

DCA

Clear Aligner & Retainer Resin

DCA is a major breakthrough in digital dental industry which is used for LuxCreo "direct" print aligners & retainers based on Digital Polishing platform. It maintains high transparency and good accuracy. LuxAlign Clear Aligner printed by DCA has passed FDA 510(k) certification and completed CE IIA self-declaration.

ISO Standard	Tested Property	Test Result
ISO 10993-10:2010	Oral Mucosa Irritation and Skin Sensitization	Pass
ISO 10993-5:2009	In Vitro Cytotoxicity	Pass
ISO 10993-11:2017	Acute Systemic Toxicity and Subchronic Systemic Toxicity	Pass
ISO 10993-3:2014	Genetic Toxicity	Pass
ISO 10993-6:2016	Subcutaneous Implantation	Pass



Transparent



Accurate



Transparency



Fast



Biocompatible

DCA Technical Data Sheet:

Tensile Properties, ASTM D638	Metric	U.S.
Tensile Modulus	990 MPa	143.57 ksi
Ultimate Tensile Strength	34.93 MPa	5.66 ksi
Elongation at Break	60.44 %	60.44 %
Tensile Strength at Yield	23.45 MPa	3.40 ksi
Elongation at Yield	4.41 %	4.41 %
Impact Properties, ISO 180/A	Metric	U.S.
Notched Izod (Machined), 23°C	4.46 KJ/m ²	2.14 ft-lbf/in
Flexural Properties, ASTM D790	Metric	U.S.
Flexural Strength	38.45 MPa	5.57 ksi
Flexural Modulus	1219 MPa	176.8 ksi
Thermal Properties, ASTM D648	Metric	U.S.
Heat Deflection Temperature@ 0.455 MPa/66 psi	69.4 °C	156.92 °F
General Properties	Metric	
Density (cured resin), ASTM D792	1.11 g/cm ³	
Density (liquid resin), ASTM D4052	1.04 g/cm ³	

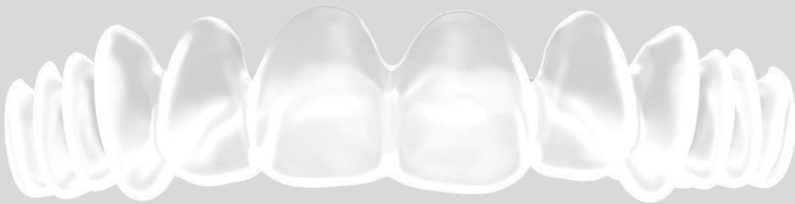
The above TDS data is tested and verified in LuxCreo's 3D printing system. The mechanical properties of the material may vary based on print orientation, print settings and the choice of post-process technology. Please refer to LuxCreo's material "Application Guide" or consult after-sales to select suitable parameters for best performance of the material. Improper use of materials or non-compliance with material "Application Guide" may result in changes in mechanical properties and colors. LuxCreo reserves the right to change material properties and formulations without notice.

DCA PLUS

White Aligner & Retainer Resin

DCA PLUS White is a major breakthrough in digital dental industry which is used for LuxCreo "Direct" print 4D Bright™ aligners & retainers based on Digital Polishing™ platform. It maintains high transparency and good accuracy. 4D Bright™ printed by DCA PLUS White has passed FDA 510(k) certification.

ISO Standard	Tested Property	Test Result
ISO 10993-10:2021	Skin Sensitization	Pass
ISO 10993-5:2009	In Vitro Cytotoxicity	Pass
ISO 10993-11:2017	Systemic Toxicity And Subacute Systemic Toxicity	Pass
ISO 10993-23:2021	Oral Mucosa Irritation	Pass
ISO 10993-11:2017	Sub-chronic Systemic Toxicity	Pass
ISO 10993-6:2016	Local Effects After Implantation	Pass
ISO 10993-3:2014	Bacterial Reverse Mutation Assay	Pass
ISO 10993-3:2014	In Vitro Mammalian Chromosome Aberration	Pass



White



Accurate



Transparency



Fast



Biocompatible

DCA PLUS White Technical Data Sheet :

