PRODUCT BULLETIN

January 2024

Polynt A 6199 A

Flame-Retardant Polyester Resin

DESCRIPTION

Polynt A 6199 A is a pre-promoted, unsaturated polyester base resin in reactive monomer. Polynt A 6199 A is specifically formulated for use in closed molding applications requiring flame retardancy. When combined with ATH filler, Polynt A 6199 A can be used to produce parts meeting flame spread and smoke requirements for transportation applications.

BENEFITS & FEATURES

- Flame retardant
- Capable of high filler loading (38% Huber MoldX® P18)
- Superior surface cosmetics
- Resistance to fiberglass pattern print-through
- High heat distortion temperature equals reduced post-cure on finished parts
- Good reactivity

PROPERTIES – LIQUID

Property(1)	Unit	6199 A
NVM (110 °C)	%	53.10
Viscosity(2)	cps	100
Filled Viscosity(3)	cps	245
Filled Viscosity (90°F)(3)	cps	180
Gel Time(4)	minutes	31
Gel to Peak	minutes	7.25
Peak Exotherm	°C/°F	169/337

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer LVF Spindle #2 at 60 RPM
3) Brookfield Viscometer LVF Spindle #2 at 30 RPM (sheared with Cowles blade)
4) 1.5% United Initiators Norox® MEKP-9

PROPERTIES – PHYSICAL

Property(1)	Unit	Neat Resin Casting(2)	Test Method
Tensile Strength	psi	5,000	ASTM D 638
Tensile Modulus	psi	248,000	ASTM D 638
Tensile Elongation	%	3.3	ASTM D 638
Flexure Strength	psi	7,000	ASTM D 790
Flexure Modulus	psi	284,000	ASTM D 790
Heat Deflection Temperature	°C/°F	60/140	ASTM D 648

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.
2) 1.5% United Initiators Norox® MEKP-9. Post cured 4 hours @ 150 °F

PROPERTIES - OTHER

Test	Application	Results	
ASTM E162-08: Surface Flammability of Materials using a Radiant Heat Energy Source [1]	Transportation (Docket 90-A Recommended Fire Safety Practices for Transit Bus and Van Materials Selection)	Flame Spread Index, I_s = 30	
ASTM E662: Optical Smoke Density [1] *Specific Optical Density (D_s) at 1.5 min *Specific Optical Density (D_s) at 4.0 min		**Flaming** D_s = 14 D_s = 138	**Non-Flaming** D_s = 0 D_s = 20
FMVSS 302: Flammability of Interior Materials – Passenger Cars, Multipurpose Passenger Vehicles, Trucks and Buses	Transportation	Burn Rate (mm/min.) = 0 (specimen did not ignite)	
Bombardier SMP 800-C[2]: Smoke Toxicity Test *CO ppm *CO2 ppm *NO2 ppm *SO2 ppm *HCl ppm *HF ppm *HBr ppm *HCN ppm	Transportation	**Flaming** 835 (Max.) 28055 (Max.) 4 <1 4 5 1 <1	**Non-Flaming** 77 (Max.) 546 (Max.) <1 <1 27 2 3 <1

1) Composition: Gel Coat: 55XAP607, Batch B753-177A Catalyzed at 1.75% with Norox® MEKP-9 and spray applied. Resin: Polynt A 6170 A Batch Number B758-115 filled with 38% by weight Huber MoldX® P18 ATH. Filled mix catalyzed with 1.8% Norox® MEKP-925. Reinforcement Saertex® SAERflow® 900-180-900. Gel Coat Thickness: 10-15 mils; Total Laminate Thickness: 0.155-0.210 inches.
2) Refer to SGS Test Report 3-41987-0; Completed 3-Feb-2021

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 Polynt A 6199 A 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.