

LOCTITE®



Mission Eyewear.

See the Future.

DIGITAL EYEWEAR

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Henkel Corporation

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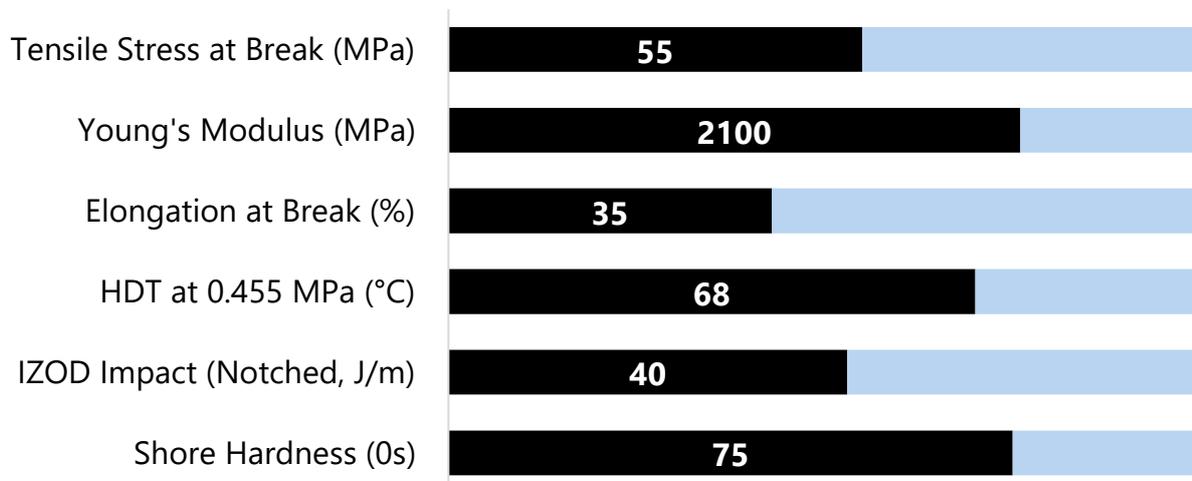


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Resin optimized for the production of eyewear frames (fronts and temples) fulfilling all necessary standards when processed with the G1/F1 workflow. It was tested according to ISO12870.





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PROPERTIES

Mechanical Properties	Measure	Method	Green	Post Processed
5cm	2,2cm	3,1cm	3,5cm	3,5cm
Young's Modulus	MPa	ASTM D638	1650 – 1800 ^[1]	2000 – 2200 ^[1]
Tensile Stress at Yield	MPa	ASTM D638	39 – 42 ^[1]	50 – 55 ^[1]
Elongation at Yield	%	ASTM D638	4 – 4.3 ^[1]	4.4 – 4.7 ^[1]
Tensile Stress at Break	MPa	ASTM D638	30 – 32 ^[1]	38 – 42 ^[1]
Elongation at Break	%	ASTM D638	65 – ^[1]	30 – 40 ^[1]
Flexural Modulus	MPa	ASTM D790	1500 – 1700 ^[1]	1800 – 2000 ^[1]
Flexural Stress at Break	MPa	ASTM D790	-	75 – 80 ^[1]
Flexural Elongation at Break	%	ASTM D790	>5 ^[1]	>5 ^[1]
IZOD Impact (Notched)	J/m	ASTM D256	-	-
Shore Hardness (3s)	D	ASTM D2240	-	81 ^[1]
Other Properties				
HDT at 0.455 MPa	°C	ASTM D648	-	65°C – 69°C ^[2]
HDT at 1.82 MPa	°C	ASTM D648	-	53°C – 56°C ^[2]
Water Absorption (24hr)	%	ASTM D570	-	1.3 ^[2]
Water Absorption (72hr)	%	ASTM D570	-	2.1 ^[2]
Solid Density	g/cm ³	ASTM D1475	-	1.07 ^[2]
Thermal Conductivity	W/(m·K)	ASTM D5930	-	0.19 ^[2]
Heat Capacity	J/(g·K)	ASTM D5930	-	1.3 ^[2]
CTE (10°C to 60°C)	µm/(m·K)	ASTM E831	-	118 ^[2]
Tg	°C	ASTM E1640	-	-

Test parameters:

*All specimen are printed unless otherwise noted. All specimen were conditioned in ambient lab conditions at 19-23°C / 40-60% RH for at least 24 hours." ASTM Methods: D638 Type IV, 5 mm/min, D790-B, 2 mm/min, D648, D256 Notched IZOD (Machine Notched), 6 mm x 12 mm, D570 0.125" x 2" Disc 24hr@ 25°C, D2240, Type "D" (0, 3 seconds), D7867, D1475

*The biological assessment has been performed based on the in vitro method according to ISO10993-23

Internal Data Sources:

[1] FOR858074



WORKFLOW

The validated G1/F1 workflow need to be followed to achieve properties as provided in the TDS.



G1 PRINTER

DIGITAL EYEWEAR is formulated to be print on the G1 DLP printer. Read the manual safety data sheet carefully to get details about health and safety instructions.

Shake resin cartridge well before usage.



F1 Post Processing Unit (PPU)

DIGITAL EYEWEAR is formulated to be post processed on the F1 Post Processing Unit.

The post processing is a fully automated process which includes cleaning, drying and curing of the printed part. Read the manual and safety data sheet carefully to get details about health and safety instructions.



Cartridge STORAGE

Store **DIGITAL EYEWEAR** in the unopened cartridge in a dry location.

Optimal Storage: 8°C to 30°C and protected from light.

Storage below 8 °C or above 30°C or in direct light can adversely affect product properties. Material removed from containers may be contaminated during use.

Don't refill the cartridge with used resin. Shake resin cartridge well before usage.



NOTE

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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