



Strong, lightweight structural adhesives for whatever you're putting together...

SG5000: Fast Cure and Rapid Strength for Diverse Bonding Applications

- Bonds most metals, plastics and composites without surface pretreatment^{1,2}



SCIGRIP® SG5000 Series are high strength two-component products for bonding metals¹, plastics² 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, 15 and 40 minute working times, fast cure and rapid strength build make this series of adhesives an ideal first choice for diverse bonding applications.

Performance Benefits

FEATURE	BENEFIT
Variable working times (3 to 40 mins)	Selection to fit application/process requirements
Minimal surface preparation ^{1,2}	Reduced labor and throughput times
Excellent flow characteristics	High flow at low pressure, ease of manual dispensing
Excellent chemical resistance	Permanent bonds in harsh environments
Non critical 1:1 mix ratio	Excellent results with manual or metered mixing

Additional Resources

- Technical questions? Use the [Ask SCIGRIP](#) feature at scigrip.com
- Try our [Substrate Match Tool](#) at scigrip.com
- Request more information and [schedule a demo](#) at scigrip.com
- [Find a distributor](#) at scigrip.com/scigrip-us-distributors

NOTES:

- Prepare metal for bonding by removing all dust, loose scale, rust and other surface residue including oil and grease. For maximum bond strength on steel, abrade the mating surface prior to bonding. See notes a, b on reverse side. Value will depend on strength and stiffness of substrate.
- Polyolefins, thermoplastic polyesters, fluorocarbon plastics and other low surface energy plastics are generally not bondable.
- Lap shear strength of UNPRIMED aluminium to aluminium based on ASTM D1002 method.
- Brookfield RV, T-C 2-5 rpm
- Tensile strength, modulus and elongation based on ASTM D638, Type IV
- Tensile modulus as measured in the linear portion of the stress strain curve.



IPS Adhesives 600 Ellis Road, Durham, NC 27703 USA | 877.477.4583 | Fax: 919-598-2439 | ipsadhesives.com
 IPS Adhesives Europe New York Industrial Park, Newcastle Upon Tyne, UK NE27 0QF | +44 (0) 191-259-0033

TECHNICAL DATA SHEET

SG5000 SERIES

METHACRYLATE ADHESIVES

RECOMMENDED FOR BONDING

Composites	Metals ¹	Thermoplastics ²
Epoxy	Aluminum	ABS
Polyester/DCPD	Carbon Steel	Acrylics
Vinyl Ester	Stainless Steel	Polycarbonates
Gelcoats	Coated Metals	Vinyls (PVC)

PRODUCT PROPERTIES (In Minutes)

Cartridge	Adhesive	Activator	Working Time	Fixture Time
SG5000-03	SG5000-03A	SG5000-03B	2 - 5	6 - 8
SG5000-06	SG5000-06A	SG5000-06B	5 - 8	10 - 12
SG5000-13	SG5000-13A	SG5000-13B	14 - 19	20 - 25
SG5000-40	SG5000-40A	SG5000-40B	35 - 45	55 - 65

Time to reach 70% of ultimate strength in lap shear @75°F (24°C)³

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

SG5000 SERIES Uncured	Part A Adhesive	Part B Activator	A+B Mix
Color	Amber	Amber or Black	
Mix ratio/volume	1	1	-
Mix ratio/weight	1	1	-
Density, g/cc	0.96	0.97	0.97
Density, lb/gallon	8.01	8.09	8.09
Viscosity, cps ⁴	90,000-180,000	120,000-250,000	-

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

Tensile Strength ⁶ PSI (MPa)	>5,076 (35-40)
Maximum Tensile Elongation ⁵ %	>5
Tensile Modulus ^{5,6} PSI (MPa)	160,000 – 180,000 (1,100 – 1,240)
Lap Shear Strength ³ PSI (MPa)	>2,611 (18)
Service Temperatures	-40 to 212°F (-40 to 100°C)

PACKAGING & AVAILABILITY

Cartridges
50 & 400 ML



Pails
5 Gal./19 L



Drums
55 Gal./ 189 L





SAFETY AND HANDLING: Read Material Safety Data Sheet before handling or using this product. Adhesive component A contains methyl methacrylate monomer and is flammable. Always use in a well-ventilated area. Floor-level extraction and large quantities of moving air greatly facilitate ventilation. Activator component B contains peroxide. Both materials must be stored in a cool place away from sources of heat and open flames or sparks. Keep containers closed when not in use. Prevent contact with skin and eyes. In case of skin contact, wash with soap and water. In case of eye contact, flush with water for 15 minutes and seek immediate medical attention. Harmful if swallowed. Keep out of reach of children.

PRODUCT APPLICATION & USE: To ensure consistent performance, product temperatures must be held reasonably constant between 65°F (18°C) and 80°F (27°C). Substrate preparation, adhesive/activator ratio, application temperature, humidity and a variety of other environmental and end user application factors are beyond the control of IPS Adhesives; therefore, the end user is solely responsible for determining whether the product is fit for a specific purpose and suitable for the user's product, design and final application requirements.

DISPENSING EQUIPMENT: Dispensing directly from disposable cartridges or meter-mix dispense equipment is strongly recommended. Both methods employ convenient static motionless mixer technology. Contact your SCIGRIP representative for information and availability.

