PRODUCT BULLETIN

November 2023

STYPOL®

040-4562, 040-4572

Isophthalic Filament Winding Resins - FDA Approvable

DESCRIPTION

STYPOL® 040-4562 and STYPOL® 040-4572 are pre-promoted, unsaturated polyester laminating resins in monomer. They are especially formulated for filament winding parts for high heat resistance and/or corrosion resistant applications.

STYPOL® 040-4562 and STYPOL® 040-4572 are formulated with FDA approved ingredients for indirect food contact per 21 CFR 177.2420.

STYPOL® 040-4562 and STYPOL® 040-4572 meet National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composite Production, corrosion resistant/high strength resins, filament, and manual application.

BENEFITS & FEATURES

- Outstanding chemical resistance
- High impact resistance
- Good heat resistance

PROPERTIES – LIQUID

Property(1)	Unit	040-4562	040-4572
Viscosity(2)	cps	550	550
Gel Time(3)	minutes	25	18
Gel to Peak	minutes	13	13
Peak Exotherm	°C/°F	191/375	191/375

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer LVF Spindle #3 at 60 RPM
3) 1.5% Arkema Luperox® DDM-9

PROPERTIES – PHYSICAL

Property[1]	Unit	Neat Resin Casting[2]	Test Method
Tensile Strength	psi	9,000	ASTM D 638
Tensile Modulus	psi	930,000	ASTM D 638
Tensile Elongation	%	1.9	ASTM D 638
Flexure Strength	psi	18,000	ASTM D 790
Flexure Modulus	psi	650,000	ASTM D 790
Heat Deflection Temperature (at 264 psi) Cure at 70 °C Cure at 120 °C	°C/°F	 87/189 97/207	ASTM D 648
Hardness, Barcol Model 934-1	HB	48	ASTM D 2583

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.
2) 1.5% Arkema Luperox® DDM-9

APPLICATION

Refer to Polynt's Composites Applications Guide ("Cookbook") for equipment and application recommendations. Each user must determine the suitability of this product to his/her particular mode of operation and intended end-use application. A Polynt representative will be available to assist in the proper selection of all Polynt products available for commercial use.

SHELF LIFE & STORAGE

The shelf life of STYPOL® 040-4562 and STYPOL® 040-4572 is 120 days from the date of manufacture from Polynt. To maximize usage life and maintain optimum properties, resins and gel coats should be stored in the original closed container at temperatures below 23°C/73°F and away from ignition sources and sunlight. Keep containers sealed to prevent moisture pick-up and monomer loss.

SAFETY & WARRANTY

To receive a copy of our safety and warranty information, please email safetyandwarranty@polynt.com.