SCIGRIP™ SMARTER ADHESIVE SOLUTIONS

TECHNICAL DATA SHEET

SG300 Series

Methacrylate Adhesives

DESCRIPTION

SCIGRIP™ SG300 Series Methacrylate Adhesives are two-component, 10:1 mix ratio products for bonding metals, composites and other plastic parts[1]. Most metals can be bonded without priming[2]. These advanced products are designed to meet specific requirements of the transportation industry, including reduced read through on show surfaces. The combination of minimum surface preparation[1, 2], primerless metal bonding and low read through makes the SG300 series products ideal for a variety of assembly operations. Packaging options include 50 and 490 ml cartridges and 5 and 50 gallon (19 and 189 liters) bulk containers for application with meter-mix dispense equipment.

PERFORMANCE BENEFITS

• **Primerless metal bonding**	**No surface treatment or primers required for most metals[2]**
• **Reduced bond line read through**	**Reduced post finishing requirements**
• **Choice of 5, 15 and 40 minute working times**	**Selection to fit application and process requirements**
• **Non-sag application characteristics**	**Facilitates application on non-level surfaces**
• **Excellent environmental resistance**	**Permanent bonds in harsh operating environments**
• **Permanent toughness**	**Excellent fatigue, impact and shock load resistance**

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

Characteristics	Part A (Adhesive)	Part B (Activator)	Mix (Part A + B)
Color	Off White	Black or Off White	Black or Off White
Mix ratio by volume	10	1	—
Mix ratio by weight	8.75	1	—
Density, g/cc	1.01	1.15	1.02
Density, lb/gallon	8.40	9.60	8.51
Viscosity, cps	190,000 – 250,000	50,000 – 150,000	—

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

Tensile Strength psi (MPa)	2,000 – 2,200 (14 – 15)	Lap Shear Strength[4] psi (MPa)	2,500 – 2,800 (17 – 19)
Maximum Tensile Elongation (%)	100 – 125	Service Temperatures °F (°C)	-40 to 180 (-40 to 82)
Tensile Modulus[3] psi (MPa)	30,000 – 40,000 (207 – 276)		

RECOMMENDED SUBSTRATES

Composites	Metals[2]	Thermoplastics[1]
✓ Epoxy	✓ Aluminum	✓ ABS
✓ Polyester & DCPD Modified	✓ Carbon Steel	✓ Acrylics
✓ Vinyl Ester	✓ Stainless Steel	✓ PVC/CPVC
✓ Gelcoats	✓ Coated Metals	✓ Styrenics

PRODUCT PROPERTIES @ 75°F (24°C) – Fixture Time (time to achieve 200 psi or 1.4 MPa strength in lap shear)[4]

Cartridge	Adhesive / Activator	Working Time (minutes)	Fixture Time (minutes)
SG300-05	SG305 A / SG605 B	4 – 6	>15
SG300-15	SG315 A / SG605 B	13 – 17	>30
SG300-40	SG340 A / SG605 B	35 – 45	>80

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.

SCIGRIP Americas, 600 Ellis Road, Durham, NC 27703 • Toll Free: 1-877-477-4583 • Fax: 919-598-2439 **scigrip.com** IPS CORPORATION

SAFETY AND HANDLING

Read Material Safety Data Sheet before handling or using this product. Adhesive components contain methyl methacrylate monomer and are flammable. Always use in a well-ventilated area. Floor-level extraction and large quantities of moving air greatly facilitate ventilation. 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.

MIXING AND APPLICATION

EXOTHERM: The chemical curing reaction that occurs when components A and B are mixed generates heat. The amount of heat generated is dependent on the mass and thickness of the mixed product. Large masses over 1.5 inch (39 mm) thick can develop heat in excess of 250°F (121°C) and can generate vapors that should be avoided from direct personal contact.

CURING

Open working time is the approximate time after mixing components A and B, depending on bonding conditions, that the adhesive remains fluid and bondable. Fixture time is the approximate time after mixing components A and B required for the adhesive to react the partial state of cure necessary 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 and reduce open working time. 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.