When meter-mix dispense systems are used, care must be taken to assure compatibility between the adhesive components and the materials in the equipment that they contact. All wetted metal components should be constructed of stainless steel or aluminum. Contact with copper, zinc, brass or other alloys containing these materials must be strictly prevented. All non-metallic seals and gaskets should be fabricated from PTFE or UHMW polyethylene based materials.

CURING: Working time is the approximate time after mixing components A and B that the adhesive remains fluid and bondable. Fixture time is the approximate time after mixing components A and B required for the adhesive to develop sufficient strength to allow careful movement, unclamping or de-molding of assembled parts. Parts can generally be put in service when 80 percent of full strength is developed. The time to achieve 80% cure is approximately 2-3 times that required for fixturing. The working and fixture times presented in this bulletin are based on laboratory tests performed at 75°F (24°C). Higher temperatures speed the curing reaction, which reduces working time and speeds the development of strength. The reverse is true for lower temperatures. If significant variation in temperatures or application at very high or low temperatures is anticipated, contact your SCIGRIP representative for technical assistance. The chemical curing reaction that occurs when components A and B are mixed generate heat. The amount of heat generated is dependant on the mass and thickness of the mixed product.

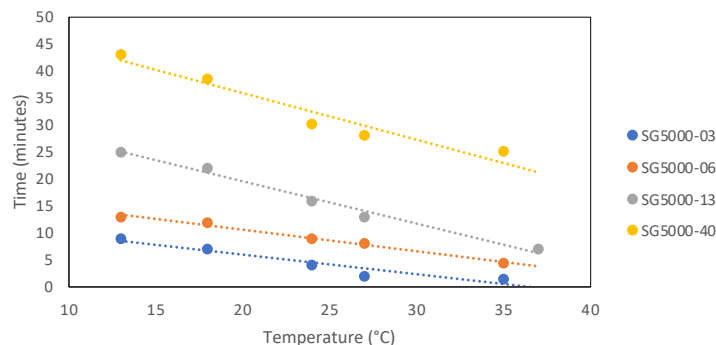
CLEAN UP: Adhesive components and mixed adhesive should be removed from mixing and application equipment with a suitable industrial solvent or cleaner before the mixed adhesive cures. Once the adhesive cures, soaking in a strong solvent or paint remover will be required to soften the adhesive for removal. Contact your SCIGRIP representative for additional information..

SHELF LIFE & STORAGE CONDITIONS: The shelf life of adhesive and activator in unopened containers is twelve (12) months from the date of manufacture unless otherwise explicitly stated. Shelf life is based on a continuous, steady state storage temperature of between 65°F (13°C) and 80°F (27°C). Exposure to temperatures below 65°F (13°C) or above 80°F (27°C) will impact the product performance and viscosity. Exposure to temperatures above 80°F (27°C) will rapidly reduce the stated shelf life of the product.

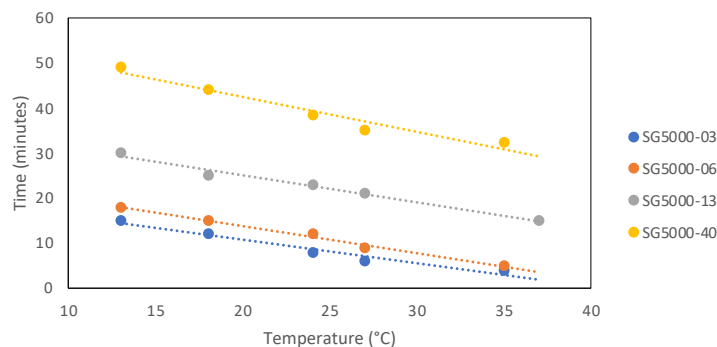
IMPORTANT NOTES

- SUBSTRATE AND APPLICATION COMPATIBILITY.** The user must determine the suitability of a selected adhesive for a given substrate and application. SCIGRIP strongly recommends laboratory, shop and end-use testing that simulates the actual manufacturing and end-use environment.
- TECHNICAL ASSISTANCE.** Contact your SCIGRIP representative for questions or assistance with the selection of adhesives and methods for evaluating adhesives for your intended application.

Working Time vs Adhesive Temperature



Fixture Time vs Adhesive Temperature



NOTE: This product is intended for use by skilled individuals at their own risk. Recommendations contained herein are based on information we believe to be reliable. The properties and strength values presented above are typical properties obtained under controlled conditions at the SCIGRIP laboratory. They are intended to be used only as a guide for selection for end-use evaluation. The ultimate suitability for any intended application must be verified by the end user under anticipated test conditions. Since specific use, materials and product handling are not controlled by SCIGRIP, our warranty is limited to the replacement of defective SCIGRIP products.

Limited Warranty: Seller warrants to the original Buyer of the goods that all new Seller goods shall be free from defects in material and workmanship for the published shelf life of the good. If any Seller good fails to conform to this Limited Warranty under normal use and storage conditions, and if the original Buyer complies with the terms of this Limited Warranty, then Seller will, without charge to Buyer, replace the nonconforming good.

This Limited Warranty shall not extend to, nor shall Seller be responsible for, damages or loss resulting from accident, misuse, negligent use, improper storage, or improper application.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES. SELLER MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, AND EXPRESSLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ARISING FROM A COURSE OF DEALINGS, AND/OR FROM USAGE OF TRADE.

SELLER SHALL NOT BE LIABLE IN CONTRACT, IN TORT (INCLUDING NEGLIGENCE OR STRICT LIABILITY) OR OTHERWISE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES.