



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

## SG230HV: Strong, Permanent Bonds for Larger Structural Projects

Formulated to meet the specific needs of the marine, transportation and construction markets



SCIGRIP® SG230HV Series are two component, 10:1 ratio Methacrylate Adhesives for bonding composite and other plastic parts with little to no surface preparation.<sup>1</sup> SG230 HV is mostly used in marine, transportation and construction applications. It is especially suited for bonding large structural parts requiring long working times and for filling deep irregular gaps up to 1.5 inches (39 mm).

### Performance Benefits

FEATURE	BENEFIT
Variable working times (30 - 90 mins)	Single adhesives, choice of activators, reduced inventory
Minimal surface preparation	No surface prep needed on composites
Environmental resistance	Permanent bonds in harsh environments
Unique high viscosity formulations	Stays put with no slide or sag even on inverted surfaces
Permanent strength and toughness	Excellent fatigue, impact, and shock load resistance
Reduced bond line read through	Reduced post finishing requirements

### 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. Primer is required 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 PRIMED aluminium to aluminium based on ASTM D1002 method.
- Brookfield HB, T-E 2.5rpm
- 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

# SG230HV SERIES

METHACRYLATE ADHESIVES

### RECOMMENDED FOR BONDING

Composites	Metals <sup>1</sup>	Thermoplastics <sup>2</sup>
Epoxy	Aluminum	Acrylics
Polyester/DCPD	Carbon Steel	PVC/CPVC
Vinyl Ester	Stainless Steel	Styrenics
Gelcoats	Coated Metals	

### PRODUCT PROPERTIES (In Minutes)

Cartridge	Adhesive	Activator	Working Time	Fixture Time
SG230-30	SG230HVA	SG605B	25 - 30	45 - 55
SG230-40	SG230HVA	SG214B	35 - 45	60 - 75
SG230-60	SG230HVA	SG216B	50 - 70	140 - 170
Bulk Only	SG230HVA	SG218B	70 - 90	180 - 210

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

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

SG230HV SERIES Uncured	Part A Adhesive	Part B Activator	A+B Mix
Color	Off White	Black	Gray
Mix ratio/volume	10	1	-
Mix ratio/weight	8.4	1	-
Density, g/cc	0.97	1.15	0.99
Density, lb/gallon	8.09	9.60	8.25
Viscosity, cps <sup>4</sup>	900,000-1,400,000	120,000-180,000	-

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

Tensile Strength <sup>6</sup> PSI (MPa)	>3,000 (21)
Maximum Tensile Elongation <sup>5</sup>	>100%
Tensile Modulus <sup>5,6</sup> PSI (MPa)	80,000 – 103,000 (552 – 710)
Lap Shear Strength <sup>3</sup> PSI (MPa)	>2,000 (14)
Service Temperatures	-40 to 180 °F (-40 to 82 °C)

### PACKAGING & AVAILABILITY

Cartridges\*  
490 ML

Pails  
5 Gal./19 L

Drums  
55 Gal./ 189 L



\*UK/EU Only



**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.

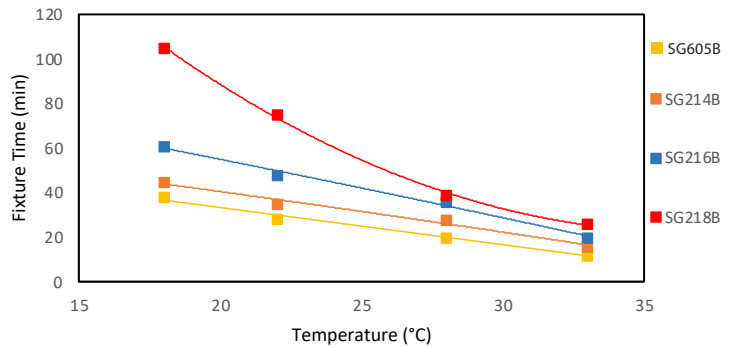
**CLEAN UP:** Adhesive components and mixed adhesive should be removed from mixing and application equipment with a suitable industrial solvent or cleaner before the mixed adhesive cures. Once the adhesive cures, soaking in a strong solvent or paint remover will be required to soften the adhesive for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

**SHELF LIFE & STORAGE CONDITIONS:** The shelf life of adhesive and activator in unopened containers is nine (9) months from the date of shipment to you from IPS Adhesives unless otherwise explicitly stated. Shelf life is based on a continuous, steady state storage temperature of between 55°F (13°C) and 80°F (27°C). Exposure to temperatures below 55°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.

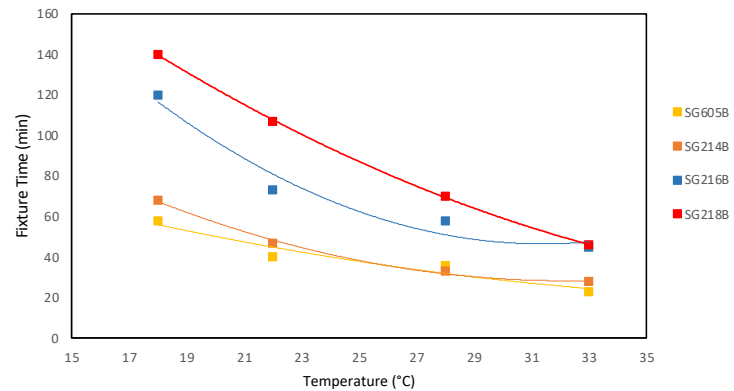
**IMPORTANT NOTES**

- 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.

