

ChromaFlow 50

Technical Data Sheet

Product Description

ChromaFlow resins are flexible, colored, translucent or opaque polyurethane resins. They have been specifically developed for 3D-printing applications that require specific flow and viscosity parameters in order to work with the RX-AM™ platform. This unique system has been evaluated for applications ranging from automotives to textiles. ChromaFlow is available with a wide range of properties.

ChromaFlow 50 is a medium-strong, highly flexible material with medium crosslinking. It was designed for oil-resistant applications of all types at low temperatures. It is well suited for seals and gaskets for automotive, marine, aircraft and off-road equipment.

Features

- Smooth parts without post processing
- Isotropic tensile properties
- Fast elastic rebound
- Color matching easily possible

Physical & Mechanical Properties

| | | |
|----------------------------------|-----------------|---------|
| Cured Density | 1.03 g/mL | |
| Temperature Range | -40 to 110° C | |
| Maximum Temperature (Short-Term) | 125 / 10° C/min | |
| Shore A Hardness | 50 | ISO 868 |
| Tensile Modulus (100% Strain) | 1.5 MPA | ISO 37 |
| Peak Stress (Up To) | 4.3 MPA | ISO 37 |
| Elongation at Break (Up To) | 370% | ISO 37 |

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 |

info@c3dm.com

ChromaFlow 70

Technical Data Sheet

Product Description

ChromaFlow resins are flexible, colored, translucent or opaque polyurethane resins. They have been specifically developed for 3D-printing applications that require specific flow and viscosity parameters in order to work with the RX-AM™ platform. This unique system has been evaluated for applications ranging from automotives to textiles. ChromaFlow is available with a wide range of properties.

ChromaFlow 70 is a medium-strong, flexible polyurethane material with crosslinking. 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 in engine mounts.

Features

- Smooth parts without post processing
- Isotropic tensile properties
- Color matching easily possible
- Large parts without warping
- Solidly filled parts
- Gas-tight printing

Physical & Mechanical Properties

| | |
|----------------------------------|-----------------|
| Cured Density | 1.1 g/mL |
| Temperature Range | -40 to 110° C |
| Maximum Temperature (Short-Term) | 125 / 10° C/min |
| Shore A Hardness | 72 ISO 868 |
| Tensile Modulus (100% Strain) | 2.99 MPa ISO 37 |
| Peak Stress (Up To) | 9.06 MPa ISO 37 |
| Elongation at Break (Up To) | 350% ISO 37 |

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 |

info@c3dm.com

ChromaFlow 90

Technical Data Sheet

Product Description

ChromaFlow resins are flexible, colored, translucent or opaque polyurethane resins. They have been specifically developed for 3D-printing applications that require specific flow and viscosity parameters in order to work with the RX-AM™ platform. This unique system has been evaluated for applications ranging from automotives to textiles. ChromaFlow is available with a wide range of properties.

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
- Color matching easily possible
- Large parts without warping
- Exceptionally strong
- Fast elastic rebound

Physical & Mechanical Properties

| | |
|----------------------------------|-----------------|
| Cured Density | 1.12 g/mL |
| Temperature Range | -40 to 110° C |
| Maximum Temperature (Short-Term) | 125 / 10° C/min |
| Shore A Hardness | 93 ISO 868 |
| Tensile Modulus (100% Strain) | 9.67 MPa ISO 37 |
| Peak Stress (Up To) | 18.4 MPa ISO 37 |
| Elongation at Break (Up To) | 272% ISO 37 |

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 |

info@c3dm.com

Chromatic 3D Materials, Inc. 684 Mendelssohn Avenue North Golden Valley, MN 5427, US | Chromatic 3D Materials GmbH Kirchstr. 18 52538 Selfkant, Germany

All information supplied by or on behalf of Chromatic 3D Materials INC in relation to its products, whether in the nature of data, recommendations or otherwise, is supported by research and, in good faith, believed reliable, but Chromatic 3d Materials assumes no liability and makes no warranties of any kind, express or implied, including, but not limited to, those of title, merchantability, fitness for a particular purpose or non-infringement or any warranty arising from a course of dealing, usage, or trade practice whatsoever in respect of application, processing or use made of the aforementioned information, or product. The user assumes all responsibility for the use of all information provided and shall verify quality and other properties or any consequences from the use of all such information. Typical values are indicative only and are not to be construed being binding specifications. This document replaces all previous versions relating to this subject. Copyright © Chromatic 3d Materials 2019. All rights reserved. No part of the information may be reproduced, distributed or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of Chromatic 3d Materials.