



Channel Partner Sales Handbook

2025/2026



A BRAND OF IPS ADHESIVES



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- Construction vehicle applications
- Marine applications
- Truck applications
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We are SCIGRIP

For over 65 years, we’ve invested in innovation to provide cutting edge formulations of Methacrylate adhesives that are unrivalled for their combination of strength, toughness and ease of use.

Worldwide reach

Our products are used in a multitude of structural applications all over the world. The industry favourite for bonding advance composites with little or no surface preparation.

Technical support

We deliver unsurpassed value and unmatched flexibility to ensure you receive the right solution for your project. Our technical support team will ensure our products are adapted to fit your needs.

Certifications



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SCIGRIP within IPS Adhesives

Under the umbrella of IPS Adhesives, SCIGRIP comes together with other adhesive brands such as Integra, Unika and Arjay to offer a wide range of adhesive chemistries and bonding solutions.



400+ Adhesive colours for quartz, natural stone, sintered surface and more



Professional primerless MMA adhesives for a wide range of structural applications



Innovative structural bonding compounds for boat production



Powerful adhesive technology for all sign and display assembly projects



Specialist colour matched installation and aftercare products for virtually every work surface



High-performance adhesive designed for fast curing, minimal visibility and superior durability in fabrication

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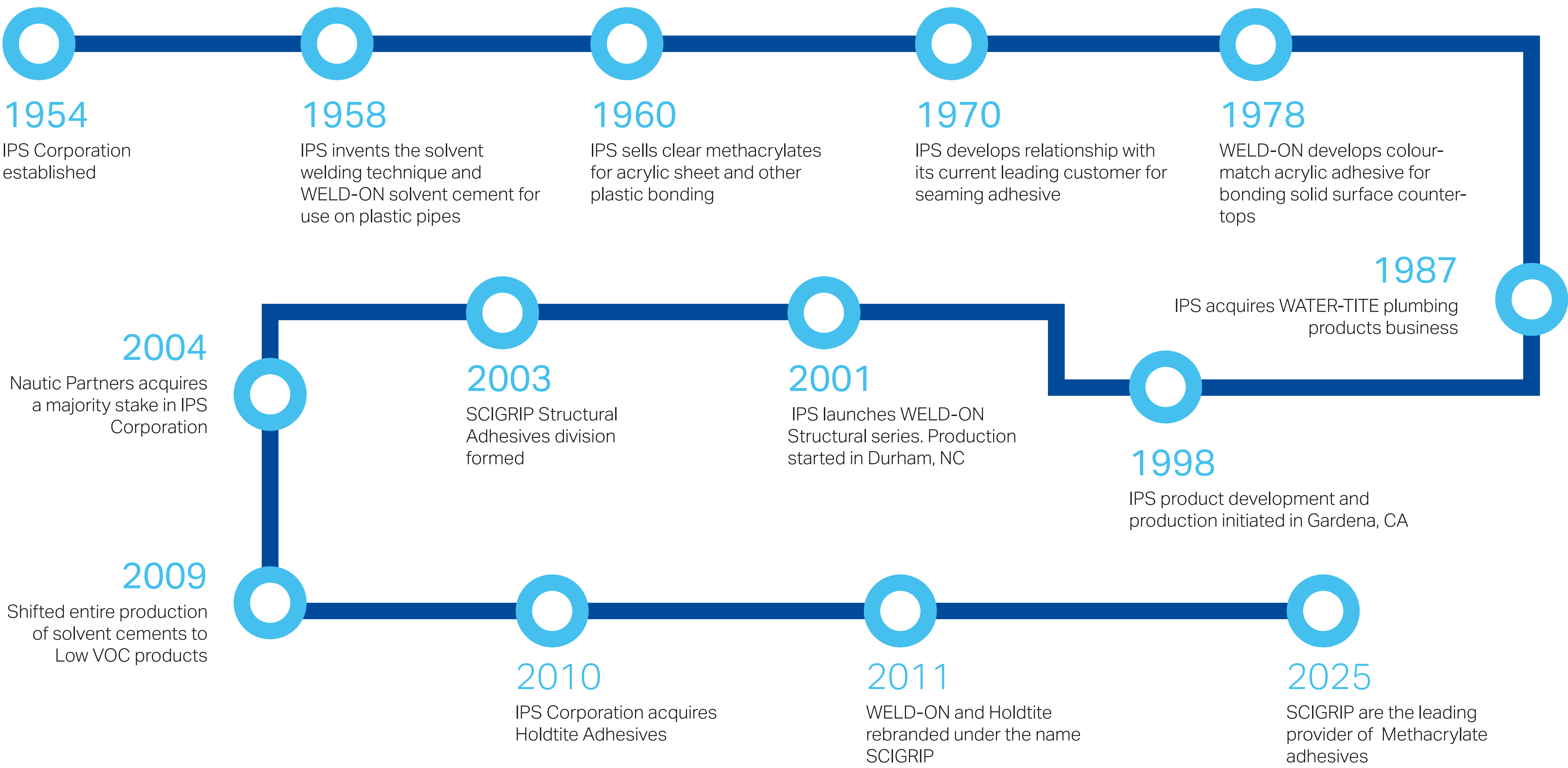
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IPS Adhesives overview

