

THERMOFILM H191U

Heat Activated Film - 50µm Nitrile Phenolic Transfer Adhesive

DESCRIPTION

ThermoFilm® H191U is a heat activated unsupported nitrile phenolic thermosetting adhesive transfer film. The product is supplied on a 3.5 mil kraft release liner

APPLICATIONS

- Bonding of plastic parts for electronic assembly.
- Splicing of fiberglass cloth and other woven fabric materials.
- Heat seaming applications.
- Lamination to PVC and other plasticized materials.

PRODUCT BENEFITS

- Provides high bond strength (considered structural in many applications) to metals, wood, plastics, paper, ceramics, and woven materials when heat activated.
- Tack free at room temperature for easy die-cutting.
- Relatively low bonding temperature allows use on temperature-sensitive substrates.
- Clear color has less visibility on light colored substrates.
- Formulated to prevent ooze/squeeze out when heat activated.
- Excellent resistance to solvents, plasticizers, and heat when cured.
- Maintains flexibility at low temperatures.

TECHNICAL PROPERTIES

Technical Property	Nominal Value	Unit	Test Method
Adhesive Colour	Clear to pale yellow	-	-
Adhesive Thickness	2.0 (0.051)	Mils (mm)	-
Release Liner Thickness (Kraft Paper)	3.5 0.089	Mils (mm)	-

STANDARD PRESENTATIONS

RECOMMENDATIONS

Application to Primary Substrate;

Unwind H191U and apply the adhesive side to the surface of the substrate to be bonded. To achieve maximum bonding strength, bonding surfaces should be clean, dry and free of grease and oil. This should be done by using a heated (150°F/66°C to 250°F/121°C) squeeze roll or other method which ensures firm pressure and intimate contact of the adhesive film and the substrate surface.

NOTE: After initial bonding, the substrate must be cooled to room temperature before the adhesive regains its non-blocking characteristics.

Application to Secondary Substrate:

Peel off the protective release liner and apply the adhesive side to the desired surface using heat and pressure as outlined in the table below:

	Temperature	Dwell	Pressure
For Bonding:	250°F(121°C)	15-45 sec.	30 psi (2.1 kg/cm ²) minimum
	325°F(163°C)	5-15 sec.	30 psi (2.1 kg/cm ²) minimum
	400°F(204°C)	1-5 sec.	30 psi (2.1 kg/cm ²) minimum
For Thermoset:	300°F(149°C)	30-45 min.	30 psi (2.1 kg/cm ²) minimum
	350°F(177°C)	10-20 min.	30 psi (2.1 kg/cm ²) minimum
	400°F(204°C)	5-10 min.	30 psi (2.1 kg/cm ²) minimum

A hot platen press is recommended for heat bonding and thermosetting. Peel strength and holding power will vary depending on substrates, heat seal temperature, dwell time, and pressure. Generally speaking, bond strengths are significantly higher than pressure sensitive films and can be classified as structural in many end uses.

NOTE: Shelf life is one year from date of shipment when stored in a cool dry place below 76°F (24°C). Rolls should be stored on end.