Tensile Properties, ASTM D638	Metric	U.S.
Tensile Modulus	1302 MPa	188.84 ksi
Ultimate Tensile Strength	38.84 MPa	5.63 ksi
Elongation at Break	94.15 %	94.15 %
Tensile Strength at Yield	28.89 MPa	4.19 ksi
Elongation at Yield	5.76 %	5.76 %
Impact Properties	Metric	U.S.
Notched Izod (Machined), 23°C, ISO 180/A	4.49 KJ/m ²	2.14 ft-lbf/in ²
Flexural Properties, ASTM D790	Metric	U.S.
Flexural Strength	38.14 MPa	5.53 ksi
Flexural Modulus	1086 MPa	157.51 ksi
Thermal Properties	Metric	U.S.
Heat Deflection Temperature@ 0.455 MPa/66 psi, ASTM D648	70.0 °C	158.0 °F
Tg (DMA, tan(d)), ASTM D4065	133.19 °C	271.74 °F
General Properties	Metric	
Density (cured resin), ASTM D792	1.08 g/cm ³	
Density (liquid resin), ASTM D4052	1.02 g/cm ³	

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DNG

Dental Night Guard Resin

DNG is a fast-printing transparent and easy-fit splint and nightguard resin with superb abrasion resistance, mechanical properties and biocompatibility. DNG is FDA Class I certified.

ISO Standard	Tested Property	Test Result
ISO 10993-10:2010	Oral Mucosa Irritation and Skin Sensitization	Pass
ISO 10993-5:2009	In Vitro Cytotoxicity	Pass



Transparent



Accurate



Transparent



Fast



Biocompatible

DNG Technical Data Sheet:

Tensile Properties, ASTM D638	Metric	U.S.
Tensile Modulus	1351 Mpa	195.93 ksi
Ultimate Tensile Strength	38.12 MPa	5.53 ksi
Elongation at Break	19.65 %	19.65 %
Tensile Strength at Yield	34.29 MPa	4.97 ksi
Elongation at Yield	5.5 %	5.5 %
Impact Properties	Metric	U.S.
Notched Izod (Machined), 23 °C, ISO 180/A	0.96 KJ/m ²	0.46 ft-lb/in ²
Flexural Properties, ASTM D790	Metric	U.S.
Flexural Strength	45.74 MPa	6.63 ksi
Flexural Modulus	1187.8 MPa	172.3 ksi
Thermal Properties, ASTM D648	Metric	U.S.
Heat Deflection Temperature@ 0.455 MPa/66 psi, ASTM D648	58.9 °C	138 °F
General Properties	Metric	
Hardness, Shore D, ASTM D2240	71D	
Density (cured resin), ASTM D792	1.17 g/cm ³	
Density (liquid resin), ASTM D4052	1.10 g/cm ³	
Viscosity, 25 °C, ASTM D2196	2290 cps	
Water Absorption, 24 hours, 23 °C, ASTM D570	0.80 %	

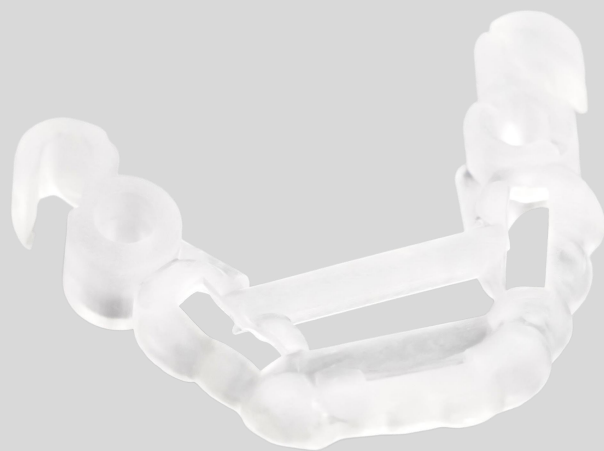
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DSG

Dental Surgical Guide Resin

DSG is a transparent and tough resin ideal for implant applications. DSG is an FDA Class I certified material with excellent mechanical properties and good biocompatibility.

