

PRODWAYS MATERIALS

UV POLYMERIZATION MATERIALS



ProMaker MOVINGLight® compatible resins 2019

A PORTFOLIO OF PREMIUM MATERIALS

Prodways' exclusive MOVINGLight(r) technology, based on photo-polymerization of liquid resin via moving DLP® heads, is designed to work with premium acrylate and hybrid resins to deliver unequaled levels of precision and productivity for a large array of applications in industries such as dental, medical, aerospace, investment casting, molding, and R&D centers

INNOVATION AND EXPERTISE

Prodways is constantly working to develop new materials with unique mechanical, physical, and aesthetic properties, supported by integrated R&D teams as well as strategic partners. Our experts also support customer research and innovation for the development of new materials to push MOVINGLight® 3D printing technology into new territories.



ProMaker L & LD SERIES compatible resins 2019

PLASTCure materials have been developed by Prodways and our partners to work in combination with ProMaker machines, offering an effective additive manufacturing solution for many applications, including biomedical and industrial needs.

	PLASTCure Cast 200*	PLASTCure Cast 300 HD*	PLASTCure ABS 3000*	PLASTCure Rigid 10 500*
Compatible with	L series / LD series	L series / LD series	L series	L series
Appearance	Orange translucent	Orange translucent	White	Ivory opaque
Typical Application Examples	Investment casting of accurate and thin parts for dental, jewelry or industrial applications.	Investment casting of accurate and highly thin parts for jewelry, art & design, dental, pressable ceramics and industrial applications.	RTV patterns and durable concept models requiring high accuracy, excellent resolution and surface finish in industries such as electronics, aerospace and automotive.	Molding, rapid tooling, wind tunnel testing, high temperature testing, electrical casings and automotive housings. Parts requiring thermal stability, extreme accuracy and quick turnaround
Specification	<ul style="list-style-type: none">· Good reactivity and low viscosity· High accuracy· Ability to produce sharp-edged parts· Outstanding burnout properties with nearly zero ash content	<ul style="list-style-type: none">· High accuracy allowing very thin details· Outstanding burnout properties with nearly zero ash content	<ul style="list-style-type: none">· High detail resolution· Sharp geometries· Good surface finish, shiny aspect	<ul style="list-style-type: none">· Excellent detail resolution and sidewall quality· Easy finishing· Superior thermomechanical properties· Low thermal expansion
Liquid density (g/cm3)	1.11	1.10	1.11	1.60
Viscosity @ 28°C (cps)	200 - 400	300 - 500	395	900 - 1100
Hardness (Shore D)	85 - 90	70 - 75	89	90 - 95
Tensile Modulus (MPa) ASTM D638	N/A	N/A	3050	7700 - 8200
Tensile Strength (MPa) ASTM D638	N/A	N/A	64.7	50 - 65
Elongation at Break (%) ASTM D638	N/A	N/A	N/A	0.5 - 1
Flexural Strength (MPa) ASTM D790	65 - 75	40 - 50	121	65 - 90
Flexural Modulus (MPa) ASTM D790	1400 - 1800	800 - 1200	2650	7000 - 8000
Izod Impact (J/m) ASTM D256A	N/A	N/A	N/A	N/A
HDT @ 0.46 MPa (°C) ASTM D648	N/A	N/A	126	120 - 125
Residual ash content	No residue	No residue	N/A	Not relevant
Water Absorption (%) ASTM D570	N/A	N/A	N/A	0.5 - 0.7
By	Prodways Materials	Prodways Materials	Prodways Materials	DSM Somos

	PLASTCure Model 300*	PLASTCure Model 310*	PLASTCure Model 320*	PLASTCure Dental Tray*	PLASTCure Clear 200*
Compatible with	L series	L series / LD series	L series / LD series	L series / LD series	L series
Appearance	Reddish beige	Light beige opaque	Beige opaque	Beige opaque	Clear
Typical Application Examples	Broad range of dental model applications. Suited for thermoforming applications.	Broad range of dental model applications. Suited for thermoforming applications.	Broad range of dental model applications. Suited for thermforming applications.	Medical device class I certification, developed for the print of custom impression trays	Designed for production of dental drill guides. Can be used as well for various non-medical applications if high transparency is required.
Specification	<ul style="list-style-type: none">· High accuracy and excellent resolution· Ability to produce sharp edges and detailed parts· High green strength and good mechanical properties	<ul style="list-style-type: none">· High accuracy and excellent resolution· Ability to produce sharp edges and detailed parts· High green strength and good mechanical properties	<ul style="list-style-type: none">· High accuracy and excellent resolution· Ability to produce sharp edges and detailed parts· High green strength and good mechanical properties	<ul style="list-style-type: none">· High accuracy, excellent resolution and mechanical properties.· Ability to produce sharp edges and detailed parts	<ul style="list-style-type: none">· Ultra-clear material with high transparency and superior build speed· For dental drill guides the material is classified and certified as a medical device class I following the European regulation 93/42/EWG.· The final product can be sterilized according to the recommendations in the instructions
Liquid density (g/cm3)	1.10	1.11	1.11	1.11	1.10
Viscosity @ 28°C (cps)	350 - 550	350 - 550	350 - 550	350 - 550	500 - 700
Hardness (Shore D)	85 - 90	85 - 90	85 - 90	85 - 90	85 - 90
Tensile Strength (MPa) ASTM D638	72 - 76	72 - 76	72 - 76	72 - 76	66 - 71
Tensile Modulus (MPa) ASTM D638	2800 - 3100	2800 - 3100	2800 - 3100	2800 - 3100	2500 - 2900
Elongation at Break (%) ASTM D638	5 - 7	5 - 7	5 - 7	5 - 7	3 - 4
Flexural Strength (MPa) ASTM D790	110 - 120	110 - 120	110 - 120	110 - 120	110 - 120
Flexural Modulus (MPa) ASTM D790	2300 - 2600	2300 - 2600	2300 - 2600	2300 - 2600	2500 - 2700
Izod Impact (J/m) ASTM D256A	N/A	N/A	N/A	N/A	N/A
HDT @ 0.46 MPa (°C) ASTM D648	70 - 80	70 - 80	70 - 80	70 - 80	66 - 69
Residual ash content	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant
Water Absorption (%) ASTM D570	0.6 - 0.8	0.6 - 0.8	0.6 - 0.8	0.6 - 0.8	0.5 - 0.7
By	Prodways Materials	Prodways Materials	Prodways Materials	Prodways Materials	Prodways Materials

*Preliminary data. Performance characteristics of these materials may change according to product application, operating conditions, material combined or end use

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