

3M™ Water-Soluble Wave Solder Tape 5414, Transparent

Product Description

3M™ Water-Soluble Wave Solder Tape 5414 has a water-soluble poly-vinyl alcohol-backing and a synthetic water-soluble adhesive. It is designed for use in masking gold finger areas on printed circuit boards during the wave soldering and then will dissolve completely away during typical in-line aqueous cleaning processes.

Key Features

- No adhesive residue after removal
- Low static upon liner release and when taping circuit board
- Moisture barrier packaging plus desiccant
- Humidity extremes do not affect tape properties
- Easy manual and machine application
- Die-cuttable

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Poly-vinyl alcohol (PVA) backing – 1.3 mils (0.033 mm)	} 2.1 mil (0.053 mm)
Synthetic water-soluble adhesive layer – 0.8 mils (0.020 mm)	
Kraft paper liner	

Product Construction/Material Description

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ Water-Soluble Wave Solder Tape 5414, Transparent	
Property	Value
Backing	Poly-vinyl alcohol (PVA) film
Adhesive	Synthetic water-soluble adhesive
Liner	Kraft paper
Color	Hazy, transparent
Product form	Roll
Standard roll length	36 yards (33 meters)

Applications

- Masking of gold finger areas on printed circuit boards for wave soldering.

Application Techniques

Best results are attained when applied to a clean, dry and non-dusty surface above 0°C. To improve adhesion, ensure that firm and even pressure is applied.

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Typical Physical Properties and Performance Characteristics

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Property	Test Method*	Value
Adhesion to Stainless	ASTM D3330	4 oz/in
Adhesion to Stainless (metric)	ASTM D3330	0.1 kg/25.4 mm, 0.4 N/cm
Elongation at break	ASTM D3759	334%
Temperature range (Celsius)	3M test method	-40°C to 240°C
Temperature range (Fahrenheit)	3M test method	-40°F to 464°F
Tensile strength at break	ASTM D3759	6 lb/in
Tensile strength at break (metric)	ASTM D3759	105.1 N/100 mm
Total tape thickness without liner	ASTM D3652	2.1 mil
Total tape thickness without liner (metric)	ASTM D3652	0.053 mm

*Methods listed as ASTM are tested in accordance with the ASTM method noted

Storage and Shelf Life

The shelf life of 3M™ Water-Soluble Wave Solder Tape 5414 is 12 months from the date of manufacture when stored in the original packaging materials and stored at 21°C (70°F) and 50% relative humidity.

Certificate of Analysis (COA)

The 3M Certificate of Analysis (COA) for this product is established when the product is commercially available from 3M. The commercially available product will have a COA specification established. The COA contains the 3M specifications and test methods for the products performance limits that the product will be supplied against. The 3M product is supplied to 3M COA test specifications and the COA test methods. Contact your local 3M representative for this product's COA.

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