

Version: 2.1
Last update 15-05-2025

Technical datasheet

Prusament Resin Model Transparent Clear



Identification

Name	Prusament Resin Model Transparent Clear
Usage	3D printing
Manufacturer	Prusa Polymers a.s., Prague, Czech Republic

Basic material properties

Density of the liquid [g/cm ³]	1.11
Density of the 3D printed model [g/cm ³]	1.21
Color	Clear
Odour	Low

Viscosity (20 °C) [mPa.s]	200 – 350	ISO 2431
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Recommended setting

Resin details		SL1S					
Type	Name	25 um [s]	First layers [s]	50 um [s]	First layers [s]	100 um [s]	First layers [s]
Model	Transparent Clear	2.4	5	2.8	6	3.5	8

Important Update - Exposure Times Changed

As of **May 15, 2025**, exposure times for resin printing have been updated. Resin bottles delivered **after this date** require a **longer exposure time – approximately 10% per layer**. To ensure optimal results, we **highly recommend using the latest configuration bundle in PrusaSlicer**, which includes the updated settings.

Recommended curing setting after print

Washing in isopropyl alcohol (>90%) [min]	5
Drying (at 45 °C) [min]	3
Minimal curing time [min]	1
Optimal curing time [min]	1

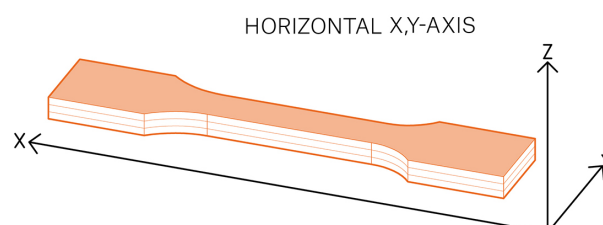
Mechanical properties(1)

Property/print direction	Uncured XY	Cured XY (1 min)	Cured XY (60 mins)	Method
Tensile strength [MPa]	21.3 ± 2.5	41.4 ± 0.7	69.2 ± 2.1	ISO 527-1
Elongation [%]	13.3 ± 3.8	5.6 ± 1.1	3.7 ± 0.4	ISO 527-1
Tensile modulus [MPa]	609.2 ± 45.8	1720.3 ± 33.4	2702.5 ± 29.8	ISO 527-1
Impact strength Charpy [kJ/m2](2)	36.7 ± 9.3	22.7 ± 7.0	23.1 ± 5.2	ISO 179-1
Notched impact strength Charpy [kJ/m2](3)	6.6 ± 1.3	5.4 ± 1.1	5.2 ± 1.2	ISO 179-1
Heat deflection temperature (0.45 MPa)	40	45	65	ISO 75
Heat deflection temperature (1.8 MPa)	40	42.5	55	ISO 75
Hardness - Shore D	79.5	88.5	89	ISO 164

(1) Original Prusa SL1S Speed 3D printer was used to make testing specimens. PrusaSlicer-2.5:0 was used to create G-codes with the following settings: Prusament Resin Model; layer 0,05mm; faded layers: 0; exposure times: 2.3s/10s (SL1S), without supports and pad; other parameters set the default.

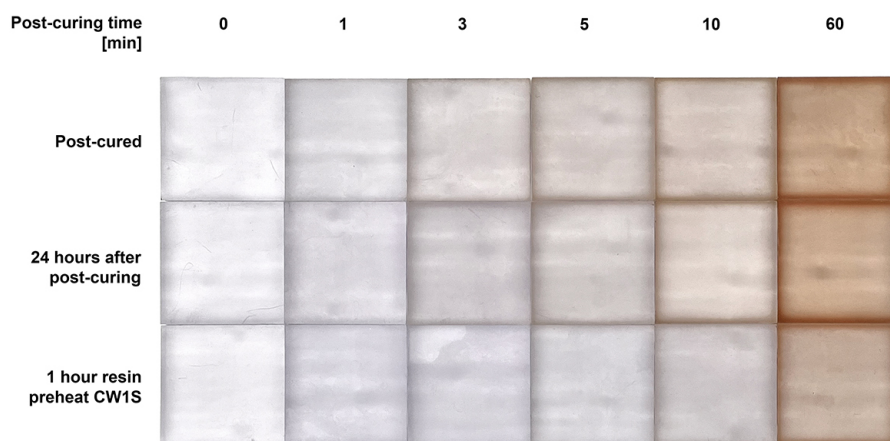
(2) Impact resistance Charpy - Edgewise direction of blow according to ISO 179-1.

