



HexPly® M949

Next Generation Cosmetic Prepreg for Automotive

HEXCEL®

HexPly® M949

Next-Generation Cosmetic Prepreg for Automotive



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 ✓

WEIGHT SAVINGS VS
TRADITIONAL COSMETIC LAYERS ✓

HIGH TG >145°C ✓

EXCELLENT SURFACE FINISH ✓

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/cm ³
• 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

(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

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.

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® preprints
- 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>

©2025 Hexcel Corporation - All rights reserved. Hexcel Corporation and its subsidiaries («Hexcel») believe that the technical data and other information provided herein was materially accurate as of the date this document was issued. Hexcel reserves the right to update, revise or modify such technical data and information at any time. Any performance values provided are considered representative but do not and should not constitute a substitute for your own testing of the suitability of our products for your particular purpose. Hexcel makes no warranty or representation, express or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, and disclaims any liability arising out of or related to, the use of or reliance upon any of the technical data or information contained in this document.

