

3M™ Solar Edge Tape 1060

Product Description

3M™ Solar Edge Tape 1060 is specially designed for solar module edge sealing and protection. It consists of high-quality acrylic foam adhesive with superior weathering black backing film. Solar Edge Tape 1060 may be used to bond a variety of substrates.

Key Benefits

- Pressure sensitive adhesive for quick application with immediate handling strength to speed assembly.
- Neat application without the mess, ooze and curing delay of liquid adhesives.
- Bonds and seals simultaneously, with durability to withstand vibration, impact and weathering.
- Provides a clean, smooth appearance.

Typical Physical Properties

(Data not for specification purposes)

Properties		Typical Values
Color		Black (gray adhesive)
Thickness	Foam Inches (mm)	0.023 (0.6)
	Total	0.029 (0.74)
Adhesive Type		Acrylic Foam
Backing Film Type		Durable Black Film
Release	Type	PE Film
Color		White

Dynamic Adhesion Performance	Unit	Value
90° Peel Adhesion	(N/100 mm)	100
90° Peel Adhesion After Aging		
TC200	(N/100 mm)	100
HF10	(N/100 mm)	100
DH1000	(N/100 mm)	110
UV	(N/100 mm)	120



TC200, HF10, DH1000 aging condition refers to IEC61215; UV aging condition refers to ASTM G154
 90° Peel Adhesion – Based on ASTM D-3330 –
 To stainless steel, room temperature, jaw speed 12 in/min
 (305 mm/min). Average force to remove is measured.

Mechanical Performance	Unit	Value
Tensile Strength	MPa	3.2
Elongation at Break	%	100

Resistivity (ASTM D257)

Dielectric Strength	12 KV/mm
Surface Resistance	>10 ¹⁶ in ohms/square

General Solar Acrylic Foam Tape Application Guidelines

Temperature, humidity, and pressure can impact the initial adhesion characteristics.

- **Temperature:** As temperature increases, the initial adhesion will typically increase. Suggested application temperatures are 21°C to 38°C (70°F to 100°F). Minimum application temperature is 15°C (60°F).
- **Humidity:** The suggested humidity target for the application is below 90% R.H. Solar Acrylic Foam Tapes that have a paper liner should be kept and applied below 70% R.H. There is concern that bringing cold tape or substrates into a warm humid environment can also cause condensation, which can impact adhesion.
- **Pressure:** Increasing pressure can improve the adhesive to surface contact, which can increase the adhesion. Suggested pressurization is 20 N/cm² (30 psi). Minimum suggested pressurization is 10 N/cm² (15 psi).

The impacts of these variables are very dependent on the specific substrate. Going outside of these ranges can have positive or negative impacts. Performance is dependent on the substrate and upon the specific application.

Shelf Life

3M™ Solar Edge Tapes have a shelf life of 24 months from their date of manufacturing when stored at 4°C to 38°C (40°F to 100°F) and 0 – 95% (for film liner) and 0 – 70% (for paper liner) relative humidity. The optimum storage conditions are 22°C (72°F) and 50% relative humidity. Performance of tapes is not projected to change even after shelf life expires; however, 3M does suggest that 3M™ Solar Edge Tapes be used prior to the shelf life date whenever possible.

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

Caution: Recommended application conditions are 23°C with 50% relative humidity. The following situations must be evaluated thoroughly to determine whether this product is suitable for the intended use:

- Applications that require performance at severe cold temperatures, if the intended use will subject the joint to high impact stresses.

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Other Areas

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For more information on our solar manufacturing product line, contact 3M Renewable Energy at 800-755-2654 or visit us at www.3M.com/solar.

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