



# YR-5414 Water Soluble Wave Solder Tape

## Product Data Sheet

Updated : March 1996  
Supersedes : October 1993

### Product Description

5414 is a totally static free adhesive tape which will rapidly dissolve in water. The product is designed to mask finger areas of circuit boards during wave soldering and then dissolve completely away during typical in-line aqueous

cleaning operations. When dissolved, the tape is biodegradable non-toxic, pollution free and neutral in pH. The product is packaged in a moisture impervious foil bag with desiccant to ensure long term storage stability under

extreme conditions of humidity.

### Physical Properties

Not for specification purposes

<b>Adhesive Type</b>	Water soluble synthetic.	
<b>Backing</b>	PVA film.	
<b>Thickness</b> (ASTM D-3652)	60 µm	
<b>Film Thickness</b>	30 µm	
<b>Dissolution Time</b>	40 secs. 60°C agitated water.	
<b>Release Liner</b>	Release coated kraft paper.	
<b>Tape Colour</b>	Hazy, Transparent.	
<b>Shelf Life</b>	12 months from date of despatch by 3M when stored in the original carton at 21°C (70°F) & 50 % Relative Humidity	

### Performance Characteristics

Not for specification purposes

<b>Adhesion to Stainless Steel</b> ASTM D-3330	0.8 N/10mm	
<b>Tensile Strength</b> ASTM D-3759	11.6 N/10mm	
<b>Elongation at Break</b> ASTM D-3759	100 %	
<b>Temperature Range</b> Maximum	240 °C 5 secs. exposure.	
<b>Electrostatic Decay Time</b>	<0.1 sec. Fed. Test Method Std 101C TM 4046.	

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<b>Application Techniques</b>	Best results are attained when applied to a clean, dry and non dusty surface above 0°C.	To improve adhesion ensure firm and even application pressure is applied.
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<b>Applications</b>	Masking in wave solder baths where aqueous cleaning is used.
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FEATURES	ADVANTAGES	BENEFITS
PVA backing/synthetic adhesive.	Rapid total solubility.	No residue after aqueous cleaning.
Biodegradable backing and adhesive.	Non-toxic. Neutral pH. Non-corrosive.	Pollution free.
Static Free.	Static-sensitive components cannot be damaged by static discharge.	Defect-free production.
Absolute moisture-barrier packaging plus desiccant.	Extremes of humidity in storage cannot affect tape.  Tape retains strength and adhesion in storage until needed.	Nearly unlimited shelf life.  Easy to handle. Tape can be applied manually or by machine. (S-45 motorised edger.)

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Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations.



#### Specialty Tapes & Adhesives

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3M United Kingdom PLC  
3M House,  
28 Great Jackson Street,  
Manchester,  
M15 4PA

Customer Service :  
  
Tel 0161 236 8500  
Fax 0161 237 1105

3M Ireland  
3M House, Adelphi Centre,  
Upper Georges Street,  
Dun Laoghaire, Co. Dublin,  
Ireland

Customer Service :  
  
Tel (01) 280 3555  
Fax (01) 280 3509