ISO Standard	Tested Property	Test Result
ISO 10993-10:2010	Oral Mucosa Irritation and Skin Sensitization	Pass
ISO 10993-5:2009	In Vitro Cytotoxicity	Pass



Translucent light blue



Tough



Transparent



Biocompatible

DSG Technical Data Sheet:

Tensile Properties, ASTM D638, Type IV	Metric	U.S.
Tensile Modulus, 1 mm/min	1897 MPa	275.06 ksi
Ultimate Tensile Strength, 10 mm/min	46 MPa	6.67 ksi
Elongation at Break, 10 mm/min	6.12 %	6.12 %
Impact Properties	Metric	U.S.
Notched Izod (Machined), 23 °C, ISO 180/A	1.53 kJ/m ²	0.73 ft-lb/in ²
Flexural Properties, ASTM D790, 1 %/min	Metric	U.S.
Flexural Strength	71 MPa	10.30 ksi
Flexural Modulus	1978 MPa	286.8 ksi
Thermal Properties, ASTM D648	Metric	U.S.
Heat Deflection Temperature@ 0.455 MPa/66 psi, ASTM D648	81.5 °C	178.7 °F
General Properties	Metric	
Hardness, Shore D, ASTM D2240	84D	
Density (cured resin), ASTM D792	1.16 g/cm ³	
Density (liquid resin), ASTM D4052	1.08 g/cm ³	
Viscosity, 25 °C, ASTM D2196	749 cps	
Water Absorption, 24 hours, 23 °C, ASTM D570	0.96 %	
Water Absorption, Long Term (14 Days), ASTM D570	2.92 %	

The above TDS data is tested and verified in LuxCreo's 3D printing system. The mechanical properties of the material may vary based on print orientation, print settings and the choice of post-process technology. Please refer to LuxCreo's material "Application Guide" or consult after-sales to select suitable parameters for best performance of the material. Improper use of materials or non-compliance with material "Application Guide" may result in changes in mechanical properties and colors. LuxCreo reserves the right to change material properties and formulations without notice.

FPD

Flexible Partial Denture Resin

Flexible Partial Denture (FPD) Resin is a state of the art resin engineered specifically for the 3D Printing of digitally designed flexible partial denture bases. The FPD resin utilizes LuxCreo’s Digital Polishing™ platform to deliver clear, accurate, and biocompatible partials in a single session with minimal need for finishing. FPD supports a streamlined workflow, enabling cost and lead-time advantages compared to traditional fabrication methods. LuxCreo Flexible Partial Denture Resin has passed FDA 510(k) certification.

ISO Standard	Tested Property	Test Result
ISO 10993-10:2021	Skin Sensitization	Pass
ISO 10993-5:2009	In Vitro Cytotoxicity	Pass
ISO 10993-11:2017	Systemic Toxicity And Subacute Systemic Toxicity	Pass
ISO 10993-23:2021	Oral Mucosa Irritation	Pass
ISO 10993-11:2017	Sub-chronic Systemic Toxicity	Pass
ISO 10993-6:2016	Local Effects After Implantation	Pass
ISO 10993-3:2014	Bacterial Reverse Mutation Assay	Pass
ISO 10993-3:2014	In Vitro Mammalian Chromosome Aberration	Pass



Accurate



Transparency



Fast



Biocompatible

FPD Technical Data Sheet :

Tensile Properties, ASTM D638	Metric	U.S.
Tensile Modulus	1213 MPa	175.93 ksi
Ultimate Tensile Strength	41.16 MPa	5.97 ksi
Elongation at Break	98.5 %	98.5 %
Tensile Strength at Yield	28.11 MPa	4.08 ksi
Elongation at Yield	5.59 %	5.59 %
Impact Properties	Metric	U.S.
Notched Izod (Machined), 23°C, ISO 180/A	5.62 KJ/m ²	2.67 ft-lbf/in ²
Flexural Properties, ISO 20795-1	Metric	U.S.
Flexural Strength	32.40 MPa	4.70 ksi
Flexural Modulus	838.20 MPa	121.57 ksi
Thermal Properties	Metric	U.S.
Heat Deflection Temperature@ 0.455 MPa/66 psi, ASTM D648	71.2 °C	160.16 °F
Tg (DMA, tan(d)), ASTM D4065	131.64 °C	268.95 °F
General Properties	Metric	
Density (cured resin), ASTM D792	1.08 g/cm ³	
Density (liquid resin), ASTM D4052	1.02 g/cm ³	

The above TDS data is tested and verified in LuxCreo's 3D printing system. The mechanical properties of the material may vary based on print orientation, print settings and the choice of post-process technology. Please refer to LuxCreo's material "Application Guide" or consult after-sales to select suitable parameters for best performance of the material. Improper use of materials or non-compliance with material "Application Guide" may result in changes in mechanical properties and colors. LuxCreo reserves the right to change material properties and formulations without notice.

