forward am
a brand of MAM – Mass Additive Manufacturing GmbH

Ultracur3D® xMOLD

Rigid | Dissolvable | Light Blue

Extended TDS

Complete Technical Documentation and Testing Summary

Version 1.0

Contents

Technical Data Sheet 3

Are you looking for an updated TDS version? Check out the latest online version here.

forward-am.com +49 6221 67417 900 sales@forward-am.com

Technical Data Sheet

Soluble mold resin with high dimensional accuracy and fast dissolution.

General Properties	Method	Typical Values
Appearance	-	Light Blue
Viscosity, 25°C	Cone/Plate Rheometer[1)]	60 mPas
Viscosity, 30°C	Cone/Plate Rheometer[1)]	50 mPas
Density (Printed Part)	ASTM D792	1.23 g/cm³
Density (Liquid Resin)	DIN EN ISO 2811-3	1.13 g/cm³

Tensile Properties[2)]	Method	Typical Values
E Modulus	ASTM D638	1760 MPa
Ultimate Tensile Strength	ASTM D638	40 MPa
Elongation at Break	ASTM D638	19%

Flexural Properties	Method	Typical Values
Flexural Modulus	ASTM D790	1100 MPa
Flexural Strength	ASTM D790	40 MPa

Impact Properties	Method	Typical Values
Notched Izod (Machined), 23°C	ASTM D256	34 J/m
Unnotched Izod, 23°C	ASTM D4812	285 J/m
Notched Charpy (Machined), 23°C	ISO 179-1	3.62 kJ/m²

Thermal Properties	Method	Typical Values
HDT at 0.45 MPa	ASTM D648	45°C
HDT at 1.82 MPa	ASTM D648	40°C

The data contained in this publication is based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, this data does not relieve processors from carrying out their own investigations and tests; neither does this data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose.

Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

The safety data given in this publication is for informational purposes only and does not constitute a legally binding MSDS. The relevant MSDS can be obtained upon request from your supplier or you may contact Mass Additive Manufacturing GmbH directly at sales@forward-am.com.

Other	Method	Typical Values
Hardness Shore D	ASTM D2240	29
Water Absorption, Short-Term (24 hours)	ASTM D570	58%

Mechanical properties overview

1) Determined with TA-Instrument DHR rheometer, cone/plate, diameter 60 mm, shear rate 100 s^{-1}
2) Tensile type ASTM D638 type IV, Pulling speed 5 mm/min
3) If not noted otherwise, all specimens are 3D printed. Samples were tested at room temperature, 23°C. ASTM sample size (L x W x H): ASTM D790 127 x 3.2 x12.7 mm, ASTM D256 63 x 12.7 x 12 mm, ASTM D648 127 x 3.2 x 13 mm, ISO 179-1 80 x 4 x 10 mm.

The data contained in this publication is based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, this data does not relieve processors from carrying out their own investigations and tests; neither does this data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose.

Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

The safety data given in this publication is for informational purposes only and does not constitute a legally binding MSDS. The relevant MSDS can be obtained upon request from your supplier or you may contact Mass Additive Manufacturing GmbH directly at sales@forward-am.com.