



HELMITIN
QUALITY ADHESIVE SOLUTIONS

HELMITHERM 483 CLEAR

HIGH ADHESION EDGEBOARDING HOT MELT

Product Description

A versatile edgebanding hot melt formulated to yield superior bonds on edgebanding machinery running up to 36 m/min, HELMITHERM 483 CLEAR offers unsurpassed performance on high speed straight line edgebanders, automated contour edgebanding machining centers and softforming machinery.

Benefits

- ✓ Aggressive, high adhesion formulation for good bonds and seamless glue lines.
- ✓ Very good heat resistance.
- ✓ Versatile - runs cleanly at line speeds between 4 & 36 m/min.
- ✓ Universal product for all straight line edgebanding, automated contour edgebanding and softforming applications.
 - eliminate multiple products - reduce inventory
- ✓ Fast setting for strong bonds on high speed machinery.
- ✓ Long open-time to ensure good bonds when used on low speed or manual contour edgebanders.

Suggested Uses

- Straight line and contour edgebanding applications on automated edgebanding machinery running at line speeds between 4 & 36 m/minute.
- Softforming & Profile Wrapping.
- Compatible with: Solid and engineered wood edges up to ¼ inch thick; PVC, ABS, PP and melamine edgetapes; fleece-backed, paper-backed and raw veneer tapes, primed HPL.

Certifications & Compliance

- Complies with SCAQMD Rule 1168 VOC limits
- California compliant
- OTC compliant

Physical Properties

Base:	EVA
Form:	Pellets
Color:	Clear Amber
Softening Point:	110°C (230°F) (ASTM E28)
Melt Viscosity:	90,000-130,000 cP @ 177°C/350°F
Specific Gravity:	0.98
Running Temperature:	190-220°C (375 - 430°F) depending on tape thickness and machine feed speed. Consult the Application Guidelines on the reverse for detailed information.
Running Speed:	4 - 36 m/min
Open time:	Variable depending on the amount of adhesive applied, the application temperature of the hot melt, and the temperatures of the substrates and manufacturing facility.
VHAP:	Not applicable.
VOC:	0 lb/gal (0 g/L); less water and exempt solvents.

Handling & Storage

- 3 year shelf life from date of manufacture in unopened containers.
- Freeze/Thaw Stable
- Rotate stock to use the oldest material first.
- Store at room temperature. 22°C/72°F.
- Keep unused material covered and free from moisture, dirt, dust and/or other sources of contamination.

Packaging

- 20 kg/44 lb plastic bag

Clean-Up

- Finished Parts - SOLVENT 665 or HELMITIN CITRUS CLEANER

APPLICATION GUIDELINES**Conditioning of Materials (Cores, Wood Veneer and HPL Edging)**

Allow the core and edge materials to acclimate together at the same temperature and humidity for at least 48 hours before bonding. Optimum conditions are approximately 22 °C/72 °F and relative humidity of 45% - 55%. Provisions should be made for the circulation of air around the components.

Adhesive Application

1. Regular maintenance of the edgebander in general and glue pot in particular are essential.
 - Remove any buildup of dust and debris at every break.
 - Follow the edgebander manufacturer's preventative maintenance schedule.
2. The first sign of a malfunction in the adhesive application system is often poorly bonded edges.
 - Check the glue pot and application roller temperatures regularly with a good quality IR thermometer or pyrometer to ensure all thermostats and heating elements are functioning properly.
3. Failure to maintain proper working temperature is a common cause of edge failures. Maintaining proper application temperature is therefore critical when working with hot melt adhesives.
 - For best results, the factory and substrate temperatures should be 20 °C/68 °F or warmer. Cold or frozen parts will shock the adhesive, cause it to set prematurely and cause poor bonds.
 - Situate edgebanders away from outside doors; cold drafts blowing around the edgebander can cool the hot melt and lead to edge failures.
4. HPL edges require priming when using EVA based hot melts to obtain optimum results.
5. Application temperature is affected by the edgetape thickness and machine feed speed with thicker tapes and slower feed speeds requiring the hot melt to be applied at a higher temperatures.
 - To obtain the best performance from HELMITHERM 483 CLEAR it should be run at or above 190 °C (375 °F).
 - Suggested starting temperature ranges for automatic edgebanding, softforming and profile wrapping applications are:
 - 190 - 200 °C (375 - 395 °F) for PVC and polymer-based edges up to 3mm thick; backed & unbacked veneer tapes.
 - 210 - 220 °C (410 - 430 °F) for solid and engineered wood, and HPL.
6. Apply enough adhesive to leave a thin, even coat of adhesive which fills all voids in the core material.
 - Excessive adhesive application will cause cleanliness problems on both the finished parts as well as the edgebanders.
7. Adhesive degradation and the build-up of hardened and charred hot melt in the glue pot can be reduced by avoiding the prolonged heating of the hot melt when not running parts through the edgebander.
 - Turn the adhesive temperature(s) down 10 - 30 °C when idle and not running parts.
 - If excessive adhesive degradation occurs, remove degraded hot melt from glue pot and add fresh hot melt.
8. Failure to apply sufficient pressure to edges after they have been mated to the core is also a common cause of edge failures.
 - Ensure that the compression rollers are applying enough pressure to properly bond the edge to the core.
 - The spring loaded or compressed air loaded rollers in the pressure section of the edgebander should not be able to be prevented from turning by hand.
 - If the compression rollers can be prevented from turning by hand, insufficient pressure being applied to the edge and they must be adjusted to apply more pressure to the edge.

Warranty

Because Seller has no control over methods of product application or conditions of use, its product is warranted only to be made of standard commercial grade materials and in conformance with Seller's published specifications, if any. Any recommendations for the use of the product are based on tests or experience believed to be reliable and are furnished without compensation, and Seller does not guarantee the applicability or the accuracy of this information or the suitability of its product in any given situation. Buyer must make its own tests to determine the suitability of Seller's product for Buyer's particular use and Buyer assumes all risk and liability of use of Seller's product.

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