Established in 1954, as the inventor of solvent cement for PVC pipe applications.

Today IPS manufactures plumbing and roofing supplies for the construction industry, as well as structural adhesives and solvent cements for a broad range of construction, surfacing/ industrial, transportation and marine manufacturing applications.



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IPS Adhesives overview

Head-quartered in Durham, NC, with production and distribution facilities in the United States and United Kingdom.



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Sustainability

IPS Adhesives has a sustainability strategy based on four pillars



Waste Streams

Continuous improvement of processes to reduce waste and when waste is created – value it, avoiding the need to incinerate or land fill.



Materials

Innovating new sustainable adhesive solution.
Becoming resource efficient.



Value Chain

Careful management of route to market, reducing geographical distance and layers within supply chain.

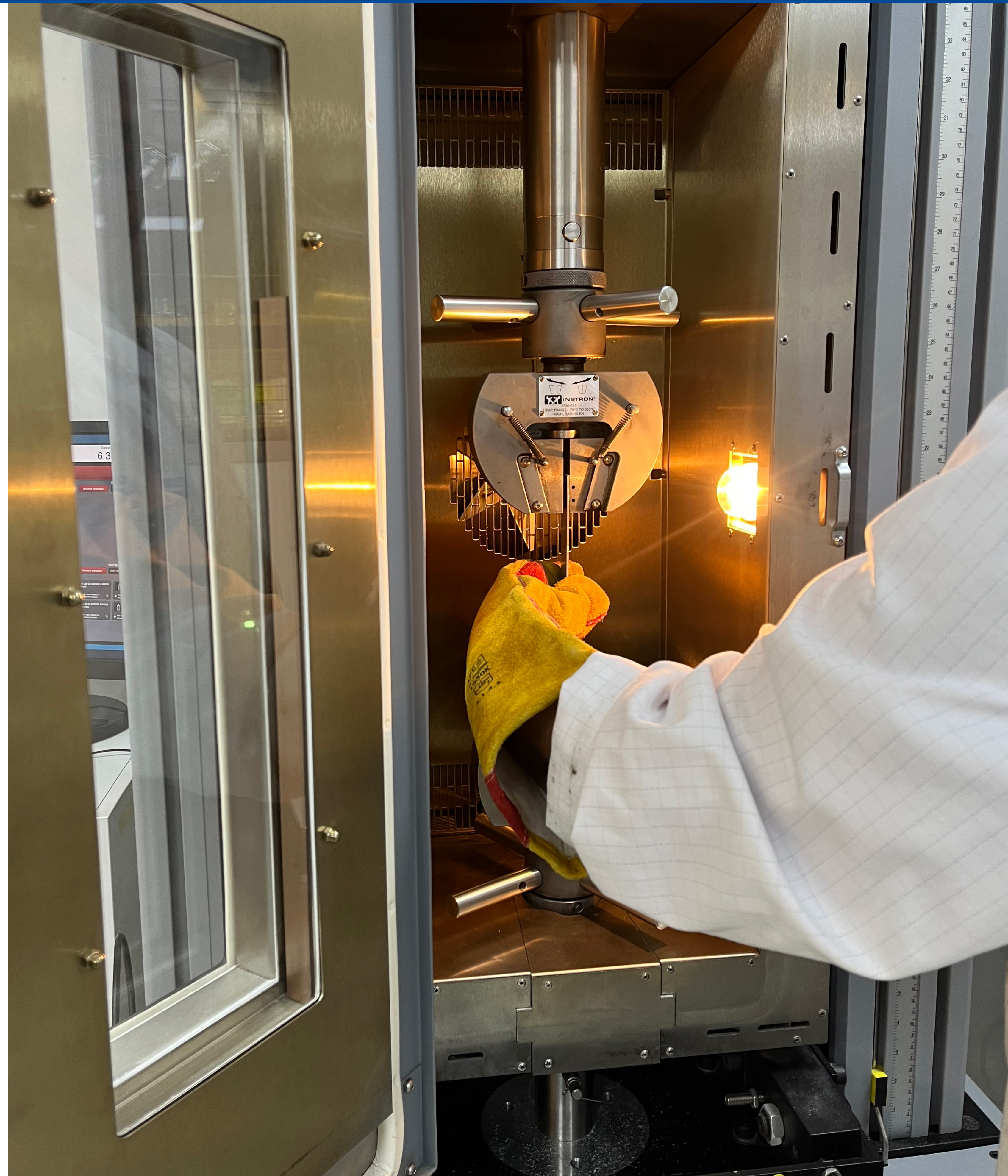


Energy

Creating a culture of sustainability.
Investing in the reduction of carbon footprint.



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Your solutions partner



High performance products



Responsive customer service



End-to-end manufacturing



Full-service lab & testing capabilities



Unparalleled formulation development



Multiple manufacturing locations



Flexible terms



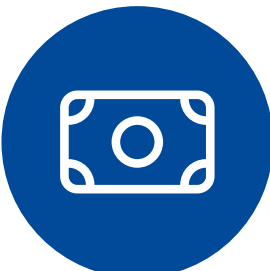
After sale support



Packaging & delivery



Quick lead times



Competitive pricing



Sales collateral



Rep training

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Route to market

- ↗ Distribution based business model
- ↗ Collaborative approach
- ↗ Focus on selection & training
- ↗ Strategic business partners



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How we can help

Team and lab support

- ✓ Technical service support to help create specification, confirm requirements, and ensure quality bonding

Available to be hands on at customer for application and training help

- ✓ Development chemists available to assist in product testing, certifications, modifications, and new product development

- ✓ Full scale research and development application lab

Turn around time 1-2 weeks for average projects however can be faster if needed





Our technology



Our technology

MMA technology

Strong focus to ensure specialised and custom formulations

The SCIGRIP® MMA structural adhesive range offers a unique combination of chemistries that tackle the main challenges for adhesives:



SCIGRIP's unique patented MMA technology makes new adhesive properties possible that were previously outside the scope of traditional formulations.

SCIGRIP's technical team will work hand in hand with you to solve complex application problems, offer new custom-made solutions and finally test our product with your process.

SCIGRIP has a strong research and development team focused in working in true partnership with our customers.

We will address the need for solutions for new application processes, new substrates and assembly performance as well as improving customer productivity.

