HexPly® M949

Next Generation Cosmetic Prepreg for Automotive

HEXCEL®

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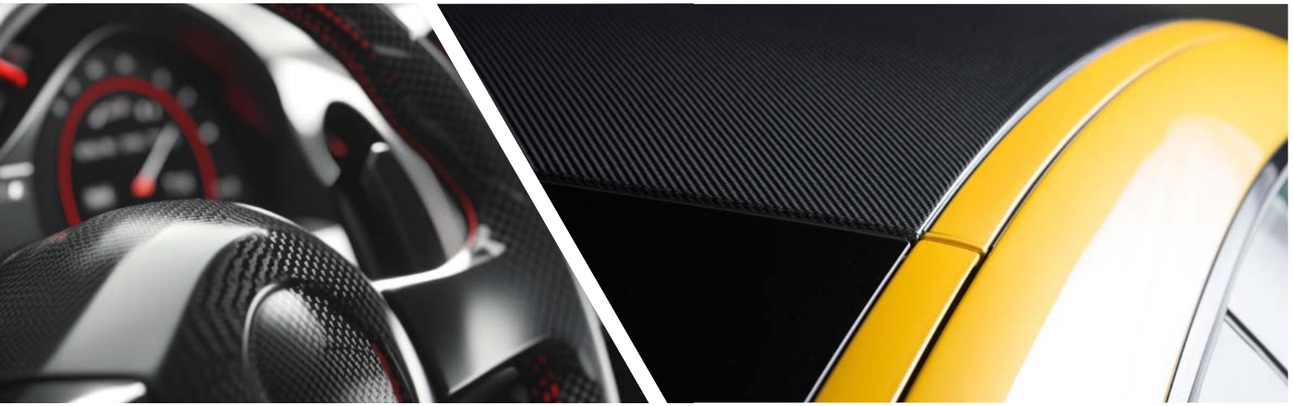
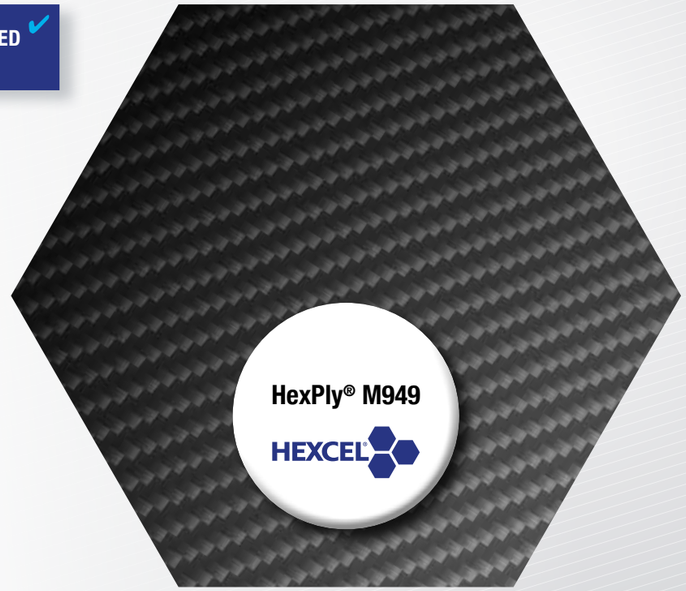
HexPly® M949 is designed for the **automotive sector, offering many benefits:**

- Suitable for **all visible carbon applications**
- Created for **high-quality exterior and interior cosmetic parts**
- Parts can be cured in the **press or autoclave**
- Suitable for parts exposed to **elevated temperatures**



Toughened Epoxy Prepreg for High-Quality Carbon-Look Surfaces

- PREPREG COMPRESSION MOLDING AND AUTOCLAVE PROCESS ✔
- HOT-MELT CHEMISTRY PARTIALLY BIO-DERIVED RESIN* ✔
- MULTIPLE LINES QUALIFIED CAMERA VISION SYSTEM ✔
- FREE OF PINHOLES AND WHITE SPOTS ✔
- EXCELLENT SURFACE FINISH ✔
- HIGH TG >145°C ✔
- WEIGHT SAVINGS VS TRADITIONAL COSMETIC LAYERS ✔
- LONG OUTLIFE: 21 WEEKS AT ROOM TEMPERATURE ✔



*Available Q2 2025.

Key Features

Resin Matrix Properties

- Dynamic Thermal Properties by DSC[1]

Uncured Tg	-5 to +1°C
TOnset	140 – 150°C
TPeak	145 – 155°C
Enthalpy	340J/g ± 20%

- Typical cured Tg — >145°C (following a 90min cure @140°C)[2]
- Density (ISO 1183–1) — 1.15 – 1.20g/cm³
- Hot-Wet Performance[3]
  - Tg Dry[2] — 150 ± 5°C
  - Tg Hot-Wet[2] — 125 ± 5°C
- Shelf Life[4]
  - @ +23°C — 21 weeks
  - @ +5°C — ≥ 6 months
  - @ -18°C — ≥ 18 months

Recommended typical Curing Conditions

	Cure Cycle	Tg[4]
Autoclave	Ramp up 2°C/min, 60-90 min @130-140°C, 7 bar	>145°C
PCM	15 to 30 min @130-140°C (hot in/hot out), 10 bar	>145°C

The optimum cure cycle, heat-up rate, dwell period and pressure are dependent on component size, shape, layup construction, oven capacity and thermal mass of tool. Higher temperature cure cycles than 140°C are not recommended.

(1) According to ISO 11357-2 using a 10°C/min ramp rate, -40 to 270°C
(2) Measured by DMTA according to ASTM E-1640-09 @10°C/min, Maximum Loss Modulus (E")
(3) 2 weeks at 70°C, specimens immersed in water
(4) Stored sealed, in dry conditions and in absence of direct sunlight. Shelf Life refers to the minimum time at given temperature after which the resin is being impaired in its thermal or rheological properties. An increase in uncured Tg above NTP temperature limitation (NIST) defines the end of shelf life of the resin matrix

For more information

Hexcel is a leading worldwide supplier of composite materials to aerospace and industrial markets.
Our comprehensive range includes:

- HexTow® carbon fibers
- HexForce® reinforcements
- HexPly® prepregs
- HexAM® additive manufacturing
- HexMC® molding compounds
- HexFlow® RTM resins
- HexBond® adhesives
- HexTool® tooling materials
- HexWeb® honeycomb
- Acousti-CAP® sound attenuating honeycomb
- Engineered core
- Engineered products
- Polyspeed® laminates & pultruded profiles
- TowPly™ towpreg
- HexShape™ preforms

For US quotes, orders and product information call toll-free 1-800-688-7734. For other worldwide sales office telephone numbers and a full address list, please go to:

https://www.hexcel.com/contact

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