



**SG5000 Series**  
Methacrylate Adhesives

**DESCRIPTION**

SCIGRIP™ SG5000 Series Methacrylate Adhesives are high strength two-component products for bonding metals,<sup>2</sup> plastics<sup>1</sup> and composites. They offer a unique combination of convenient 1:1 mix ratio and ability to adhere to a wide variety of materials. Most metals, including steel and aluminum, can be bonded without surface pretreatment. A choice of 3, 6, 13 and 40 minute working times, fast cure and rapid strength build make this series of adhesives an ideal first choice for diverse bonding applications. Packaging options include 25 ml syringes; 50 and 400 ml cartridges and in 19 and 189 liter (5 and 50 gallon) bulk containers for application with meter-mix dispense equipment.

**PERFORMANCE BENEFITS**

• Primerless metal bonding for most metals	→	Eliminates surface treatment steps
• Choice of 3, 6, 13 and 40minute open times	→	Selection to fit process requirements
• Non critical 1:1 mix ratio	→	Excellent results with manual or metered mixing
• Excellent environmental & chemical resistance	→	Permanent bonds in harsh environments
• Minimal surface preparation	→	Offers clean shop and speedy assembly process

**TYPICAL ADHESIVE CHARACTERISTICS @ 24°C (75°F)**

Characteristics	Part A (Adhesive)	Part B (Activator)	Mix (Part A + B)
Color	Off White	Amber or Black	Amber or Black
Mix ratio by volume	1	1	—
Mix ratio by weight	1	1	—
Density, g/cc	0.96	0.97	0.97
Density, lb/gallon	8.01	8.09	8.09
Viscosity, cps	30,000 – 100,000	50,000 – 120,000	—

**TYPICAL PHYSICAL PROPERTIES @ 24°C (75°F)**

Tensile Strength MPa (psi)	31 – 32 (4,500 – 4,600)	Lap Shear Strength <sup>4</sup> MPa (psi)	20 – 25 (2,900 – 3,600)
Maximum Tensile Elongation (%)	6 – 7	Service Temperatures °C (°F)	-40 to 100 (-40 to 212)
Tensile Modulus <sup>3</sup> MPa (psi)	938 – 966 (136,000 – 140,000)		

**RECOMMENDED SUBSTRATES**

Composites	Metals <sup>2</sup>	Thermoplastics <sup>1</sup>
✓ Epoxy laminates	✓ Aluminum	✓ ABS, Acrylics
✓ FRP (Polyester / Vinyl Ester)	✓ Carbon Steel	✓ Vinyl
✓ Gelcoats	✓ Stainless Steel	✓ PVC, Polycarbonates

**PRODUCT PROPERTIES @ 24°C (75°F) – Fixture Time (time to achieve 1.4 MPa or 200 psi strength in lap shear)<sup>4</sup>**

Cartridge	Adhesive / Activator	Working Time (minutes)	Fixture Time (minutes)
SG5000-03	SG5005 A / SG5005 B	2 – 4	6 – 8
SG5000-06	SG5020 A / SG5020 B	5 – 7	10 – 12
SG5000-13	SG5030 A / SG5030 B	12 – 14	20 – 25
SG5000-40	SG5060 A / SG5060 B	35 – 45	55 – 60

**NOTES:**

1. Polyolefins, thermoplastic polyesters, fluorocarbon plastics and other low surface energy plastics are generally not bondable.
2. Prepare metal by removing dust, loose scale, rust and other surface residue including oil and grease. For maximum bond strength on steel, abrade surface prior to bonding. See important notes a, b and c on reverse side.
3. Tensile modulus as measured in the linear portion of the stress strain curve.
4. Lap shear strength of unprimed aluminum to aluminum bond based on ASTM D 1002 method.

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