- ✓ Toughness
- ✓ Surface adhesion
- ✓ Cure speed control

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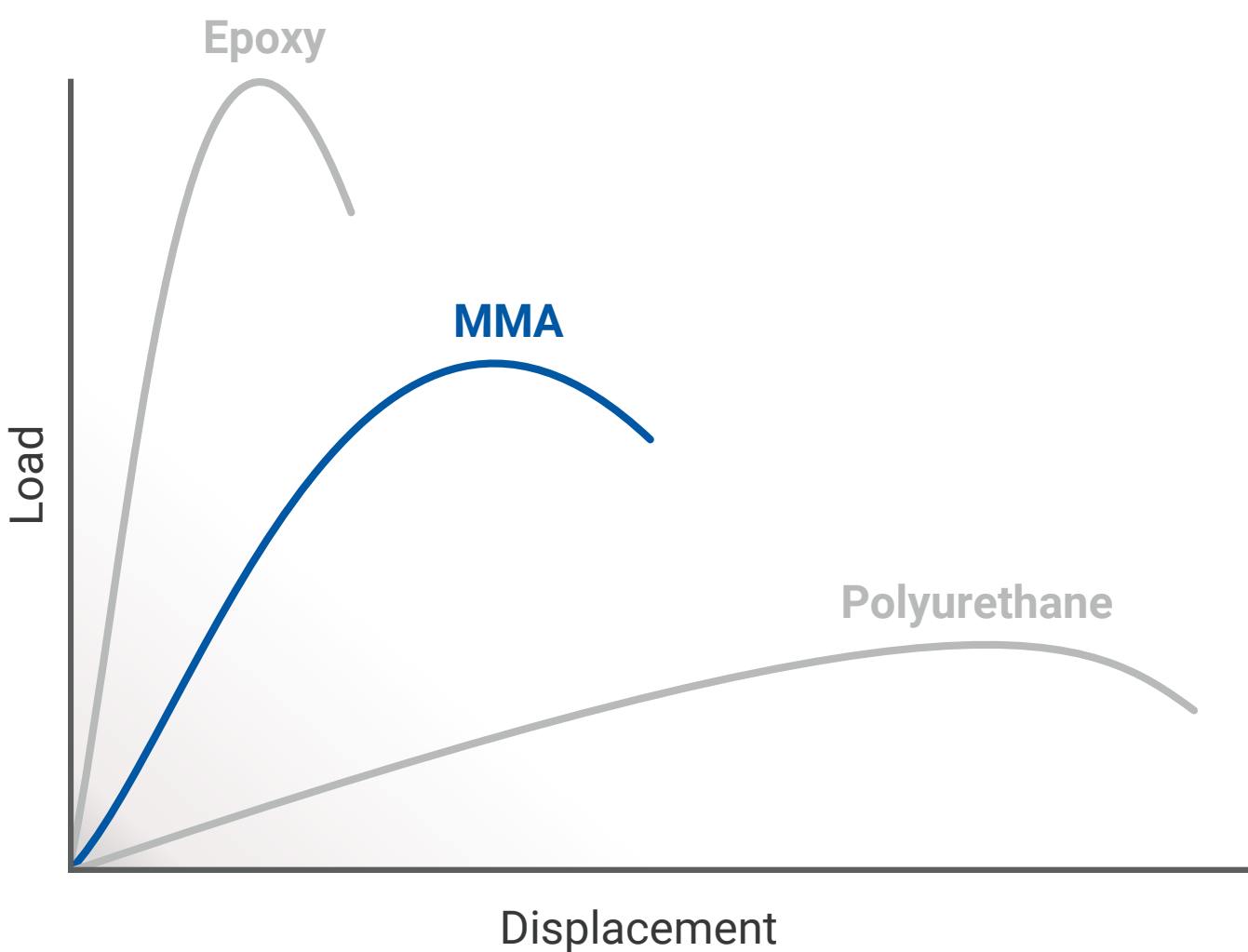
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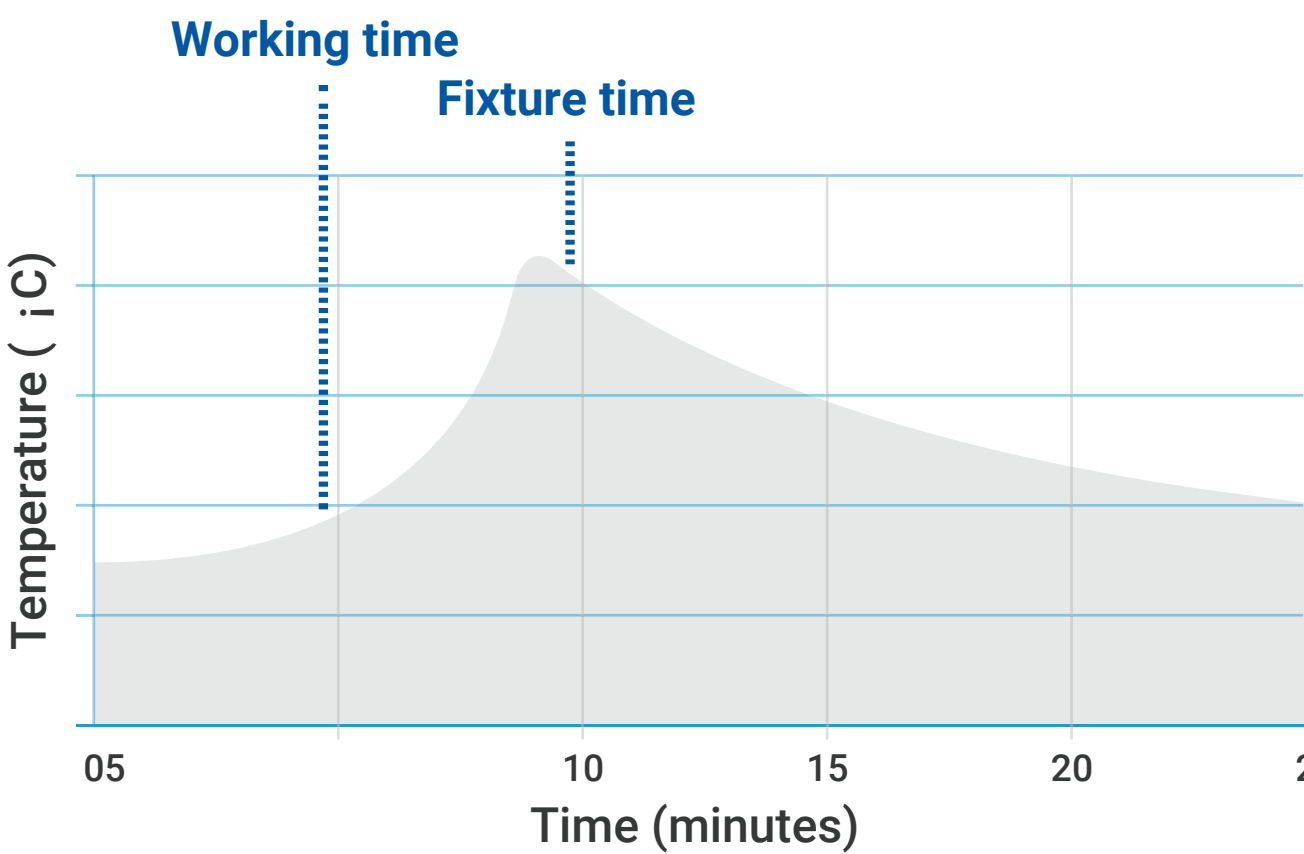
MMA technology

