SCOTTAM ADVANCED MANUFACTURING

SG 95 Resin Data Sheet

Description			**Similar to ABS**
Features			**Excellent all-round properties, strong, optical properties**
Suitable for			**Snap fits, low temperature applications, colour matching**
Cured properties			**Test / ISO standard where applicable**
Colour		Colourless	
Transparency		Transparent	
Shore hardness	At 23 °C At 60 °C At 80 °C	82 D 77 D 74 D	868
Flexural strength		99 N/mm^2	178
Flexural modulus		2400 N/mm^2	178
Tensile strength		58 N/mm^2	R 527
Tensile modulus		2521 N/mm^2	R 527
Izod impact		12 kJ/m^2	180
Yield strength		64.2 N/mm^2	R 527
Elongation yield		6 %	
Elongation at break		25 %	R 527
Tear strength		Not measured	34
Thermal conductivity		0.208 W/mK	BS 874
Specific gravity	At 25 °C	1.21	
Coefficient of linear thermal expansion		7.5×10^{-5}	
Heat deflection temperature		72 °C	(test piece 110 mm × 12.7 mm × 6.4 mm)
Glass transition temperature		68 °C	
Optical properties Haze 1.71	Refractive index 1.565 Diffused lights 1.55	Transmissivity 90.75 Paralleled lights 89.2	
Processing information			**Notes**
Viscosity	Part A 1300 cPs	Part B 130 cPs	At 25 °C
Specific gravity	Part A 1.07	Part B 1.19	
Mix ratio A:B		100:150	By weight
Mixing time		45 s to 60 s	
Resin temperature		40 °C	Heating chamber
Mould temperature		70 °C	Heating chamber
Curing temperature		70 °C	Heating chamber
Curing time in mould		45 min	
Pot life		300 s	100 g at 25 °C
Post curing process		None	
Typical shrinkage		0.2 %	

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Handling procedure

Casting procedure

- Shake unopened A and B component cans vigorously for 10 s to 15 s
- Pre-heat mold in oven at 70 °C to 75 °C
- Pre-heat unopened A and B component cans in oven at 70 °C for 2 hours, then place in oven at 40 °C to stabilise prior to use
- Weigh A and B components into separate cups, allowing for cup loss (the amount of resin left in cup A after tipping)
- Add colour pigment to cup A
- Place filled cups in the machine and attach mixing paddle to cup B
- Start vacuum pump
- Switch on mixer motor
- Wait 10 minutes after reaching maximum vacuum level before mixing
- Pour contents of cup A into cup B and mix as fast as possible without splashing
- Pour mixed resin into silicone mould and leak vacuum chamber before the end of the pot life
- Place filled mold in oven to cure resin

Special notes

- Exact mould temperature is important
- Exact resin temperature is important
- Use no more than 2 % of total weight colour pigment

Product information

- **Pot life**
  Resin SG95 can be supplied with a pot extender component that extends the pot life to up to 10 minutes. Please contact Scott AM for details.
- **Mould life**
  Mould life can be increased by using the correct Scott AM release agent and demoulding the casting immediately after curing.
- **Storage**
  Store unopened cans at > 20 °C
  Protect against frost
  Store opened cans in oven at 40 °C with caps on
  Both components are sensitive to humidity.
- **In case of crystallisation of B-component**
  Place cans in oven at 70 °C for 2 hours to 4 hours and stir resin afterwards.

Please follow the procedure for preparing the vacuum casting system as described in the system operation manual!

Always observe the instructions in the Safety Data Sheets of the product and always work in accordance with the safety instructions of the materials manufacturer! Safety Data Sheets can be found at www.scott-am.com

Wear suitable respiratory protection, safety gloves and safety goggles during the entire filling procedure in accordance with the Safety Data Sheets.