



## UV POLYMERIZATION MATERIALS FOR UNLIMITED POSSIBILITIES

**PRODWAYS**  
THE NEW WAY OF PRODUCING

## PLASTCure MATERIALS

[WWW.PRODWAYS.COM](http://WWW.PRODWAYS.COM)

### 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/cm3)	1.095	1.114	1.595	1.109	1.109
Viscosity @ 28°C (cps)	100 - 200	250 - 300	650 - 750	100 - 200	140 - 150
Hardness (Shore D)	80 - 85	85 - 90	90 - 95	85 - 90	85 - 90
Tensile Strength (MPa) ASTM D638	40 - 50	N/A	68	53	55 - 60
Elongation at Break (%) ASTM D638	3 - 4	N/A	1 - 2	9	3 - 5
Tensile Modulus (MPa) ASTM D638	2300 - 2500	N/A	10000 - 11000	2600 - 3650	2700 - 3000
Residual ash content	<0.1%	<0.1%	Not relevant	Not relevant	Not relevant
Flexural Strength (MPa) ASTM D790-10	90 - 100	65 - 75	100 - 140	90 - 100	100 - 110
Flexural Modulus (MPa) ASTM D790-10	2300 - 2500	1600 - 2000	8000 - 10000	2000 - 2200	2600 - 3000
Izod Impact (J/m) ASTM D256A	N/A	N/A	17	20	N/A
HDT @ 0.46 MPa (°C) ASTM D648	N/A	N/A	132	96	N/A
Specification	High reactivity & low viscosity High green strength, excellent dimensional stability Excellent burn out properties and low residue content Can be placed directly into 800°C	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	Good chemical resistance High transparency Fast & adaptable material to a wide range of building conditions May not require manual finishing	Good chemical resistance Fast & adaptable material to a wide range of building conditions May not require manual finishing
Typical Application Examples	Fulfills the high demands placed on the digital process chain	Highly suitable for direct investment casting or dental 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	Ideal for segments such as medical, electronic, aerospace and automotive markets that demand accurate RTV patterns, durable concept models, high accuracy, and humidity- & temperature-resistant parts	Ideal for segments such as medical, electronic, aerospace and automotive markets that demand accurate RTV patterns, durable concept models, high accuracy, and humidity- & temperature-resistant parts
By	Dreve	Prodways Materials	DSM Somos	DSM Somos	DSM Somos

	PLASTCure Model 100*	PLASTCure Model 300*	PLASTCure Clear 100*	PLASTCure Clear 200*
Appearance	Beige opaque	Reddish beige opaque	Clear	Clear
Liquid density (g/cm3)	1.113	1.105	1.113	1.103
Viscosity @ 28°C (cps)	600 - 700	300 - 400	600 - 700	500 - 600
Hardness (Shore D)	85 - 90	85 - 90	80 - 85	85 - 90
Tensile Strength (MPa) ASTM D638	N/A	N/A	N/A	N/A
Elongation at Break (%) ASTM D638	N/A	N/A	N/A	N/A
Tensile Modulus (MPa) ASTM D638	N/A	N/A	N/A	N/A
Residual ash content	Not relevant	Not relevant	Not relevant	Not relevant
Flexural Strength (MPa) ASTM D790-10	75 - 85	110 - 120	80 - 90	110 - 120
Flexural Modulus (MPa) ASTM D790-10	1900 - 2100	2300 - 2500	2000 - 2200	2400 - 2600
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	N/A	N/A
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	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	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	Dreve	Prodways Materials

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

## ProMaker **V SERIES** COMPATIBLE MATERIALS

Prodways is capable of developing highly viscous materials, which are compatible with our V Series machines, for specific applications requiring Zirconia, Hydroxyapatite, Alumina, or Tricalcium Phosphate pastes. Contact Prodways to inquire about specialized development.

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ZI Les Garennes - 1-3, rue Chappe 78130 les Mureaux | Tel: +33 (0)1 30 90 44 12 | [www.prodways.com](http://www.prodways.com)

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