DNG 06

Splint & Night Guard Resin

DNG 06 is a fast-printing transparent and easy-fit splint and nightguard resin with superb abrasion resistance, mechanical properties and biocompatibility. DNG 06 is FDA Class I certified.

ISO Standard	Tested Property	Test Result
ISO 10993-10:2010	Oral Mucosa Irritation and Skin Sensitization	Pass
ISO 10993-5:2009	In Vitro Cytotoxicity	Pass



Transparent



Accurate



Transparent



Fast



Biocompatible

DNG 06 Technical Data Sheet:

Tensile Properties, ASTM D638	Metric	U.S.
Tensile Modulus	1351 Mpa	195.93 ksi
Ultimate Tensile Strength	38.12 MPa	5.53 ksi
Elongation at Break	19.65 %	19.65 %
Tensile Strength at Yield	34.29 MPa	4.97 ksi
Elongation at Yield	5.5 %	5.5 %
Impact Properties	Metric	U.S.
Notched Izod (Machined), 23 °C, ISO 180/A	0.96 KJ/m ²	0.46 ft-lb/in ²
Flexural Properties, ASTM D790	Metric	U.S.
Flexural Strength	45.74 MPa	6.63 ksi
Flexural Modulus	1187.8 MPa	172.3 ksi
Thermal Properties, ASTM D648	Metric	U.S.
Heat Deflection Temperature@ 0.455 MPa/66 psi, ASTM D648	58.9 °C	138 °F
General Properties	Metric	
Hardness, Shore D, ASTM D2240	71D	
Density (cured resin), ASTM D792	1.17 g/cm ³	
Density (liquid resin), ASTM D4052	1.10 g/cm ³	
Viscosity, 25 °C, ASTM D2196	2290 cps	
Water Absorption, 24 hours, 23 °C, ASTM D570	0.80 %	

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DMR III

Dental Model Resin

DMR III is a fast-printing resin with vertical printing capability for production of dental models of superb toughness, excellent wear resistance, detailed and higher resolution, and long-term stability. It is recommended to be used in the orthodontic, restoration and implant applications.



Orange



Fast



Tough



Anti-scratch



Accurate

DMR III Technical Data Sheet:

Tensile Properties, ASTM D638, Type IV	Metric	U.S.
Tensile Modulus, 1 mm/min	1821 MPa	264.05 ksi
Ultimate Tensile Strength, 10 mm/min	41 MPa	5.95 ksi
Elongation at Break, 10 mm/min	6.76 %	6.76 %
Tensile Strength at Yield, 10 mm/min	43.7 MPa	6.34 ksi
Elongation at Yield, 10 mm/min	4.4 %	4.4 %
Impact Properties	Metric	U.S.
Notched Izod (Machined), 23 °C, ASTM D256	26.9 J/m	0.504 ft-lb/in
Notched Izod (Machined), 23 °C, ISO 180/A	1.95 KJ/m ²	0.93 ft-lb/in ²
Flexural Properties, ASTM D790, 1 %/min	Metric	U.S.
Flexural Strength	70 MPa	10.15 ksi
Flexural Modulus	1948 MPa	282.46 ksi
Thermal Properties, ASTM D648	Metric	U.S.
Heat Deflection Temperature@ 0.455 MPa/66 psi, ASTM D648	55.9 °C	132.6 °F
General Properties	Metric	
Hardness, Shore D, ASTM D2240	88D	
Density (cured resin), ASTM D792	1.18 g/cm ³	
Density (liquid resin), ASTM D4052	1.10 g/cm ³	
Viscosity, 25 °C, ASTM D2196	932 cps	
Water Absorption, 24 hours, 23 °C, ASTM D570	0.70 %	
Water Absorption, Long Term (14 Days), ASTM D570	1.95 %	

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