DISPENSING EQUIPMENT

Dispensing from disposable cartridges or meter-mix dispense equipment is highly recommended. Both methods employ convenient static motionless mixer technology. Product supplied in pre-measured cartridges is dispensed from approved manual or pneumatic powered guns. While using pneumatic dispensing guns, it is mandatory to use the gun's regulator to regulate the air pressure. Manufacturers recommended maximum operating pressure and maximum compressed air supply pressure are 85 and 120 psi respectively. Removal of the regulator from the dispensing unit can lead to over pressurizing and rupture of the cartridge cylinder. 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, aluminum or a sufficient thickness of chemically resistant material that prevents contact between the adhesive components and the base metal. Contact with copper, brass, zinc or alloys containing these materials must be strictly avoided. All non-metallic seals and gaskets should be fabricated from Teflon®, or polyethylene based materials. Natural rubber, nitrile rubber (BUNA), neoprene and Viton® are not acceptable.

APPLICATION

Follow instructions provided or contact your SCIGRIP representative for proper preparation of dispensing equipment and substrates prior to starting the bonding process. Always dispense a quantity of adhesive at start-up to assure that the adhesive exiting the tip of the mixer is the proper color and is uniform, without streaks. If aged material is being used, allow the purged material to cure to assure quality before proceeding. Carefully dispense a sufficient quantity of adhesive on the substrate to assure that the bond gap will be completely filled when the parts are mated. Allow for squeeze-out at the edges of the bond to assure filling. Carefully secure or clamp parts to prevent joint movement while the adhesive sets. Do not apply excessive pressure that can cause excessively thin gaps and starve the bond line. If in doubt, use shims or spacers to set the gap. A minimum gap of 0.02 inch (0.50 mm) is recommended for all other adhesives. Test the curing adhesive at the edges for fingernail hardness before removing clamps or fixtures. If clean up of the adhesive from the bonded area is required, we recommend that it is carefully performed using alcohol or other preferred industrial solvent while the adhesive is still wet or soft. Partially cured adhesive can be carefully removed with a sharp knife. Cured adhesive must be sanded or scraped, using a suitable solvent to remove remaining traces.

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. If the bonds are exposed to UV rays then use of plasticizers such as Benzoflex 2088 is recommended, or contact your SCIGRIP representative for additional information. Any clean-up of the bonded assembly using industrial solvents is not recommended as it could affect the cure.

STORAGE AND SHELF LIFE

The shelf life of components A and B in unopened containers is approximately six months from the date the product is shipped from SCIGRIP facilities. Shelf life is based on steady state storage between 55°F and 80°F (13°C and 27°C). Exposure, intermittent or prolonged, above 80°F (27°C) will result in a reduction of the stated shelf life. Exposures above 100ºF (38ºC) during shipping or storage can quickly degrade component B in cartridges or bulk containers, and must be prevented. Shelf life of both components can be extended by air-conditioned or refrigerated storage between 50°F and 65°F (10°C and 18°C). KEEP FROM FREEZING.

IMPORTANT NOTES

a. 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.
b. SURFACE PREPARATION: The need for surface preparation must be determined by comparative testing of prepared and unprepared substrates to assure that unprepared bonding is equivalent to or acceptable for the application relative to prepared bonding. Initial bonding tests must be followed up with simulated or actual durability tests to assure that surface conditions do not lead to degradation of the bond over time under service conditions. Subsequent changes in substrates or bonding conditions will require re-testing.
c. TECHNICAL ASSISTANCE: Contact your SCIGRIP representative for questions or assistance with the selection of adhesives and methods for evaluating adhesives for your intended application.

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.*

GHS SAFETY DATA SHEET

SCIGRIP™ SG340A Adhesive

Date Revised: **JUL 2011**
Supersedes: **MAR 2011**

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **SCIGRIP™ SG340A**

PRODUCT USE: Component "A" of a 2-Component Adhesive for Thermoset Composites, Plastics and other substrates

SUPPLIER:

MANUFACTURER: **IPS Corporation**
600 Ellis Road, Durham, NC 27703 - United States
P.O. Box 12729, Research Triangle Park, NC 27709 - USA
Tel. 1-919-598-2400

EMERGENCY: Transportation: Tel. 800.424.9300, 703.527.3887 CHEMTREC (International)

