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TEMPORARY SOLDER RESISTS

SPOT-ON, COPPER SPOT-ON & AQUA SPOT-ON

Multicore Temporary Solder Resists are designed to be used on printed circuit boards prior to soldering and will withstand fluxing and wave soldering operations.

- **Peelable and water soluble versions available**
- **Withstand high temperatures**
- **Long shelf life**
- **Thixotropic - holds position**

APPLICATIONS

Multicore Temporary Solder Resists have been formulated for use in most commonly found forms of mask application. The three formulations are suitable for different application and removal techniques.

Copper Spot-On is suitable for hand, robotic, pneumatic or template screening application and is simply removed after soldering by peeling off. It is particularly suited for use on copper, gold, silver or pre-soldered surfaces.

Spot-On is a similar product which can also be applied by brush. It may be used on copper but some surface degradation and/or drop in solderability may be experienced. In this case, Copper Spot-On is recommended.

Aqua Spot-On is a water soluble product which should be applied by hand dispensing and removed during the cleaning operation.

RECOMMENDED OPERATING CONDITIONS

The substrate should be free from grease, oil and particulate matter.

Spot-On should be applied at a liquid coating thickness of 2.0mm (80 thou) to ensure a coherent film for ease of subsequent removal as it dries to a thinner coating. It will dry in 40 minutes at 80°C (176°F) or 2 hours at ambient temperature.

For best results, **Copper Spot-On** should be applied at a thickness of 0.5-1.0mm (20-40 thou). Drying times depend upon ambient humidity but as a guide, under normal conditions, Copper Spot-On is ready for the soldering process in one hour. This may be accelerated to 30 minutes at 65°C (150°F) or 20 minutes at 80°C (180°F). The mask will change from an opaque pink to a translucent red when completely cured.

Copper Spot-On does not need to be completely dry to withstand soldering temperatures, however it should be completely translucent before removal is attempted.

Aqua Spot-On should be applied at a thickness of 0.25-0.4mm (10-15 thou). As with Copper Spot-On, drying times are dependent upon ambient conditions. Aqua Spot-On will cure in one hour at 25°C (77°F) or 30 minutes at 80°C (176°F). If required, Aqua Spot-On may be thinned before application using deionised water. Drying times and the softness of the mask may be modified to suit ambient conditions as follows:

(a) Very dry operating environments may benefit by adding small amounts of glycerine to Aqua Spot-On. This will soften the mask and reduce the required washing time.

(b) Extremely humid operating environments (greater than 90% RH) will benefit by adding small amounts of iso-propanol to Aqua Spot-On. This will reduce the drying time and increase the hardness of the mask.

Over curing of these products should be avoided to prevent removal problems caused by blistering of the mask.

PROPERTIES

	Spot-On	Copper Spot-On	Aqua Spot-On
Colour	Opaque white liquid	Opaque pink liquid	Opaque blue liquid
Odour	Ammoniacal	Mild, acrylic	Mild
Recommended application thickness	2.0mm (80 thou)	0.5-1.0mm (20-40 thou)	0.25-0.4mm (10-15 thou)
Typical cure time:			
- ambient	2 hr	1 hr	1 hr
- 65°C	-	30 min	-
- 80°C	40 min	20 min	30 min
Removal	Peel off (not soluble in water or other solvents)	Peel off (not soluble in water or other solvents)	Water soluble

PACKAGING

250ml hand-application squeeze bottles with nozzle.

HEALTH AND SAFETY

WARNING: The following information is for guidance only and users must refer to the Material Safety Data Sheets relevant to Multicore Spot-On, Copper Spot-On and Aqua Spot-On before use.

Multicore Temporary Solder Resists are considered to be of low hazard in normal use. However, the following sensible precautions should be taken.

Fumes / Vapours: Avoid excessive inhalation of vapours which may give rise to irritation of the throat and respiratory system if allowed to accumulate. Always use these products in well ventilated areas. If vapour concentrations are excessive, the use of local exhaust ventilation is recommended.

Personal Protection and Hygiene: Suitable protective clothing should be worn to prevent contact with skin and eyes. If the materials come into contact with the skin, the affected area should be cleaned with a proprietary hand cleanser followed by washing with soap and water. If the materials come into contact with the eyes, they should be irrigated thoroughly with water for at least 10 minutes and medical attention sought. Eating, drinking and smoking should not be permitted in the working area and hands should be washed with soap and warm water before eating.

Fire Hazards and Precautions: Multicore Temporary Solder Resists are non flammable but will burn if exposed to naked flames giving off acrid smoke, irritating fumes and toxic gases. Smoking must not be permitted in the working area. Carbon dioxide, alcohol resistant foam or dry powder extinguishers may be used if the materials catch fire.

Spillage and Waste Disposal:

Spot-On	- Allow spilt material to solidify, then scrape up.
Copper Spot-On / Aqua Spot-On	- Soak up spillage with inert absorbent material. Store waste in closed containers.

Dispose of waste materials in accordance with local or national regulations.

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