MARKING INK – ALL COLORS

DESCRIPTION:

PC 421 Marking Ink is a two part, thermally cured, epoxy marking ink for printing circuit boards. It has been designed for excellent adhesion to most solder masks and substrates, including photodefineable solder masks. PC 421 Marking Ink exhibits excellent flow and leveling characteristics, and maintains optimum screening rheology throughout the pot life of the mixture. The colors do not degrade or darken upon cure or aging. Hot air leveling will not degrade the ink's bright white color when W Hardener is used.
PC 421 Marking Ink complies with EU Directive 2003/11/EC. PC 421 does not contain any (O)BDE, Lead, Cadmium, or Hexavalent Chromium

SPECIFICATIONS:

PC 421 Marking Ink Meets the Following Specification:

- A-A 56032 Type II (Supercedes MIL-I-43553B)
- Bellcore TR-TSY-00078, Paragraph 13.2

COLORS:		White, Yellow, Black
% SOLIDS:		≥ 85%
ODOR:		Mild
APPEARANCE:	Uncured:	Pigmented Thixotropic semi-gel
	Cured:	Smooth, defect free gloss
POT LIFE:	C Hardener:	Two Days
	W Hardener:	Two Weeks
SHELF LIFE:		Over One Year

DIRECTIONS FOR USE:

Surface Preparation:

The board should be free of all grease, oxidation, and other forms of surface Contamination. A soft mechanical scrub is recommended, followed by hot water rinse and thorough hot air-dry. If a chemical dip is required, it should be followed by the scrub step.

Mixing:

Mix 100 parts of PC 421 Marking Ink with 12.5 parts by weight of C or W Hardener. Pot life (after mixing) for optimum screening performance is approximately two days with the C Hardener and greater than 2 weeks with W Hardener (depending on storage conditions).

Screening Process

Mesh:	250 – 305 mesh stainless steel or polyester monofilament tensioned to 22 – 24 N/cm_ is recommended.
Emulsion:	Consult your screen distributor for the most suitable, lacquer proof emulsions.
Squeegee:	A 60-70-durometer squeegee is recommended. It should be well-sharpened and 10-20 degrees from vertical.
Wash up:	Solvents such as glycol ethers, methylene chloride, or 1,1,1-trichloroethane may be used.

Cure Cycle:

12.5 pph C Hardener 35 minutes per side at 300°F (150°C)
12.5 pph W Hardener 25 minutes at 275 to 300°F (135 to 150°C)

STORAGE AND SHELF LIFE:

For optimum performance, PC 421 Marking Ink should be stored at temperatures no lower than 65°F (18°C), and no higher than 90°F (32°C). Material stored at temperatures outside the required range should be kept at 75-80°F (24-27°C) for at least 24 hours prior to use for designed screening properties. There is no limitation on the shelf life of the uncatalyzed material if stored properly. For optimum screening performance, 3 months is recommended.

CAUTION:

Keep away from heat and flames. May cause irritation. Avoid contact with eyes or prolonged contact with skin. Wash exposed areas with soap and water; flush eyes with water for 15 minutes. Wash clothes before re-use. Use adequate ventilation, avoid exposure for long periods of time. If inhaled, remove to fresh air, give oxygen and artificial respiration, if needed. Do not take internally. If swallowed, give water or milk, induce vomiting. Seek medical attention.

For more information, contact
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