Medical: Tel. 800.451.8346, 760.602.8703 3E Company (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health		Environmental		Physical	
Acute Toxicity:	Category 4	Acute Toxicity:	Category 3	Flammable Liquid:	Category 2
Skin Irritation:	Category 2	Chronic Toxicity:	Category 4		
Skin Sensitization:	Category 1				
Eye:	Category 2				

GHS LABEL:   **OR**  

Signal Word: **Danger**

WHMIS CLASSIFICATION: CLASS B, DIVISION 2
CONTROLLED PRODUCT CLASS D, DIVISION 2B

Hazard Statements		Precautionary Statements
H225 - Highly flammable liquid and vapor	H312 - Harmful in contact with skin	P233 - Keep container tightly closed
H335 - May cause respiratory irritation	H302 - Harmful if swallowed	P260 - Do not breathe vapor
H315 - Causes skin irritation		P262: Do not get in eyes, on skin, or on clothing
H317 - May cause an allergic skin reaction		P271 - Use only outdoors or in a well-ventilated area

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION % by Weight
Methyl Methacrylate Monomer (MMA),* Stabilized	80-62-6	201-297-1	05-2116297731-37-0000	55 - 65
Methacrylic Acid (MAA)	79-41-4	201-204-4	05-2116297727-26-0000	< 10
Styrene*	100-42-5	202-851-5	05-2116297733-33-0000	< 4

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.
*Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.
Unsuitable Extinguishing Media: Water spray or stream.
Exposure Hazards: Inhalation and dermal contact
Combustion Products: Oxides of carbon, oxides of nitrogen, hydrocarbons, hydrocarbons, acrid smoke and gases.
Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure air-supply masks.

	HMIS	NFPA
Health	2	2
Flammability	3	3
Reactivity	2	2

0-Minimal
1-Slight
2-Moderate
3-Serious
4-Severe

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.
Provide sufficient ventilation, use explosion-proof exhaust ventilation eqiuipment or wear suitable respiratory protective equipment.
Prevent contact with skin or eyes (see section 8).
Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
Methods for Cleaning up: Contain spill with sand or other inert adsorbent or absorbent material. Use non-sparking tools.
Transfer to a closable vessel (Metal or polyethylene [PE])

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.
Do not eat, drink or smoke while handling.
Storage: Store in ventliated room or shade and away from direct sunlight. Keep container tightly closed when not in use.
Keep away from ignition sources and incompatible materials. Follow all precautionary information on container label and product bulletins.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
Methyl Methacrylate Mon.	50 ppm	100 ppm	100 ppm	N/E
Methacrylic Acid	20 ppm skin	N/E	20 ppm skin	N/E
Styrene	50 ppm	100 ppm	100 ppm	200 ppm

Engineering Controls: Use local exhaust as needed.
Monitoring: Maintain breathing zone airborne concentrations below exposure limits.
Personal Protective Equipment (PPE):
Eye Protection: Avoid contact with eyes, wear splashproof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields,
Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.
Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.
Respiratory Protection: Use in a well-ventilated room. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above. With normal use, the Exposure Limit Value will not usually be reached. When limits are approached, use respiratory protection equipment.

GHS SAFETY DATA SHEET

SCIGRIP™ SG340A Adhesive

Date Revised: **JUL 2011**
Supersedes: **MAR 2011**

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white, viscous liquid	**Odor Threshold:**	0.75 ppm: MMA
Odor:	Strong Solvent Odor	**Evaporation Rate:**	> 1.0 (BUAC = 1)
pH:	Not Applicable	**Flammability:**	Category 2
Boiling Point:	100.5℃ (212.9℉) Based on first boiling component: MMA	**Flammability Limits:**	**LEL:** 1.6% based on MMA
Flash Point:	11.5℃ (52.7℉) T.C.C. based on MMA		**UEL:** 12.5% based on MMA
Specific Gravity:	1.010 @23℃ (73℉)	**Vapor Pressure:**	28 mm Hg @ 20℃ (68℉): MMA
Solubility:	Slight in Water (MMA, MAA)	**Vapor Density:**	> 3.0 (Air = 1)
Auto-ignition Temperature:	421℃ (789.8℉): MMA	**VOC Content :**	≤50 g/l mixed
Decomposition Temperature:	Not Applicable		

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable, unless heated

Hazardous decomposition products: None in normal use. Oxides of carbon, oxides of nitrogen, hydrocarbons, acrid smoke and gases.

