



3M™ Melt Sealing Tape 5230, 5231 and 5232

Technical Data Sheet



3M™ Melt Sealing Tapes are designed to be applied before the paint process. During the paint process they will become soft and flow providing good sealing of joined panels. The resulting sealed joint will have a smooth, paint-receptive surface.

3M Melt Sealing Tapes offer the following key features:

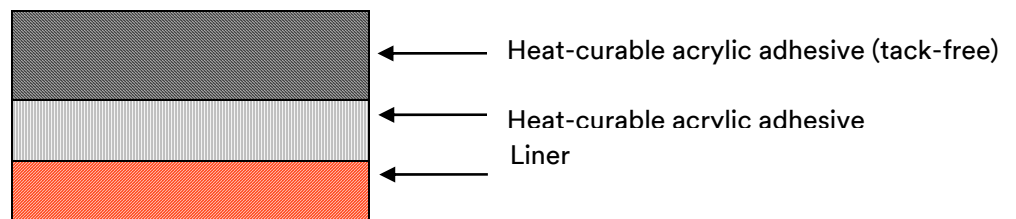
- Readily conforms to irregular surfaces, and is well suited to cover spot welds, weld flash, pillowing, and other surface imperfections treatable in the sealer deck or paint shop.
- Open-faced side is tack-free for repositionability.
- Once cured, the thermoset tape forms a hard, smooth paint-receptive surface.
- Provides high final adhesion and a good painted surface.

Typical applications include sealing of roof ditches, combined panel edge seals, hole-sealing, and sealing other body joints.

Physical Properties

3M™ Melt Sealing Tape	Tape		Liner	
	Thickness	Color	Color	Material
5230	0.5 mm	White	Transparent red	Polyethylene
5231	1.0 mm	White	Transparent red	Polyethylene
5232	1.5 mm	White	Transparent red	Polyethylene

Product Construction



Storage and Handling

Storage

Product should be used within three (3) months from date of shipment. Place the product in a sealed plastic bag to prevent exposure to moisture. Store bags at 5° C or below. If product will be used within one week of point of assembly, it is recommended that a desiccator is available in the assembly area for short term storage. In the event of line shutdown for an extended time, take the product from the desiccator, place it in a sealed bag, and place the bag in the refrigerator until one day before its required use.

Handling

Initial adhesion is reduced at lower temperatures. Tape should be applied at or above 15°C (59°F). If the tape has been stored at temperatures lower than 15°C (59°F), allow the tape to warm to a minimum of 15°C (59°F) before use.

When the product is taken out of the refrigerator, allow it to reach room temperature before the bag is opened. Immediate exposure to room temperature may cause condensation to form on the product surface. This condition must be avoided.

Move the amount of product that will be used in one day from the refrigerator to the desiccator one day before assembly. Take the minimum amount of product out of the desiccator to prevent exposure to humidity. Return left over product to the desiccator for overnight or weekend storage.

Shelf Life

Three (3) months when stored at temperatures lower than 5°C (41°F). One (1) week when stored at temperatures between 5°C - 35°C (41°F - 95°F) in a desiccator.

It is recommended that parts with an expired shelf life be discarded. A “USE BEFORE” label should be applied to parts shipped to the OEM plant.

Performance Properties (cured)

Performance tests are run using standard test procedures in 3M laboratories. The values presented are typical and are not to be used for specification purposes. Values depend on test conditions and substrates.

These products have been tested using a standard curing temperature of 140°C (284°F) for 20 min and standard paint curing conditions:

- Pre-cure: 120°C (248°F) for 10 min
- Base coating: 140°C (284°F) for 20 min
- Top-coating: 140°C (284°F) for 20 min

Property Type	Property	5230	5231	5232
General	Color	White		
	Thickness (mm)	0.5	1.0	1.5
	Density	1.2		
	Elongation after heating (%)	108	111	117
	Tensile strength after heating (MPa)	6.3	5.5	5.3
	Fluidity (mm)	0.1	0.2	0.5
	Hardness	Before heating	56	
After heating		84		
Adhesion Properties	Peel Strength Before Heating (N/cm)	12.5	13.8	14.8
	Shear Strength After Heating (MPa)	8.2	7.5	6.7
Paint Adhesion Properties	Initial, Heat Aging, Warm Water Immersion, Weathering, Heat Cycle	Excellent (no paint transfer, pinholing, paint cracking or contamination). Cross cut test: 100/00.		

Test Conditions

Environmental Aging	
Initial Shear Strength	Room temperature for 24 hours
Heat Aging	80°C, then room temperature for 24 hours
Warm Water Immersion	50°C for 336 hours, then room temperature for 24 hours
Weathering	Standard weather of material for 400 hours, then room temperature for 24 hours
Heat Cycle	-30°C for 2 hours, 80°C for 2 hours, repeat 10 cycles
Condition	
Color	Visual observation
Thickness	Measured with dial thickness gauge
Tensile strength and elongation	With dumbbell no. 1 (10 mm wide) Test speed 20 mm/min
Fluidity	90° angle, sample size 25 mm x 25 mm
Hardness	With JIS A-type rubber hardness gauge
Peel strength before heating	180° peel strength on an ED painted panel, removed after 20 min, sample size 10 mm x 25 mm, test speed 50 mm/min
Shear strength after heating	On an ED painted panel, sample size 10 mm x 25 mm, test speed 50 mm/min
Paint adhesion properties	After applying all aging conditions, check the appearance and evaluate the paint adhesion properties using the cross cut method

Regulatory Information

Please refer to the product label and Safety Data Sheet (SDS) for health and safety information before using. Observe proper handling precautions as outlined in the SDS, which is available on request or at www.3M.com/msds. To obtain published IMDS ID numbers, email requests to 3M-IMDSrequest@mmm.com.

Contact Information

The information provided in this technical document is intended as a guide for this product. For more information or help in selecting a 3M product for an application, please contact your 3M technical service representative or call 1-800-328-1684.

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