

# **S-R9**

# **TECHNICAL DATA SHEET**

## **PRODUCT DESCRIPTION**

S-R9 is an ABS like SL resin which has accurate and durable features. It is designed for solid state SLA platforms. S-R9 can be applied in master patterns, concept models, general parts and functional prototypes in the field of automotive, medical and consumer electronics industries. The durability of parts built with S-R9 is over 6.5months.

## **TYPICAL FEATURES**

- Liquid resin`s medium viscosity, so easy recoating, easy clean parts and machines
- Improved strength retained, improved dimensions retention of parts in humid condition
- Need minimal part finishing
- Long shelf life in machine

## **TYPICAL BENEFITS**

- Need less part finishing time,easier post-curing
- Build accurate and high toughness parts with improved dimensional stability
- High quality controls for vacuum casting parts
- Low shrink and good resistance to yellowing
- Magnificent white colour
- Outstanding machinable SLA material

**Physical Properties – Liquid Material**

Appearance	White
Density	1.11~1.15g/cm <sup>3</sup> @ 25 °C
Viscosity	280~420 cps @ 25 °C
Dp	0.135~0.151 mm
Ec	9.0~9.5 mJ/cm <sup>2</sup>
Building layer thickness	0.05~0.12mm

**Mechanical Properties of Post-Cured Material**

MEASUREMENT	TEST METHOD	VALUE
		90-minute UV post-cure 90
Hardness, Shore D	ASTM D 2240	75~88
Flexural modulus, Mpa	ASTM D 790	2,692-2,775
Flexural strength, Mpa	ASTM D 790	69- 74
Tensile modulus, MPa	ASTM D 638	2,589-2,695
Tensile strength, MPa	ASTM D 638	38-56
Elongation at break	ASTM D 638	8 -12%
Poisson's Ratio	ASTM D 638	0.4-0.44
Impact strength notched Izod, J/m	ASTM D 256	32 - 51
Heat deflection temperature, °C	ASTM D 648 @66PSI	38~50
Glass transition, Tg °C	DMA, E" peak	40~55
Coefficient of thermal expansion, °C	TMA(T<Tg)	90~103*E-6
Density, g/cm <sup>3</sup>		1.12~1.18
Dielectric Constant 60 Hz	ASTM D 150-98	4.2~5.0
Dielectric Constant 1 kHz	ASTM D 150-98	3.3~4.2
Dielectric Constant 1 MHz	ASTM D 150-98	3.2~4.0
Dielectric Strength kV/mm	ASTM D 1549-97a	12.8~16.1