Conditions to avoid: Keep away from direct sunlight, heat, sparks, open flame and other ignition sources.

Incompatible Materials: Reducing and oxidizing agents and metal contaminants

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact

Acute symptoms and effects:

Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.

Eye Contact: Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.

Skin Contact: Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.

Ingestion: May cause nausea, vomiting, diarrhea and mental sluggishness.

Chronic (long-term) effects: None known to humans

Toxicity:	**LD_{50}**	**LC_{50}**
Methyl Methacrylate Monomer (MMA)	Oral: 7900 mg/kg (rat), Dermal: >35000 mg/kg (rabbit)	Inhalation: 3 hrs. 7093 PPM (rat)
Methacrylic Acid (MAA)	Oral: 1600 mg/kg (rat), Dermal: 500 mg/kg (rabbit)	Inhalation: 6.7 mg/l (rat)
Styrene	Oral: 2650 mg/kg (rat)	Inhalation: 12000 PPM (rat)

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: None known

Mobility: In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 50 g/l

Degradability: Not Established

Bioaccumulation: Not Established

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult local disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name: Adhesives
Hazard Class: 3
Secondary Risk: None
Identification Number: UN 1133
Packing Group: PG II
Label Required: Class 3 Flammable Liquid
Marine Pollutant: NO

EXCEPTION for Ground Shipping
DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package.
Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D" .

TDG INFORMATION	
TDG CLASS:	FLAMMABLE LIQUID 3
SHIPPING NAME:	ADHESIVES
UN NUMBER/PACKING GROUP:	UN 1133, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information: Highly Flammable, Harmful
Symbols: F, Xn
Risk Phrases: R-11 Highly Flammable
R-36/37/38 Irritating to eyes, respiratory system and skin
R-43 May cause sensitization by skin contact.

Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)

Safety Phrases: S-2 Keep out of reach of children
S-24/25 Avoid contact with skin and eyes.
S-26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S-36/37/39 Wear suitable protective clothing, gloves and eye/face protection
S-46 If swallowed, seek medical advise immediately and show this container or label

SECTION 16 - OTHER INFORMATION

Specification Information:
Department issuing data sheet: IPS, Safety Health & Environmental Affairs
E-mail address: <EHSinfo@ipscorp.com>

All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).

Training necessary: Yes, training in practices and procedures contained in product literature.
Reissue date / reason for reissue: 7/19/2011 Modified GHS Standard Format
Intended Use of Product: Structural adhesive bonding

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

GHS SAFETY DATA SHEET

SCIGRIP™ SG605B-B Activator

Date Revised: **JUL 2011**
Supersedes: **MAR 2011**

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **SCIGRIP™ SG605B-B**

PRODUCT USE: Component "B" of a 2-Component Adhesive for Thermoset Composites, Plastics and other substrates

SUPPLIER:

MANUFACTURER: **IPS Corporation**
600 Ellis Road, Durham, NC 27703 - United States
P.O. Box 12729, Research Triangle Park, NC 27709 - USA
Tel. 1-919-598-2400

EMERGENCY: Transportation: Tel. 800.424.9300, 703.527.3887 CHEMTREC (International)

Medical: Tel. 800.451.8346, 760.602.8703 3E Company (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health		Environmental		Physical	
Acute Toxicity:	Category 5	Acute Toxicity:	None	Flammable Liquid:	Category 4
Skin Irritation:	None	Chronic Toxicity:	None		
Skin Sensitization:	None				
Eye:	Category 2				

GHS LABEL:  **OR** 

Signal Word: **Warning**

WHMIS CLASSIFICATION: Not Regulated

Hazard Statements	Precautionary Statements
H317 - May cause an allergic skin reaction	P233 - Keep container tightly closed P262: Do not get in eyes, on skin, or on clothing P271 - Use only outdoors or in a well-ventilated area

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION % by Weight
Benzoyl Peroxide (BPO)*	94-36-0	202-327-6	05-2116297715-31-0000	<15%

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.
*Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes. If irritation develops, seek medical advice.
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog
Unsuitable Extinguishing Media: Water spray or stream
Exposure Hazards: Inhalation and skin contact
Combustion Products: Oxides of carbon, oxides of nitrogen
Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure air-supply masks

