

> CYCOM[®] 7701 EPOXY RESIN

TECHNICAL DATA SHEET



DESCRIPTION

CYCOM[®] 7701 resin is a 250°F (121°C) curing epoxy resin designed for use in structural laminates and honeycomb core sandwich panels for aircraft exteriors. In the prepreg form it has excellent drape and tack.

CYCOM 7701 was created for autoclave fabrication; however, it can also be press molded and vacuum bag cured.

The recommended lay-up procedure for CYCOM 7701 epoxy resin is L-3 or L-6. The recommended cure procedure is C-6 or C-7.

FEATURES & BENEFITS

- 250°F (121°C) cure
- 200°F (93°C) dry service temperature
- Laminate and sandwich panel usage
- Self-extinguishing and solvent resistant
- Self-adhesive to honeycomb core
- Autoclave, press mold or vacuum bag processing
- Shelf life 6 months at 0°F (-18°C), 10 days at 72°F (22°C)

SUGGESTED APPLICATIONS

- Structural laminates and honeycomb core sandwich panels for aircraft exteriors

CHARACTERISTICS AND PROPERTIES

Table 1 | Mechanical Properties: E-Glass Fiber Reinforced Crowfoot Satin Fabric

Typical Cytec Engineered Materials product code MXB 7701/120

Property	-65°F (-54°C)	Room Temperature	180°F (82°C)
0° Tensile Properties			
Strength, ksi (MPa)	56 – 61 (386 – 421)	60 – 63 (414 – 434)	45 – 51 (310 – 352)
Modulus, Msi (GPa)	2.7 – 3.0 (19 – 21)	2.4 – 2.7 (17 – 19)	2.3 – 2.6 (16 – 18)
0° Compressive Properties			
Strength, ksi (MPa)	61 – 65 (421 – 448)	63 – 67 (434 – 463)	46 – 51 (317 – 352)
Modulus, Msi (GPa)	2.7 – 3.0 (19-21)	2.4 – 2.7 (17 – 19)	2.3 – 2.6 (16 – 18)
Interlaminar Shear Properties			
Strength, ksi (MPa)	-	4.7 – 4.9 (32 – 34)	5.0 – 5.3 (35 – 37)

Property values listed are typical for laminates with 50 to 55% fiber volume

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Table 2 | Mechanical Properties: E-Glass Fiber Reinforced 8 Harness Satin Fabric

Typical Cytec Engineered Materials product code MXB 7701/1581, MXB 7701/7781

Property	-65°F (-54°C)	Room Temperature	180°F (82°C)
0° Tensile Properties			
Strength, ksi (MPa)	64 – 67 (441 – 462)	59 – 61 (407 – 421)	48 – 51 (331 – 352)
Modulus, Msi (GPa)	2.8 – 3.0 (19 – 21)	3.2 – 3.4 (22 – 24)	3.0 – 3.2 (21 – 22)
0° Compressive Properties			
Strength, ksi (MPa)	67 – 70 (462 – 483)	64 – 69 (441 – 476)	46 – 50 (317 – 345)
Modulus, Msi (GPa)	3.4 – 3.7 (24 – 26)	3.8 – 4.0 (27 – 28)	3.4 – 3.7 (24 – 26)
Interlaminar Shear Properties			
Strength, ksi (MPa)	-	9.7 – 10.1 (67 – 70)	5.7 – 5.9 (39 – 41)

Property values listed are typical for laminates with 50 to 55% fiber volume

Table 3 | Mechanical Properties: Quartz Fiber Reinforced 8 Harness Satin Fabric

Typical Cytec Engineered Materials product code MXQ 7701/581

Property	Room Temperature
0° Tensile Properties	
Strength, ksi (MPa)	79 – 81 (545 – 558)
Modulus, Msi (GPa)	3.6 – 3.8 (25 – 26)
0° Compressive Properties	
Strength, ksi (MPa)	65 – 67 (448 – 462)
Modulus, Msi (GPa)	3.5 – 3.7 (24 – 26)
Interlaminar Shear Properties	
Strength, ksi (MPa)	3.9 – 4.1 (27 – 28)

Property values listed are typical for laminates with 50 to 55% fiber volume

PRODUCT HANDLING AND SAFETY

Cytec Engineered Materials recommends wearing clean, impervious gloves when working with epoxy resins to reduce skin contact and to avoid contamination of the product.

Materials Safety Data Sheets (MSDS) and product labels are available upon request and can be obtained from any Cytec Engineered Materials Office.

DISPOSAL OF SCRAP MATERIAL

Disposal of scrap material should be in accordance with local, state, and federal regulations.

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