SCIGRIP offers two MMA formulations – the established 1:1 range and the newer 10:1 range

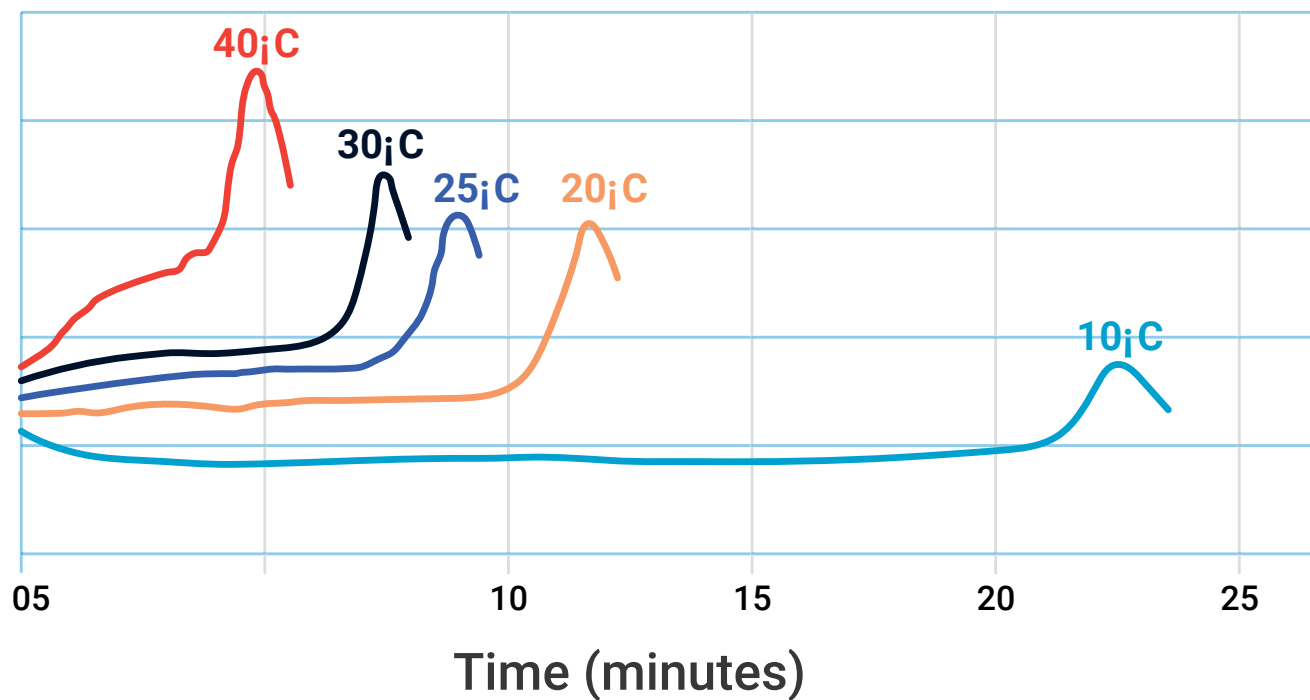


SCIGRIP advanced MMA technology bridges the gap between epoxies and polyurethane providing all the benefits of **toughness, fatigue resistance** and **high peel strength** while maintaining the highest lap shear performance.

The graph shows MMA with high strength and good flexibility.



The unique advantage of SCIGRIP MMAs is their ability to **cure and reach their full strength at room temperature**, as a result of the exothermic reaction by which they are formed.



SCIGRIP MMAs offer working times of **2 to 90 minutes** and fixture times of between **6 minutes to 4 hours** – simply by changing the activator.

