

IsoMelt HMPUR 5

IsoMelt™ HMPUR 5 is a long assembly time, moisture-curing, hot-melt polyurethane adhesive. The adhesive is solid at ambient temperatures. The adhesive is applied in the molten form and cures in the presence of moisture to form a tough, durable bond. The IsoMelt™ HMPUR 5 bonds to a wide variety of substrates, but at least one substrate must be gas permeable. Typical substrates include wood and wood products, most foams, primed metals, FRP, and other plastics with Dyne levels greater than 38 dynes. At 3-mil thickness, the adhesive transfers to the opposing substrate at least through five minutes of assembly time, prior to nipping.

APPLICATIONS

- Fabric
- Foam
- Glass
- Laminating
- Metal
- Panel Assembly Adhesive
- Plastic and Metal Fabrication
- Plywood
- RV & Trailer Manufacturing
- Wood

PRODUCT ADVANTAGES

- 100% Solids
- Adhesion to various substrates
- Excellent green strength
- Five-minute assembly time
- Roll coater stable

*Values given are not intended to be used in specific preparation

Component Properties

Color - ISO	blue, pale yellow
Specific Gravity - ISO	1.1
Viscosity - ASTM-D-2196 - 250°F, ISO	14,000 cps
% Solids	100 %

Reactivity Profile

Open Time - 1/8 inch Normal	9 Minutes
Set Time - Wooden Block - Normal	22 Minutes
3 mil open time - Internal method - wood to wood	5 Minutes
Open Time - ASTM D4497 - 4 Mil	7 Minutes

Typical Physical Properties

5 minute Green Strength	8 psi
10 minute Green Strength	23 psi
15 minute Green Strength	56 psi
Lap Shear ABS - ASTM D1002	450 psi
Lap Shear Acrylic - ASTM D1002	900 psi
Lap Shear Aluminum - ASTM D1002	300 psi
Lap Shear Maple - ASTM D1002	300 psi
Lap Shear PVC - ASTM D1002	1000 psi
Lap Shear SMC - ASTM D1002	400 psi
Hardness - ASTM D2240 - Shore D	42 Shore D
Tear Strength - ASTM D624, Die C	300 pli
Tensile Modulus - ASTM D412	20 ksi
Tensile Strength - ASTM D412	900 psi
Elongation - ASTM D412	360 %

RECOMMENDED HANDLING INSTRUCTIONS

Isotec® International's Recommended Application and Handling Instructions

- Use only in well-ventilated areas.
- Wear chemically resistant rubber gloves, safety glasses, and an apron.
- Avoid prolonged or repeated contact with skin.
- In case of skin contact, wipe affected area with isopropyl alcohol, followed by soap and water.
- In case of eye contact, flush eyes with water for 15 minutes and consult a physician.
- If swallowed or comes into contact with eyes, seek medical attention immediately.

Pre-treatment

In order to obtain optimal adhesion, all substrates must be free of oil, grease, lubricants, dust, dirt, or any other surface contaminant.

Application

Because the adhesive is solid at room temperature, IsoMelt™ HMPUR 5 must be transferred from the drum through the use of a heated follower plate pump. The lines between the pump and the application device must also be heated to prevent solidification. IsoMelt™ HMPUR 5 is typically applied using a heated roll coater. Typical application temperatures vary between 250°F – 275°F (121°C – 135°C). The adhesive is applied to one surface with deposition rates between 10 to 12 grams per square foot; however, deposition can vary depending on the porosity of the substrates. Overhead humidification must be present to provide necessary moisture for curing.

Once the substrate is coated with adhesive, mate the coated substrate with the other part, and immediately nip the bonded structure in a roll coater with at least 40 psi of down pressure. The bonded part may be moved but should not be processed until the next day.

Roll Coater Clean Up

Contact your sales representative for a cleaner recommendation. Reverse the roll coater and dump off excess adhesive. Place in forward and add cleaner to the nips(s) and allow cleaning for at least three minutes. Reverse and dump the cleaner. Add more cleaner, allow cleaning for at least three minutes, and dump the cleaner. Open rolls at least ¼” and dry with a clean cloth. Extreme care must be taken to only wipe the side away from the nip

STORAGE

IsoMelt™ HMPUR 5 should be stored in a dry place, in its sealed original container, at temperatures between 59°F to 77°F (15°C to 25°C). Under these storage conditions the shelf life is six months from date of shipment. The product should not be exposed to direct sunlight. Never reuse partial drums.

SAFETY

-Refer to the product SDS for all relevant safety information.

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- Reported laboratory test results of the color stability in no way relates to the actual performance upon exposure to light sources. Since all aromatic urethanes experience color degradation upon ultraviolet light exposure, Seller shall not be liable for any damages resulting from ultraviolet light color degradation of any aromatic urethane systems manufactured or sold by Seller.
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