Aroply™ 350 Film Adhesive
Zyvex Nano-Engineered Composite

Technical Data Sheet September 2013

Description

Aroply™ 350 Film Adhesive is a versatile, heat curing carbon-nanotube modified epoxy structural film adhesive available in a variety of film weights on a supported carrier.

Cured adhesive characteristics are designated by exceptionally high shear and peel strengths on a variety of substrates at temperatures up to 350F. This film adhesive is designed for both solid panel and honeycomb constructions.

Aroply™ 350 contains an optimum level of carbon nanotubes for additional toughness and enhanced mechanical properties. The carbon nanotubes use molecular dispersion technology to ensure enhancements are evenly distributed throughout the adhesive.

Film Adhesive Availability

Aroply™ 350 is available in a standard width of 48 inches. Virtually any other smaller widths may be made. The standard film weight is 320 g/m2 (additional film weights from 150 g/m2 to 400 g/m2).

Film Adhesive Processing

The film adhesive processes as easily as conventional film adhesives and has a long out-life for easier handling and processing. It has moderate retention of tack and drape with a 7 day tack-life and 21 day out-life at 72°F (22°C), and 1 year storage shelf life at 0°F (-18°C). A typical cure schedule is 90 minutes at 350°F.

Features

- Semi-tacky for adherence to desired location
- Long Open Time: 30 days in standard shop conditions
- Adaptable to many processes

Mechanical Properties

Table 1 | Mechanical Characteristics – Aroply 350, 90 min @ 350°F, Spring Clamp Pressure, FPL Acid Etched 6061-T6

Test[1]	Test Method	Value
Tensile Shear, RT	ASTM D 1002	4200 (psi)
Tensile Shear, 250°F	ASTM D 1002	3800 (psi)
Tensile Shear, 350°F	ASTM D 1002	3000 (psi)
Tensile Shear, 350°F 2 hour soak	ASTM D 1002	1500 (psi)
T-Peel, RT	ASTM D 1876	17 (pli)
T-Peel, 250°F	ASTM D 1876	26 (pli)
Roller Peel, RT	ASTM D 3167	37 (pli)
Roller Peel, 250°F	ASTM D 3167	43 (pli)
Roller Peel, 350°F	ASTM D 3167	32 (pli)

[1]**Weight and Carrier**: Aroply™ 350 Film Adhesive 300 g/m^2 on nylon carrier

Table 2 | Mechanical Characteristics – Aroply 350, 90 min @ 350°F, Spring Clamp Pressure, Abraded 6061-T6 Untreated

Test[1]	Test Method	Value
Flatwise Tensile, RT	ASTM C 297M	1000 (psi)

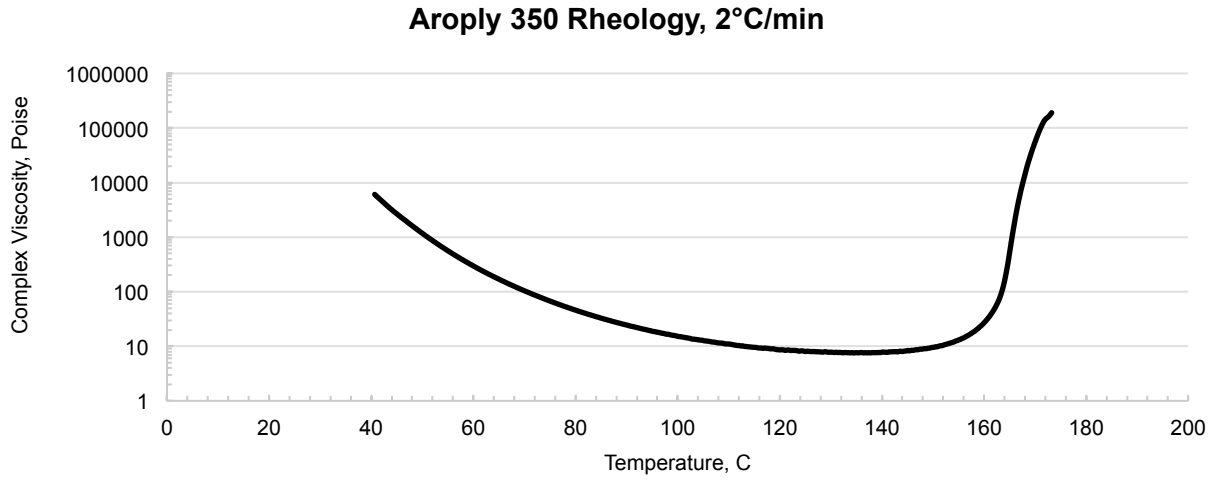
[1]**Weight and Carrier**: Aroply™ 350 Film Adhesive 300 g/m^2 on nylon carrier

Cure Timing

Zyvex recommends curing Aroply 350 at 350°F for 90 minutes.

Contact Zyvex for further information on specific cure cycles.

Figure 1 | Rheology Profile, 2°C/minute



Safety Handling

Zyvex Technologies provides its customers with a product specific Material Safety Data Sheet (MSDS) to cover potential health effects, safe handling and use information.

Zyvex encourages its customers to review all relevant MSDS prior to use.

Disclaimer

Zyvex Technologies believes that the technical data provided is accurate as of the published date. Performance values are considered representative but are not intended as a specification.

Contact Zyvex

For United States quotes, orders and product information call toll free 877.Go.Zyvex (877.469.9839).
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