

ChromaFlow™ 90

Strong, rigid polyurethane for additive manufacturing

ChromaFlow™ 90 is a strong, rigid polyurethane with residual flexibility. It was designed for oil-resistant applications of all types at low to medium temperatures. It is well suited for seals and gaskets as well as vibration damping applications, such as engine mounts and for buffers and impact reduction.

FEATURES

- Smooth parts without post processing
- Isotropic tensile properties (Z properties are 76-113% of XY properties)
- Easy color matching
- Large parts without warping
- Solidly filled parts
- Gas-tight printing

PROPERTY	MEAN	STD. DEVIATION	UNIT	STANDARD
Tensile Strength (XY)	18.4 (2662)	2.1 (299)	MPa (psi)	ASTM 638
Tensile Strength (Z)	14.8 (2149)	0.8 (109)	MPa (psi)	ASTM 638
Elongation at Break (XY)	391	47	%	ASTM 638
Elongation at Break (Z)	250	17	%	ASTM 638
Modulus at 100% Strain (XY)	8.5 (1235)	0.5(73)	MPa (psi)	ASTM 638
Modulus at 100% Strain (Z)	8.6 (1251)	0.2 (29)	MPa (psi)	ASTM 638
Hardness	94	+/-5	Shore A	ASTM D2240

PHYSICAL & THERMAL PROPERTIES

Cured Density	1.12 g/mL
Temperature Range	-40 to 110° C
Maximum Temperature (Short-Term)	125 / 10° C/min

CHEMICAL PROPERTIES

Flame Retardancy	Slow Burning
Resistance to Oil	Very Good
Water Absorption	Low
Adhesion to Metals	Very Good
Adhesion to Fabrics	Very Good
Adhesion to Plastics	Good to Fair

CHROMAFLOW™ RESINS

ChromaFlow™ resins are flexible, colored, translucent or opaque polyurethane resins available with a wide range of properties including various Shore A and Shore D hardnesses.

These resins have been developed for 3D-printing applications that require specific flow and viscosity parameters in order to work with Chromatic's RX-AM™ platform, a novel type of additive manufacturing that uses chemical reactions. RX-AM™ is suitable for a range of applications from automotive to textiles to industrial seals and gaskets.

To learn more about ChromaFlow™, please contact us at info@c3dm.com.