PRODUCT BULLETIN

January 2024

ARMORCAST® 040-6095, 040-6097, 040-6098

Hybrid Marble Resins

DESCRIPTION

ARMORCAST® 040-6095, 040-6097, and 040-6098 are pre-promoted, low shrink hybrid marble resins suitable for manufacturing all cultured marble parts. Because of the low exotherm and shrinkage, these resins are ideal for making large parts such as tubs and shower pans. Their fast green strength development allows ¼" panels, if initiated properly, to be de-molded within 1-1.5 hours. These products are exceptionally compatible for use with lightweight fillers.

ARMORCAST® 040-6097 is the "summer" or longer gel time version of ARMORCAST® 040-6095.

ARMORCAST® 040-6098 is a shorter gel time variation of ARMORCAST® 040-6095 and may be considered when faster de-molding times are required or as a "winter" version.

BENEFITS & FEATURES

- Cured casting color is easily pigmented
- Lower viscosity provided at higher solids (NVM) content, an advantage for manufacturers reporting emissions
- Superior wet-out capabilities allow higher filler loading
- Low matrix exotherm
- Low shrinkage rate reduces buildup of internal stress during cure of the part
- Fast green strength development and cure
- Very compatible with lightweight fillers
- Excellent thermal shock resistance

PROPERTIES – LIQUID

Property(1)	Unit	040-6095	040-6097	040-6098
Viscosity(2)	cps	750	750	750
Gel Time(3)	minutes	20	27.5	15
Gel to Peak	minutes	10.5	-	10.5
Peak Exotherm	°C/°F	160/320	160/320	160/320

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer LVF Spindle #2 at 12 RPM
3) 1.0% Arkema Luperox® DDM-9

PROPERTIES – PHYSICAL (UNFILLED)

Note: The physical properties of thermoset resins evolve as the resin cures. The properties given below are for well cured castings. Resin and laminates at different stages of cure will have varying properties.

Property[1]	Unit	Neat Resin Casting	Test Method
Tensile Strength	psi	9,000	ASTM D 638
Tensile Modulus	psi	520,000	ASTM D 638
Tensile Elongation	%	2.12	ASTM D 638
Flexure Strength	psi	18,000	ASTM D 790
Flexure Modulus	psi	550,000	ASTM D 790
Heat Deflection Temperature	°C/°F	56/132	ASTM D 648

1) Physical properties were determined using internal Polynt test methods that are similar to those listed above.

PROPERTIES - OTHER

TYPICAL FILLED MARBLE MATRIX PROPERTIES (77°F)

Marble Matrix Formulation	
ARMORCAST® 040-6095, 040-6097, 040-6098	25%
Calcium Carbonate Filler	75%
Catalyst (Arkema Luperox® DDM-9)	1.25%

Matrix Property	040-6095	040-6097	040-6098
Marble Gel Time	30 minutes	45 minutes	22 minutes
De-mold Time	60 minutes	70 minutes	50 minutes
Peak Exotherm	120-140°F	120-140°F	120-140°F

APPLICATION

ARMORCAST® 040-6095, 040-6097, and 040-6098 are quality control tested using Arkema Luperox® DDM-9. The initiator level should not exceed 2.5% or fall below 0.6% for proper cure. The recommended range is 0.75-2.25%, with an initiator level of 1.25% at 77°F considered ideal.

This product should not be used when temperature conditions are below 60°F, as curing may be adversely affected.

Caution

Do not add any material, other than the recommended fillers and methyl ethyl ketone peroxide, to this product without the advice of a representative of Polynt Composites.

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 ARMORCAST® 040-6095, 040-6097, and 040-6098 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.