



Plastilock® 795-1

Epoxy Film Adhesive

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Description

Plastilock® 795-1 (PL 795-1) is an epoxy film adhesive for composite bonding applications. PL 795-1 has excellent peel and -67°F (-55°C) properties. PL 795-1 may cure at 250°F (120°C) or 350°F (180°C) with service temperatures up to 350°F (180°C).

Features

- Dual temperature cure capabilities 250°F (121°C) or 350°F (180°C)
- Excellent peel and -67°F (-55°C) properties
- Good flow characteristics for surfacing applications
- Ideal for composite co-curing and secondary bonding applications
- Excellent hot-wet resistance
- Outstanding tack and handling characteristics - material has excellent tack yet is repositionable on itself or pre-preg
- Superior out-time characteristics - performance properties are maintained after **100+ days** at 77°F (25°C)
- Consistent performance properties over aluminum or composite

Uses

- Composite repair
- Composite surfacing
- Bonding pre-cured composite
- Co-curing with composite pre-pregs
- Bonding aluminum

Typical Technical Data	PL 795-1
Type:	Modified epoxy film available supported or unsupported
Scrim:	Non-woven polyester-others available upon request
Weight:	.03 to .10 lbs/sf (146 to 488g/m ²)
Thickness:	.005 - .017" (.0127 - .043 cm)
Color:	Green
Width:	Up to 48" wide(1.2m) - Std. 36"
Volatiles:	< 1%
Out Time:	100+ days @ 77°F(25°C)
Shelf Life:	2 year @ 0°F(-18°C)
Gel Time (RDS):	45 minutes when heated from 50°C at 2°C/minute, 50% strain, 10 rad/sec
Tg (DSC):	295°F (146°C)
Tg (DMA):	332°F (162°C)

Performance Properties

Performance properties of PL795-1 cured at 350°F (177°C) at 30 psi (.21 MPa) and 5°F (2.8°C) heat up rate on unprimed 2024 T3 aluminum PAA.

Typical technical data and performance properties given for reference only. Not for specification purposes.

Test Conditions		PL 795-1	
Film Weight		lbs/sf	g/m ²
		0.035	171
Single Overlap Shear			
°F	°C	PSI	MPa
75	24	3700	25.5
300	149	2100	14.5
Bell Peel			
75	24	24	107
Tested at			
75°F	24°C	PSI	MPa
1000 hrs @ 75°F in Distilled Water		3800	26.2
1000 hrs in Isopropyl Alcohol		3600	24.8
1000 hrs in JP4		3800	26.2
1000 hrs in Hiset IV		3600	24.8
1 hr soak in MEK		3700	25.5
2000 hrs @ 250°F		3400	23.4

Cured 2 hrs @ 350°F (177°C) at 45 psi (.31 MPa)
 5°F (2.8°C) per minute heat-up rate on graphite epoxy composite.

Double Overlap			
°F	°C	PSI	MPa
-65	-54	3600	24.8
75	23	4300	29.7
160	71	4600	31.8
270	132	2000	13.8
14 days immersion in distilled water			
160	71	3800	26.2
75	23	5000	34.5

Flatwise Tensile			
°F	°C	PSI	MPa
-65	-54	900	602
75	23	1000	6.9
160	71	1000	6.9
Beam Shear			
75	23	700	4.8

Application Method

Allow adhesive film to reach room temperature before opening poly bag to prevent moisture contamination. Bonding surfaces should be clean, dry and free of contamination. Remove poly liner and apply adhesive to one surface to be bonded. Just prior to bonding, remove remaining liner. The bonded parts should be held in contact until the adhesive is cured.

Curing

60 Minutes @ 350°F(180 °C) and 25-100 psi (.17 - .69 MPa)

90 Minutes @ 250°F(120 °C) and 25-100 psi (.17 - .69 MPa)

Other cure conditions are possible.

Clean-up

Uncured adhesive may be removed effectively with ketone solvents in well-ventilated areas. Avoid contaminating uncured parts. Consult solvent container label/MSDS for proper safety and handling procedures.

Storage

PL 795-1 has a shelf life of 2 years at 0°F(-18 °C).

The adhesive has an out time at 77°F (25 °C) of over 100+ days.

Handling Precautions

Do not handle or use until the Material Safety Data Sheet has been read and understood.

For industrial use only.

General:

As with most epoxy based systems, use this product with adequate ventilation. Do not get in eyes or on skin. Avoid breathing the vapors. Wash thoroughly with soap and water after handling. Empty containers retain product residue and vapors so obey all precautions when handling empty containers.

ONE PART

CAUTION! This material may cause eye and skin irritation or allergic dermatitis. It contains epoxy resins.

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Users should review the Materials Safety Data Sheet (MSDS) and product label for the material to determine possible health hazards, appropriate engineering controls and precautions to be observed in using the material. Copies of the MSDS and label are available upon request.

