



Description:

POLYONICS XL-1600P is a 2 mil PEN (polyethylene naphthalate) laminating film with a permanent pressure sensitive acrylic adhesive. This protective overlay film is intended to be cold laminated to a printed image (i.e. circuit) and provide protection from harsh environments.

Applications:

- XL-1600P provides protection to printed images (i.e., circuits) from exposure to abrasion, chemicals, and high temperatures.
- XL-1600P provides high clarity to printed images and allows for visual inspection of printed images.

Special Considerations:

- The surface that you want to laminate should be clean, dry and free of any surface contamination.
- Lamination should be done with a mechanical nip lamination process to prevent air entrapment.
- Pressure sensitive adhesives will provide stronger bonds to a warm surface, as compared to a colder one. The adhesive will 'flow' more readily, increasing the surface area and increasing the adhesion peel strength.
- The adhesive bond will increase over time. Ideally, 72 hours of dwell will achieve maximum bond.
- All values shown are averages and should not be used for specification purposes. Adhesion and tack values have a 15% tolerance allotted to the values stated.
- Test data and test results contained in this document are for general information only and shall not be relied upon by POLYONICS customers for designs and specifications, or be relied on as meeting specified performance criteria.
- Customers desiring to develop specifications or performance criteria for specific product applications should contact Polyonics for further information

Technical Data

Properties	Test Methods	Average Results	
		USA Units	SI Units
Thickness	ASTM D1000		
-Face sheet		0.0020 inch	0.050 mm
-Adhesive		0.0010 inch	0.025 mm
-Total		0.0030 inch	0.075 mm
Adhesion	Polyonics 80313		
Stainless Steel	20 minute dwell	≥ 30 oz/in	
Clarity		Translucent	
Tack	Polyonics 80155	≥ 500 g/in	
Temperature Rating	Short Term	-40 to 536°F (-40 to 280°C)	
	Long Term	150°C 120 minutes no visible effects	
Shelf Life		1 year below 80°F (27°C) and 60% R.H.	

References: ASTM: American Society for Testing and Materials (U.S.A.), SI: International Systems of Units



Polyonics Material Compliance

RoHS- Restriction of Hazardous Substances (EU Directive 2002/95/EC)	Limits set forth in Directive 2005/618/EC amending Directive 2002/95/EC
REACH- Registration Evaluation and Authorization of Chemicals (EU Directive 1907/2006/EC)	Limits set forth in Directive 1907/2006/EC Article 7 (2)
Halogens- Restriction use of Halogen (IEC 61249-2-21)	Limits set forth in International Electrochemical Commission

WARRANTY-LIMITATION

Polyonics' products are sold with the understanding that the buyer will test them in actual use and determine for him/herself their adaptability to his/her intended uses. Polyonics warrants to the buyer that its products are free from defects in material and workmanship, but limits its obligation under this warranty to replacement of the products shown to Polyonics' satisfaction to have been defective, provided that the Buyer has complied with the handling, storage and shelf life requirements as specified by Polyonics in applicable materials specifications.

The above warranties extend solely to Buyer and all warranty claims must be made by Buyer. Rework or Replacement shall neither extend nor decrease the original warranty period. The term of all warranty periods shall not exceed thirty (30) days from the date of the original shipment.

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