



Technical Data Sheet

3M™ Ultra High Temperature Double Coated Tape 9077

Product Description

3M™ Ultra High Temperature Double Coated Tape 9077 is a double coated non-woven adhesive tape with improved die-cut and converting performance. 3M™ Ultra High Temperature Double Coated Tape 9077 utilizes a high performance and low outgassing adhesive system having excellent heat resistance in high temperature environments. This adhesive system has excellent holding power and much higher adhesion strength at high temperatures than typical pressure sensitive adhesive tapes.

Product Features

- High temperature release liner that is able to survive from a typical lead-free solder reflow process having a peak temperature up to 500°F (260°C).
- Ideal for Flexible Printed Circuit (FPC) attachments in many areas of electronics subjected to high temperature processing and operating environments.
- Releaseable after lead-free solder reflow.
- High adhesion, excellent holding power and low outgassing.

Technical Information Note

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

Typical Physical Properties

Attribute Name	Test Method	Value
Adhesive Type		Acrylic
Total Tape Thickness	ASTM D3652	0.05 mm (2 mil)
Liner		Paper
Liner Thickness		0.09 mm (3.6 mil)

Typical Performance Characteristics

Temperature: 22 °C (72 °F)

Attribute Name	Value
Liner Release	90° Test, 300 mm/min at Room Temperature, solder reflow at 260° C for 20 seconds. Before Reflow: 28 g/in After Reflow: 38 g/in

Attribute Name	Value
Short Term Temperature Resistance	260 °C (500 °F) ¹
Long Term Temperature Resistance	149 °C (300 °F) ²

¹ Short Term (minutes, hour)

² Long Term (day, weeks)

Handling/Application Information

Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure helps develop better adhesive contact and improves bond strength.

To obtain optimum adhesion, the bonding surfaces must be clean, dry, and well unified. Some typical surface cleaning solvents are isopropyl alcohol/water mixture or heptane.*

Ideal tape application temperature range is 70°F to 100°F (21°C to 38°C). Initial tape application to surfaces at temperatures below 50°F (10°C) is not recommended because the adhesive becomes too firm to adhere readily.

However, once properly applied, low temperature holding is generally satisfactory.

*Note: When using solvents, extinguish all ignition sources and follow the manufacturer's precautions and directions for use.

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original packaging, out of direct sunlight. For best performance, use this product within 12 months from date of manufacture.

Available Sizes

Attribute Name	Value
Standard Roll Length	100 m (109,3 yd)
Standard Width	500 mm (19.6 in)

Automotive Disclaimer

Select Automotive Applications:

This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

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