



UV POLYMERIZATION MATERIALS FOR UNLIMITED POSSIBILITIES

PRODWAYS
PREMIUM MATERIALS

PLASTCure MATERIALS

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A WIDE RANGE OF POSSIBILITIES

Our UV polymerization technology is designed to work with premium liquid resins and composites in the form of pastes that contain high levels of ceramic, metal, fibers, or nano-particles. Prodways is constantly working to develop new materials with unique mechanical properties (resistance and elasticity), physical properties, aesthetic properties (color and transparency, for example), and stability over time. With such a wide range of possibilities, Prodways can offer additive manufacturing solutions for many industries.

INNOVATION AND EXPERTISE

Prodways has a team of experts with the knowledge and experience to push materials technology into new territory. In addition, strong partnerships with established materials developers has allowed Prodways to be even more effective at providing solutions.



ProMaker L SERIES COMPATIBLE MATERIALS

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 100*	PLASTCure Cast 200*	PLASTCure Rigid 10 500*	PLASTCure ABS 3650*	PLASTCure ABS 2800*
Appearance	Red translucent	Orange translucent	Ivory opaque	Clear	White
Liquid density (g/cm ³)	1.10	1.11	1.60	1.11	1.11
Viscosity @ 28°C (cps)	100 - 300	200 - 400	900 - 1100	100 - 300	100 - 300
Hardness (Shore D)	85 - 90	85 - 90	90-95	80-85	85-90
Tensile Strength (MPa) ASTM D638	N/A	N/A	50 - 65	50 - 60	60 - 65
Strain at Break (%) ASTM D638	N/A	N/A	0.5 - 1	3 - 5	3 - 5
Tensile Modulus (MPa) ASTM D638	N/A	N/A	7700 - 8200	2400 - 2700	3000 - 3400
Flexural Strength (MPa) ASTM D790-10	90 - 100	65 - 75	65 - 90	85 - 95	105 - 115
Elongation at Break (%) ASTM D790-10	5 - 6	5 - 6	1.0 - 2.0	10 - 12	6.5 - 8.5
Flexural Modulus (MPa) ASTM D790-10	2300 - 2500	1400 - 1800	7000 - 8000	1800 - 2200	2500 - 2600
Izod Impact (J/m) ASTM D256A	N/A	N/A	N/A	N/A	N/A
HDT @ 0.46 MPa (°C) ASTM D648	N/A	N/A	120 - 125	67 - 71	70 - 75
Residual ash content	< 2%	No residue	Not relevant	No residue	< 0.2%
Water Absorption (%) ASTM D570	N/A	N/A	0.5 - 0.7	1.2 - 1.4	0.8 - 1.0
Specification	High reactivity & low viscosity High green strength, excellent dimensional stability Excellent burn out properties and low residue content	Good reactivity and low viscosity High accuracy Ability to produce sharp-edged parts Outstanding burnout properties with nearly zero ash content	Excellent detail resolution & sidewall quality Easy finishing Superior thermomechanical properties Low thermal expansion	High transparency Good chemical resistance Fast and adaptable material to a wide range of building conditions Suited for tetraShell and foundry applications on large parts	High detail resolution Sharp geometries Good surface finish, shiny aspect
Typical Application Examples	Highly suitable for investment casting of thin and accurate parts like dental brackets or jewelry	Highly suitable investment casting of accurate and thin parts for dental or jewelry applications	Suitable for the manufacture of parts that require thermal stability, extreme accuracy and quick turnaround. Exceptional for parts designed for wind tunnel testing and unique applications in rapid tooling or high temperature testing, electrical casings, and automotive housings	Highly suitable for investment casting of industrial elements like impellers or aeronautical parts, even in Titanium or high level alloys	Ideal for segments such as electronic, aerospace and automotive markets that demand high accuracy, excellent resolution and surface finish for RTV patterns and durable concept models.
By	Dreve	Prodways Materials	DSM Somos	DSM Somos	DSM Somos

	PLASTCure Model 100*	PLASTCure Model 300*	PLASTCure Model 310*	PLASTCure Clear 100*	PLASTCure Clear 200*
Appearance	Beige opaque	Reddish beige	Beige opaque	Clear	Clear
Liquid density (g/cm ³)	1.11	1.10	1.02	1.11	1.10
Viscosity @ 28°C (cps)	600 - 800	350 - 550	350 - 550	600 - 800	500 - 700
Hardness (Shore D)	85 - 90	85 - 90	85 - 90	80 - 85	85 - 90
Tensile Strength (MPa) ASTM D638	45 - 49	72 - 76	72 - 76	N/A	N/A
Strain at Break (%) ASTM D638	4 - 7	5 - 7	5 - 7	N/A	N/A
Tensile Modulus (MPa) ASTM D638	1800 - 2100	2800 - 3100	2800 - 3100	N/A	N/A
Flexural Strength (MPa) ASTM D790-10	80 - 90	110 - 120	110 - 120	85 - 95	110 - 120
Elongation at Break (%) ASTM D790-10	7 - 10	8 - 10	7 - 10	5 - 8	6 - 10
Flexural Modulus (MPa) ASTM D790-10	1900 - 2100	2300 - 2600	2300 - 2600	2000 - 2200	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	68 - 70	72 - 76	69 - 73	N/A	66 - 69
Residual ash content	Not relevant	Not relevant	Not relevant	< 0.2%	No residue
Water Absorption (%) ASTM D570	0.5 - 0.9	0.6 - 0.8	0.6 - 0.8	0.6 - 0.8	0.5 - 0.7
Specification	Easy to elaborate High precision of the components Quality look & feel High workability	High accuracy and excellent resolution Ability to produce sharp edges and detailed parts High green strength and good mechanical properties	High accuracy and excellent resolution Ability to produce sharp edges and detailed parts High green strength and good mechanical properties	Ultra-clear material with high transparency End products are biocompatible Meet criteria regarding irritation, sensitization and cytotoxicity for biological assessment of medical products (DIN ISO 10993) Can be steam sterilized over longer period (>15 min.)	Ultra-clear material with high transparency
Typical Application Examples	Whole range of dental model applications from models for restorations to orthodontic applications	Broad range of dental model applications Suited for thermoforming applications	Broad range of dental model applications Suited for thermoforming applications	Wide range of medical application such as surgical patterns or operation models	Wide range of application needing transparent material such as surgical patterns or operation models
By	Dreve	Prodways Materials	Prodways Materials	Dreve	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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