	HMIS	NFPA	
			0-Minimal
Health	1	1	1-Slight
Flammability	1	1	2-Moderate
Reactivity	1	1	3-Serious
			4-Severe

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.
Provide sufficient ventilation, or wear suitable respiratory protective equipment.
Prevent contact with skin or eyes (see section 8).
Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
Methods for Cleaning up: Clean up with sand or other inert absorbant material. Transfer to a suitable closable container

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
Keep away from ignition sources, and ensure adequate ventilation/fume exhaust hoods.
Do not eat, drink or smoke while handling.
Storage: Store in ventliated room or shade and away from direct sunlight and temperatures above 29°C (85°F). Keep container tightly closed when not in use.
Keep away from ignition sources and incompatible materials. Follow all precautionary information on container label and product bulletins.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
Benzoyl Peroxide	5 mg/m^3		5 mg/m^3	

Engineering Controls: Use local exhaust as needed.
Monitoring: Maintain breathing zone airborne concentrations below exposure limits.
Personal Protective Equipment (PPE):
Eye Protection: Avoid contact with eyes, wear splashproof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields,
Skin Protection: Prevent contact with the skin as much as possible. Nitrile or neprene gloves should be used for frequent immersion.
Use of latex/nitrile surgical gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.
Respiratory Protection: Use in a well-ventilated room. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above. With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

GHS SAFETY DATA SHEET

SCIGRIP™ SG605B-B Activator

Date Revised: **JUL 2011**
Supersedes: **MAR 2011**

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black, viscous liquid		
Odor:	Mild	**Active Oxygen Content:**	<1 %
pH:	Not Applicable	**Evaporation Rate:**	<1
Boiling Point:	Not Established	**Flammability:**	Category 4
Flash Point:	84°C (184°F) for BPO	**Flammability Limits:**	**LEL:** Not Established
Specific Gravity	1.130 @23°C (73°F)		**UEL:** Not Established
Solubility:	Insoluble in Water	**Vapor Pressure:**	Not Established
Auto-ignition Temperature:	Not Established	**Vapor Density:**	Not Established
Decomposition Temperature:	110ºC (230°F)	**VOC Content:**	None

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable
Hazardous decomposition products: None in normal use. Oxides of carbon.
Conditions to avoid: Keep away from direct sunlight, heat, sparks, open flame and other ignition sources.
Incompatible Materials: Strong acids and alkalis, reducing agents and metal contaminants

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact
Acute symptoms and effects:
Inhalation: May cause irritation of nose, throat and lungs
Eye Contact: May cause eye irritation
Skin Contact: Prolonged exposure may cause moderate skin irritation
Ingestion: May cause nausea, vomiting and diarrhea
Chronic (long-term) effects: None known to humans

Toxicity:	**LD_{50}**	**LC_{50}**
Benzoyl Peroxide	Oral: 6400 mg/kg (rat)	Oral: 2 mg/l 96 hours (guppy)

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotyxicity	Sensitization to Product	Synergistic Products
None	None	None	Not Established	None	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: Category 3
Mobility: Not Established
Degradability: Not Established
Bioaccumulation: Not Established

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult local disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name: Not Regulated
Hazard Class: Not Regulated as a hazardous material
Secondary Risk None
Identification Number: None
Packing Group: Not Regulated
Label Required: Not Regulated
Marine Pollutant: NO

TDG INFORMATION	
TDG CLASS:	Not Regulated
SHIPPING NAME:	Not Regulated
UN NUMBER/PACKING GROUP:	Not Regulated

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information: Irritant
Symbols: Xi
Risk Phrases: R-36 Irritating to eyes
Safety Phrases: S-2 Keep out of the reach of children
S-3 Keep in a cool place
S-7 Keep container tightly closed
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection

Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)

SECTION 16 - OTHER INFORMATION

Specification Information:
Department issuing data sheet: IPS, Safety Health & Environmental Affairs
E-mail address: <EHSinfo@ipscorp.com>

All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).

Training necessary: Yes, training in practices and procedures contained in product literature.
Reissue date / reason for reissue: 7/20/2011 Modified GHS Standard Format
Intended Use of Product: Structural adhesive bonding

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.