



Pyralux® HXI Black Coverlay

Halogen Free Epoxy Adhesive Coverlay
Flexible Composites

Technical Information

Description

Pyralux® HXI coverlay is a halogen free coverlay. Pyralux® HXI coverlay composites are constructed of DuPont™ special black polyimide film, coated on one side with a B-stage modified epoxy adhesive. Coverlay is used to encapsulate etched details in flexible construction for environmental and electrical insulation. Pyralux® HXI meets UL-94 VTM-0 requirement stand alone and the new halogen-free requirements “RoHS directive”.

Pyralux® HXI coverlay products are designed to provide the best warpage performance and compatibility with laminates to allow circuit fabricator to achieve high process yield.

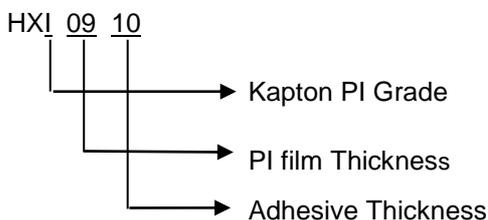
Construction

Current Coverlay is available in 9um film and 10um adhesive as Table 1.

Table 1. Coverlay Product Code

Product Code	Kapton® Film [µm]	Adhesive [µm]
HXI 0910	9	10

Product Code



Typical Data

See Table 2.

Table 2. Coverlay properties¹

[Adhesive thickness: 10um, polyimide thickness: 9um]

Test Item	Test Conditions	Typical Value	Test Method
Peel Strength [Kgf/cm]	AR	1.0	IPC-TM-650 2.4.9
Dimensional Stability [%]	MD	+/- 0.10	IPC-TM-650 2.2.4
	TD	+/- 0.08	
Solder Resistance	288 °C/10sec	Pass	IPC-TM-650 2.4.13
Resin Flow [mm]	-----	0.065	IPC-TM-650 2.3.17.1
Gloss [GU]	Test at 60 angle	25	Gloss meter

¹See Footnote on page 2.

Packaging

Pyralux® HXI coverlay composites are supplied on 19.7/9.8 inch (500 mm/249mm) wide by 656 ft (200m) long rolls.

Processing

Laminating conditions for Pyralux® HXI flexible composites are typically in the following ranges:

Quick press:

Temperature: 180°C

Gauge Pressure: 100 Kgf/cm²

Time: 60 sec, at temperature

Post Curing: 160C for 60 min

If press pad made by paper is used, be sure to confirm that no de-lamination occurs between adhesive and film. Moisture in press pad may make adhesive weaker and cause de-lamination.

For further processing information contact your DuPont representative.

Storage

The product need refrigeration and should not be frozen. Keep coverlay at temperature 10°C or below; humidity at or less than 65%RH condition. Room temperature accelerates adhesive's semi-cured condition. If storage conditions have been deviated from these limits, the shelf life is reduced. Keep the material clean and well protected.

This product should retain its original properties for normal usage within 4 months from the production date, if kept as advised above.

Coverlay should not be automatically discarded if storage conditions have deviated from these limits. We recommend that material which has been stored outside these conditions be examined in a practical test before being committed to production.

Safe Handling

Pyralux® HXI coverlay composites contain a B-staged adhesive. Because B-staged adhesive contains trace quantities (parts per million) of unreacted monomers, precautions and recommendations should be taken to minimize contact.

To eliminate contact between the skin and the adhesive, wear lint-free gloves or finger pads. Anyone handling Pyralux® HXI should wash their hands with soap before eating, smoking, or using restroom facilities. Gloves and finger pads should be changed daily, and wash other protective clothing frequently.

Adequate ventilation and exhaust is recommended in press rooms to prevent the buildup of potentially harmful vapors, to remove disagreeable odors, and to dissipate heat. Drill rooms should be furnished with standard equipment recommended by drill vendors

and required by OSHA standards

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Caution: Do not use in medical applications involving permanent implantation in the human body, or contact with internal body fluids or tissues. For other medical applications, see "DuPont Medical Caution Statement," H-50102.

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