

NT-260NM Epoxy Prepreg

Description

The NT-260NM Enduredge Max is a toughened 250°F curing epoxy resin that is optimized for ease of manufacturing composite parts in autoclaves, ovens, and presses. This system is ideally suited for use in motorsport, energy, recreational, transportation, aerospace, and defense applications. It may be used by hand layout or by automated methods.

Neat Resin Properties

Density 1.19 g/cm³

| DRY Tg | Gel Time (G' = G'') | Tack |
|---------------|--|---|
| (135°C) 275°F | Time from minimum viscosity 27 min @ 250°F 8.4 min @ 275°F | Medium (varies with reinforcement and resin content) |

NT-260NMLT low tack version available:

Reinforcements

NT260NM available with a wide assortment of reinforcements, examples include:

| Reinforcement | Style |
|---------------------------------|--|
| Carbon Fabrics | 200gsm 3K PW and 2x2 twill 368gsm 3K 8HS 670gsm 12K 2x2 twill |
| Fiberglass Fabrics | 7781 (8HS, 300gsm) 7628 (PW 207gsm) 120 (4HS, 106gsm) |
| Quartz Fabrics | 4581 (8HS, 286gsm) 4503 (PW, 114gsm) |
| Carbon Uni-directional Tape | Standard Modulus (100gsm and up) Intermediate Modulus (100gsm & up) |
| Fiberglass Uni-directional Tape | E-glass and S-glass (150gsm and up) |
| Specialty | Contact us to discuss any unique reinforcement needed |

NT-260NM/Standard Modulus 3K 2x2 Twill, 200 gsm

| Property | Test Method | Unit | RTA |
|------------------------------|-------------|------|------|
| 0° Tensile Strength | ASTM D3039 | ksi | 134 |
| 90° Tensile Strength | ASTM D3039 | ksi | 126 |
| 0° Tensile Modulus | ASTM D3039 | Msi | 10.1 |
| 90° Tensile Modulus | ASTM D3039 | Msi | 9.12 |
| 0° Flexural Strength | ASTM D790 | ksi | 131 |
| 90° Flexural Strength | ASTM D790 | ksi | 123 |
| 0° Flexural Modulus | ASTM D790 | Msi | 7.40 |
| 90° Flexural Modulus | ASTM D790 | Msi | 6.81 |
| 0° Compression Strength | ASTM D6641 | ksi | 90.4 |
| 90° Compression Strength | ASTM D6641 | ksi | 91.1 |
| 0° Compression Modulus | ASTM D6641 | Msi | 9.03 |
| 90° Compression Modulus | ASTM D6641 | Msi | 9.02 |
| 0° Short Beam Shear Strength | ASTM D2344 | ksi | 8.94 |

Normalized to 60% FV (except shear)
RTA (20°, 30-70% RH)

IM2C 12K (Intermediate Modulus Carbon), 200gsm, UD tape

| Property | Test Method | Unit | RTA |
|------------------------------|-------------|------|------|
| 0° Tensile Strength | ASTM D3039 | ksi | 232 |
| 90° Tensile Strength | ASTM D3039 | ksi | 7.17 |
| 0° Tensile Modulus | ASTM D3039 | Msi | 36.6 |
| 90° Tensile Modulus | ASTM D3039 | Msi | 1.11 |
| 0° Flexural Strength | ASTM D790 | ksi | 186 |
| 90° Flexural Strength | ASTM D790 | ksi | 14.7 |
| 0° Flexural Modulus | ASTM D790 | Msi | 18.5 |
| 90° Flexural Modulus | ASTM D790 | Msi | 1.17 |
| 0° Compression Strength | ASTM D6641 | ksi | 98.8 |
| 90° Compression Strength | ASTM D6641 | ksi | 24.2 |
| 0° Compression Modulus | ASTM D6641 | Msi | 21.3 |
| 90° Compression Modulus | ASTM D6641 | Msi | 1.21 |
| 0° Short Beam Shear Strength | ASTM D2344 | ksi | 9.49 |

Normalized to 60% FV (except shear)
RTA (20°, 30-70% RH)

NT-260NM/7781 8HS Fiberglass

| Property | Test Method | Unit | RTA |
|------------------------------|-------------|------|------|
| 0° Tensile Strength | ASTM D3039 | ksi | 86.0 |
| 90° Tensile Strength | ASTM D3039 | ksi | 66.6 |
| 0° Tensile Modulus | ASTM D3039 | Msi | 4.69 |
| 90° Tensile Modulus | ASTM D3039 | Msi | 4.40 |
| 0° Flexural Strength | ASTM D790 | ksi | 107 |
| 90° Flexural Strength | ASTM D790 | ksi | 96.4 |
| 0° Flexural Modulus | ASTM D790 | Msi | 3.65 |
| 90° Flexural Modulus | ASTM D790 | Msi | 3.64 |
| 0° Compression Strength | ASTM D6641 | ksi | 71.4 |
| 90° Compression Strength | ASTM D6641 | ksi | 61.7 |
| 0° Compression Modulus | ASTM D6641 | Msi | 4.55 |
| 90° Compression Modulus | ASTM D6641 | Msi | 4.19 |
| 0° Short Beam Shear Strength | ASTM D2344 | ksi | 8.76 |