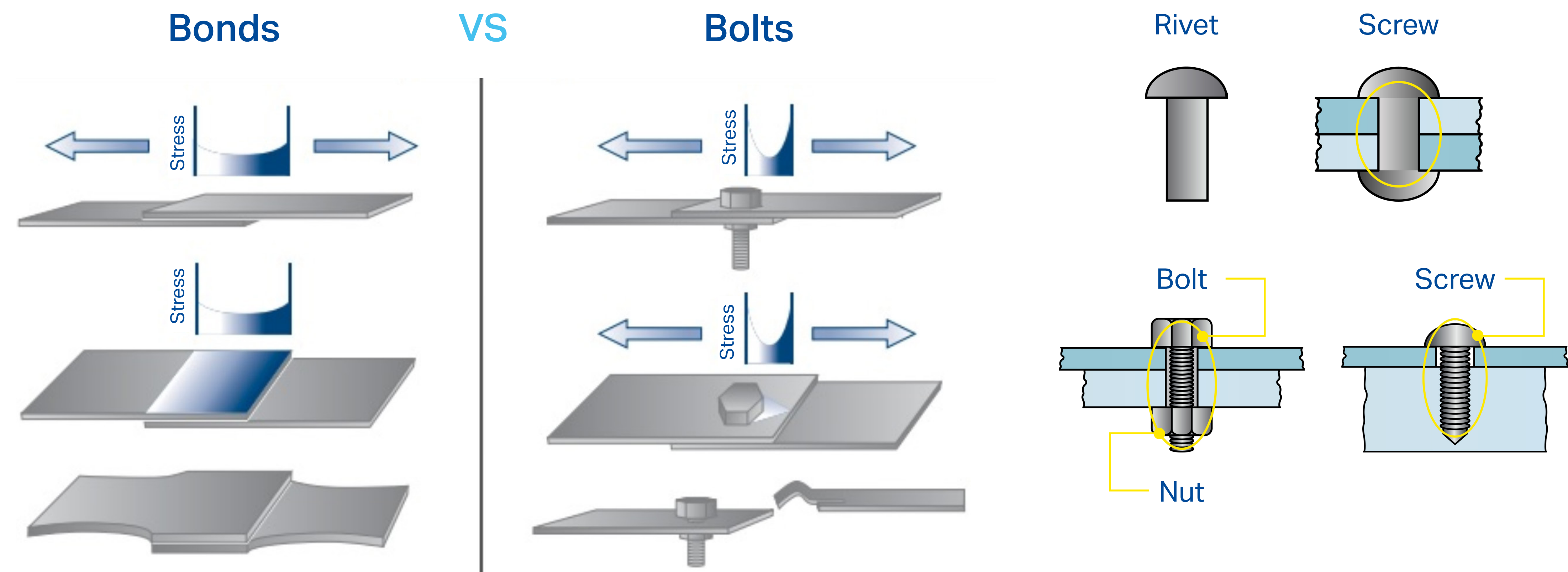
The application time can then be micro-adjusted by changing the ratio of components to **optimise productivity on warm or cool days**.

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Our technology

Advantages of MMA vs Rivets/Bolts

- ✓ Uniform distribution of stress over the bond area
- ✓ The bonded joint remains flexible to allow movements and reduce noise
- ✓ Eliminate damage to the structure
- ✓ Good fatigue resistance
- ✓ Sealing and bonding in one step
- ✓ Bolts, screws and rivets can become loose, fatigue and break



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Advantages of MMA vs Welding

- ✓ Does not blemish the surface of the substrate
- ✓ Enables joining of a wide variety of materials
- ✓ Labour savings due to less skill level required
- ✓ Prevents corrosion
- ✓ Little to no post process finishing required
- ✓ Even distribution of stress; not concentrated at bonding sites
- ✓ Lighter weight

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Safety when handling adhesives

- ✓ Like all adhesives, IPS Adhesives products do present health risks when used improperly
 - ◆ We recommend workplace safety protocols to manage risks to worker health during use
- ✓ MMA Adhesive Personal Protective Equipment (PPE)
 - ◆ Safety glasses
 - ◆ Chemical-resistant gloves
- ✓ Environment
 - ◆ Store product in a tightly closed container
 - ◆ Dispense adhesive in a well-ventilated area; Do not dispense in small, tight areas
 - ◆ Train staff about proper handling, chemical hazards and emergency responses
 - ◆ Dispose of materials or solid residues at an authorised site