(3) Notched impact resistance Charpy - Edgewise direction of blow according to ISO 179-1.

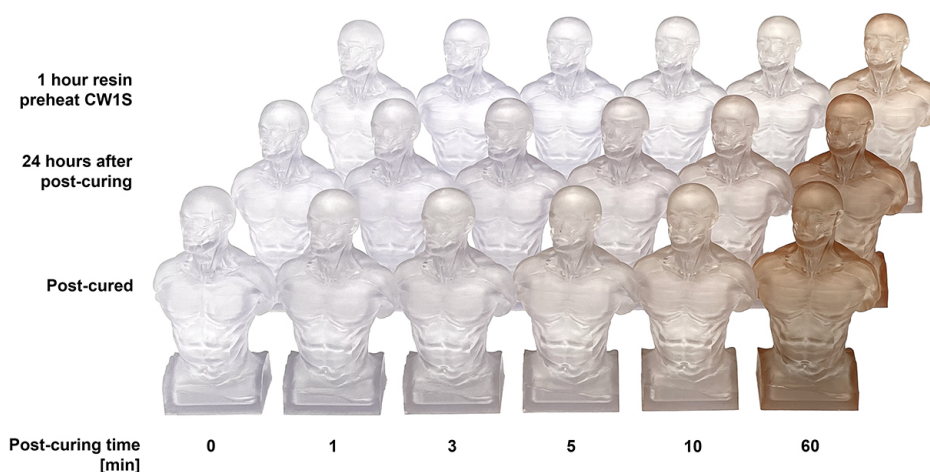


Yellowing

The optimal curing time for the Model Transparent Clear resin is 1 minute. Longer curing times lead to the yellowing of the printed objects and higher mechanical properties of the printed objects. A slow decrease in yellowness can be observed with time, for example after 24 hours at ambient temperature. Deyellowing can be accelerated by heating the object in CW1S at 60 °C. Avoid direct sunlight because the objects are not UV stable when exposed to direct sunlight. To increase UV stability, UV protection coating can be applied.



The appearance of a 10 mm thick green body and post-cured sample as a function of post-curing time captured just after the post-curing, 24 hours after post-curing at room temperature, and after 1 hour of resin preheat in CW1S at set temperature 60 °C.



The appearance of hollowed models with 3 mm thick walls green body and post-cured sample as a function of post-curing time captured just after the post-curing, 24 hours after post-curing at room temperature, and after 1 hour of resin preheat in CW1S at set temperature 60 °C.

Yellowing ΔE^* of green body and post-cured sample as a function of post-curing time



Yellowing ΔE^* of a green body and post-cured sample as a function of post-curing time measured just after the post-curing (orange), 24 hours after post-curing at room temperature (grey) and after 1 hour of resin preheat in CW1S at set temperature 60 °C (black).

Basic safety information

- This resin is not meant for contact with food, drinks, or medical use on or in the human body. Always read the material safety data sheet thoroughly.
- Resins are classified as dangerous chemicals and must be handled and disposed of properly in designated containers.

Manipulation instructions

- Shake the bottle with the resin or stir the resin thoroughly before use.
- Store at room temperature.
- Avoid direct sunlight to prevent yellowness.
- Use protective equipment for manipulation.
- Do not pour the contents of the bottle into general waste. Dispose of empty bottles and unused resin at designated places.

Disclaimer

The results presented in this data sheet are just for your information and comparison. Values are significantly dependent on print settings, operator experiences, and surrounding conditions. Everyone has to consider suitability and possible consequences of printed parts usage. Prusa Polymers corp. can not carry any responsibility for injuries or any loss caused by using Prusament Resin Model. Before the use of Prusament Resin Model material read properly all the details in the available safety data sheet (SDS).

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