Normalized to 60% FV (except shear)
RTA (20°, 30-70% RH)

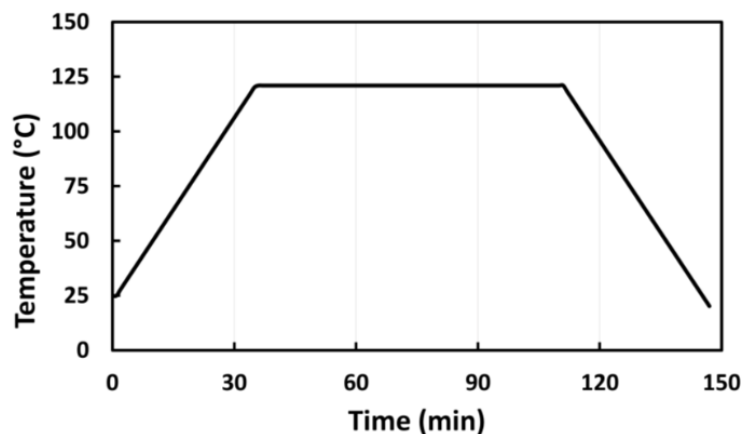
TeXtreme® UTS50S PW, 80 gsm

| Property | Test Method | Unit | RTA |
|------------------------------|-------------|------|------|
| 0° Tensile Strength | ASTM D3039 | ksi | 181 |
| 0° Tensile Modulus | ASTM D3039 | Msi | 11.1 |
| 0° Flexural Strength | ASTM D790 | ksi | 168 |
| 0° Flexural Modulus | ASTM D790 | Msi | 9.84 |
| 0° Compression Strength | ASTM D6641 | ksi | 105 |
| 0° Compression Modulus | ASTM D6641 | Msi | 9.84 |
| 0° Short Beam Shear Strength | ASTM D2344 | ksi | 9.22 |

Normalized to 60% FV (except shear)
RTA (20°, 30-70% RH)

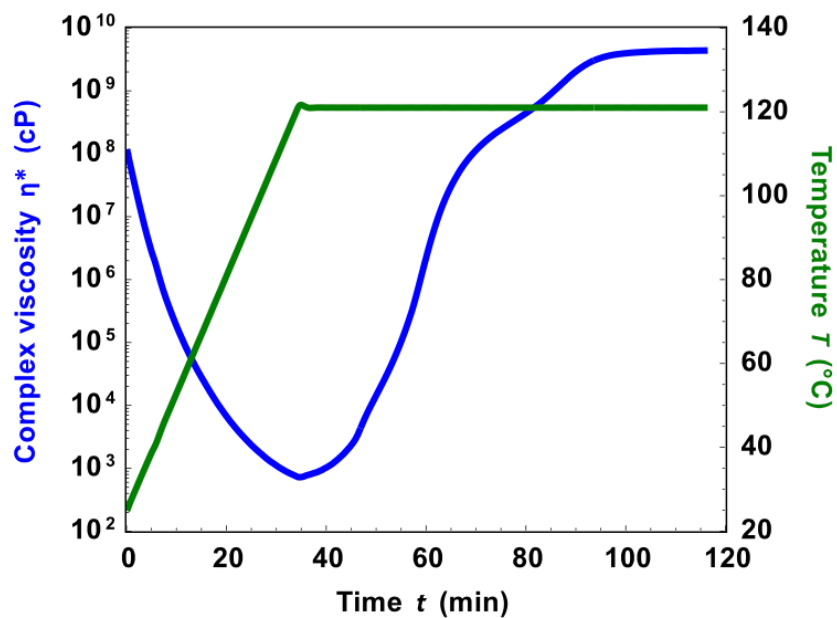
Cure Profile

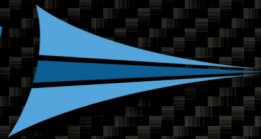
Typical cure cycle is ramp to 250°F at 1-5°F/min, hold at 250°F for 75 minutes, cool 1-5°F/min to ambient.



**Consider alternative cure cycles for thick laminates to reduce risk of void content or exotherm.*

Rheology





SHELF LIFE

The storage life of NT-260NM is 12 months at <0°F (-18°C) in the sealed shipping bag. The material should be allowed to warm to room temperature (23°C) in the sealed shipping bag prior to use. Partially used rolls should be resealed in a moisture-proof bag or container before returning to cold storage. The out life/tool life at room temperature (23°C) is 30 days.

HANDLING MATERIALS

When handling any prepreg materials, always wear clean, powder-free latex gloves. This assures that no hand oils are transferred to the prepreg and/or composite during processing. The presence of oils in the part could lead to problems in both mechanical and electrical performance of the part. This also guards against dermatitis that may occur with some users.

USE OF HONEYCOMB AND FOAM CORE MATERIALS

When using nonmetallic honeycomb and foam core materials for sandwich structures, the materials should always be dried in an oven prior to lay-up to drive off any moisture that may be in the core. The core should be cooled in the presence of a desiccant to avoid moisture uptake. Following drying, it is always best to use the material as soon as possible. Recommended core dry time/temp: 121°C (250°F) for 3-4 hours.

CONTACT INFORMATION

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