

# ChromaLast™ 90

## New 3D-printable polyurethane material for low-compression set billet, seal and gasket applications

ChromaLast 90 is a strong, flexible polyurethane material with a high degree of crosslinking. It was designed for high-temperature applications requiring high tensile strength, good hydraulic oil resistance, and low compression set. It also has improved hydrolytic stability. It has a temperature range from -20° C to 120° C.

### FEATURES

- Smooth parts without post processing
- Isotropic tensile properties
- High tensile strength
- Seals tightly against gases and liquids
- Solidly filled parts
- No warping during prints

PROPERTY	MEAN	STD. DEVIATION	UNIT	STANDARD
Tensile Strength (XY)	41.4 (6012)	2.5 (361)	MPa (psi)	ASTM 638
Tensile Strength (Z)	34.6 (5020)	2.8 (410)	MPa (psi)	ASTM 638
Elongation at Break (XY)	288	8	%	ASTM 638
Elongation at Break (Z)	264	8	%	ASTM 638
Modulus at 100% Strain (XY)	10.7 (1549)	0.2 (28)	MPa (psi)	ASTM 638
Modulus at 100% Strain (Z)	10.2 (1486)	0.2 (32)	MPa (psi)	ASTM 638
Hardness	91 21%	+/-5	Shore A	ASTM D2240

### COMPRESSION SET PROPERTIES

30%

### STANDARD

ASTM D395 (100° C for 22 hours, 25% deflection)

### CHEMICAL PROPERTIES

Resistance to Hydraulic Fluids	Very Good
Resistance to Compressor Oil	Very Good
Resistance to Mineral Oil	Very Good
Resistance to Hydrolysis	Good

### CHROMALAST™ RESINS

ChromaLast resins are flexible, colored, translucent or opaque polyurethane resins. They have a very low compression set, making them suitable for applications with long-term static or dynamic load. They have been specifically developed for applications with our RX-AM™ platform. This unique system is being evaluated for applications ranging from rail and automotive to oil and gas to hydraulic piston seals and gaskets. ChromaLast is available to make near net-shape parts, such as billets, that can be machined into tight tolerance seal applications.

To learn more about ChromaLast™, please contact us at [info@c3dm.com](mailto:info@c3dm.com).