



TECHNICAL DATA SHEET

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Ruscoe Reliobond 7037 TPO Laminating Adhesive

Description:

Reliobond 7037 is a water based adhesive designed for co-extrusion or heated lamination of thermoplastic olefin (TPO) single ply roof membrane, polypropylene, and some thermoplastic vulcanizates (TPV) to metals, concrete, or cinder block.

Physical Properties:

	Reliobond 7037
Color:	White
Application Method	Roller, Brush, Spray
Viscosity:	3000-5000 cps (Brookfield RVF #3@10)
% Non-volatile (solids):	33-37%
Density (calculated):	8.75 #/gal, 1.05 g/mL
VOC (calculated):	0 g/L

Peel Strength - TPO Roofing Membrane to Aluminum:

[5 mil wet coating thickness on aluminum Q-Panel, dried 1 hour at ambient. Bonded at 310°F (heated on metal side only) for 45 seconds at 100 psi]

	Max (pli)	Avg (pli)	Failure Mode
Membrane A	72.4	61.9	Delamination of membrane at fabric
Membrane B	62.2	55.0	Delamination of membrane at fabric
Membrane C	69.7	45.8	Delamination of membrane at fabric
Membrane D	59.4	39.6	Delamination of membrane at fabric
Membrane E	72.0	38.5	Delamination of membrane at fabric

Surface Preparation:

Metals should be degreased using an appropriate solvent or alkaline cleaner. Surfaces can be roughened with an abrasive pad or grit or sand blasted for better adhesion. Chemical treatments like phosphating or acid pickling can also improve bond strength on metals like steel or aluminum.

Adhesive Application:

Reliobond 7037 can be applied by brush, roller or spray to the substrate. Recommended coating thickness on metals is 1.0-2.0 mils dry (wet coating of 3.2-6.3 mils or 250-500 ft²/gal coverage). Porous surfaces like cinder block or concrete may require thicker coatings of up to 10-15 mil dry (30-50 mil wet, 32-53 ft²/gal coverage). Application on cinder block may require a two coat process where a first coating is applied and dried to seal the surface and then a second coating is applied to build thickness and fill gaps and crevices.

Bonding:

All water must be dried from the adhesive before the bonding operation. Adhesive can be dried at room temperature for 15-30 minutes or more depending on coating thickness and environmental conditions. Recommended oven drying temperature is 160-210°F. A forced air oven is recommended. High air flow in the drying oven or use of a fan over an ambient dried coating will greatly reduce drying time. Once dried, the adhesive will form a film with relatively weak adhesion. To lock the adhesive to the substrate, the adhesive can be heated to greater than 290°F. This will melt the adhesive and form a very strong bond to the substrate. Metal can then be rolled or cut to shape for future bonding.

After drying, the plastic can be coextruded or heat sealed to the substrate at temperatures greater than 300°F. The plastic/adhesive interface must reach 300°F for a bond to form.

Adequate pressure should be applied to ensure full contact between the vinyl substrate and the coated metal surface. Experimentation is necessary to determine optimal pressure. Ideally the substrates are held under pressure while the bond is heated to greater than 300°F and while the bond cools back below that melt temperature. However, if the bond is not disturbed or stressed, the pressure can be removed immediately after the bond-line reaches greater than 300°F.

A heat gun with integrated roller can be used for bonding roof membrane to metal, concrete, or cinder block on the job site.

Cleaning:

While wet, Reliobond 7037 can be removed with warm, soapy water. Once dried, the coating can be removed by sanding, grinding or scraping.

Storage:

Reliobond 7037 can be stored in sealed containers for up to 12 months from the date of manufacture. Ruscoe recommends storing this product below 90°F for best stability and safety.