

S1300 – Technical Data Sheet



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Description

S1300 is a two part A&B component system which is moderately fast setting when mixed via a static mix nozzle at room temperatures.

Because **S1300** is a high viscosity non-sag material the mixed material is ideal for gap filling requirements on steel, aluminium, ABS polycarbonates and general plastics and is excellent where vertical surface bonds are required.

S1300 Methacrylate exhibits excellent structural strength even without priming the surfaces.

S1300 macro structures the bond which possesses excellent durability high peel strength even in larger gaps and has excellent solvent and environmental resistance, resisting fuels, lubricants cleaning chemicals and fluids.

Typical Applications

Typical applications for **S1300** include the structural joining of metals, plastics, composite bonding. It is also used on ceramics where high impact strengths are needed.

Applications include:

- Wind turbines,
- Vehicle roofs,
- Fibreglass,
- Sports goods,
- Automotive spoilers,
- Vents,
- Housings.

Typical performance of uncured adhesive

Chemical Type	Methyl Methacrylate
Colour	Off white gel
Specific Gravity	0.97 (approx)
Viscosity @ 20°C MPas (cps) Brookfield Helipath	130-150,000
Flash Point (0°C)	11°C (51F)

Activator

Chemical Type	Methyl Methacrylate
Colour	White/yellow gel or Black
Specific Gravity	0.95 (approx)
Viscosity @ 20°C MPas (cps) Brookfield Helipath	150-180,000
Flash Point (0°C)	11°C (51F)

Mixture

Appearance	Opaque gel / yellow tint
Specific Gravity	0.97 (approx)
Viscosity @ 20°C MPas (cps) Brookfield Helipath< 4mins	150-200,000
Mix ratio by weight	1 to 1
Mix ratio by volume	1 to 1
(1) Working time 10g mass	5-7 minutes
Working time in nozzle	<12 minutes
(2) Fixture time Steel @ 25°C	12-15 minutes
(3) Note	Shelf life 6 months, store in cool environment

Typical Properties Cured material

Hardness ASTM Shore D	73
Shrinkage (lab test @ 7 days)	5%
(3) Tensile strength at break*	20N/mm ² average
Elongation at break	3%

Solvent and Environmental Resistance

Formulated to meet ASTM D1002 on steel lap shears with a 5mm gap size cured 1 week @ 23°C.

	TEMP		1000 HRS
RH100%	40°C	60%	35%
Salt spray	50°C	75%	60%
Water Glycol	20°C	75%	65%
Motor Oil	40°C	75%	93%
Gasoline	40°C	95%	92%
I P/Alcohol	40°C	75%	90%

At room temperature the product resists all the listed test chemicals, retaining 100% of its full strength.

Heat ageing properties

	500 hrs	1000 hrs	2000 hrs	Temperature
100% RH @ 20°C	90	95	98	@ 60°C
100% RH @ 20°C	65	55	60	@ 87°C

ASTM D1002 Lapshears

On steel / steel	Up to 30 N/mm ²
On aluminium / aluminium	Up to 27 N/mm ²
On polycarbonates	Up to 13 N/mm ²
On ABS / ABS	Up to 8 N/mm ²

Terminology

1. Working (Open) Time – The time interval between application of adhesive to substrate, and the possible assembly of the two mating parts @ 25 °C
2. Fixture Time – The length of time after the substrate assembly that will allow a joint to support a 1kg dead weight. (Tested on a 12mm x 25mm overlapped joint @ 25°C)
3. Reading averaged over a selection of test parts.

Please consult the S1300 Health & Safety Data Sheet for statutory regulation information.

Information relating to the products of Bondrite Adhesive Limited is based on tests carried out under laboratory conditions. If any of our products are not used in accordance with our instructions or are used under conditions which vary from our laboratory, they may not perform in accordance with any information provided and Bondrite shall not have any liability in this case. Bondrite will accordingly provide samples of our products, on request and free of charge, for Customers to carry out their own tests as to suitability of our product for their purposes and as used in their intended environment.