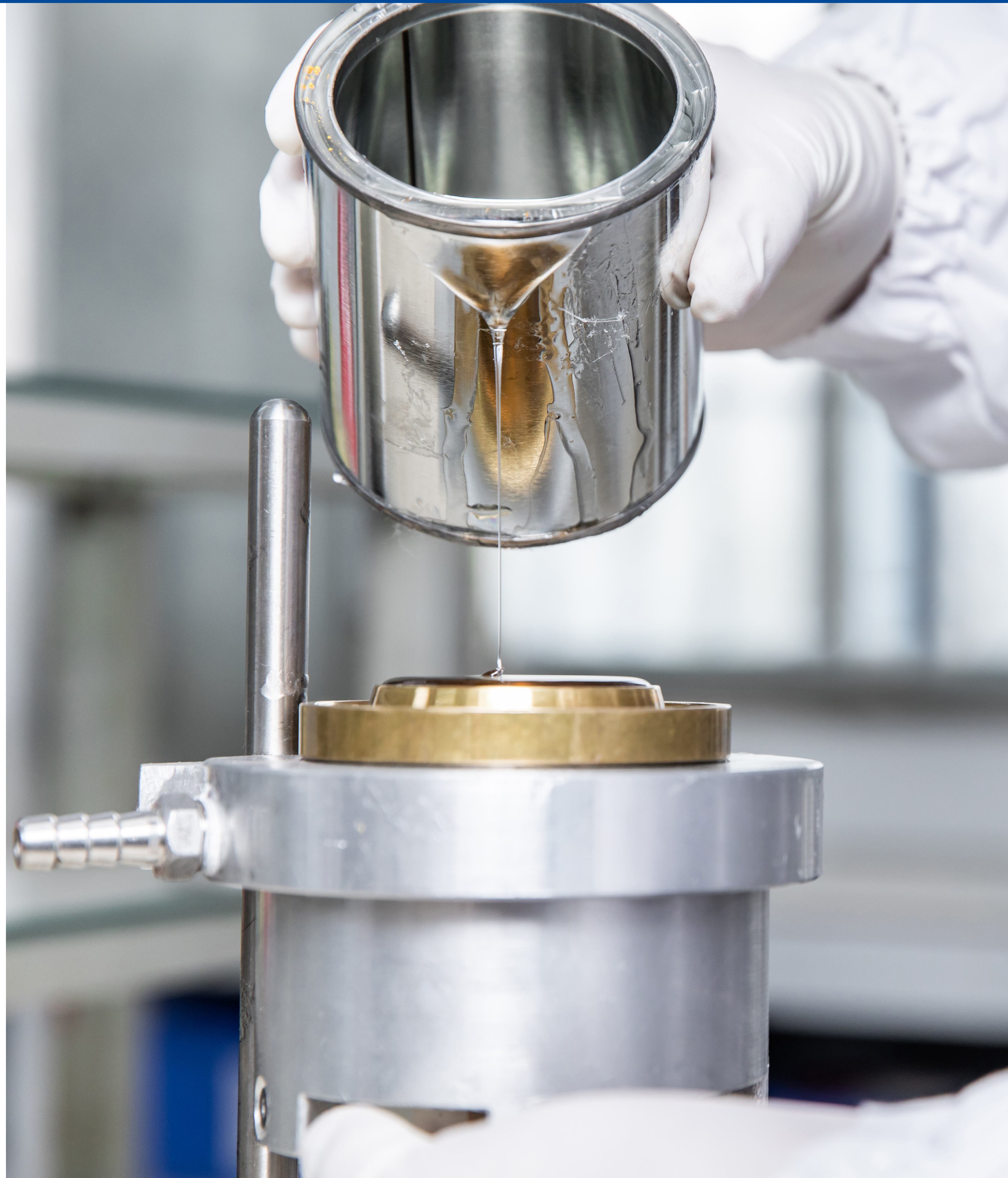


Globally harmonised system of classification and labelling of chemicals (GHS) product overview

Series	SG100	SG200  Available in North America only	SG230HV	SG300	SG350L  Available in Europe only	SG400LSE	SG42  Available in Europe only	SG46C  Available in Europe only	SG600  Available in Europe only	SG800	SG2000  Available in Europe only	SG5000
GHS02: Flammable												
GHS03: Health Hazard/ Hazardous to Ozone Layer												
GHS04: Corrosive												
GHS05: Serious Health Hazard												



Substrates



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Metals

SCIGRIP has a range of MMA's that are perfect for bonding metals

Metal jointing by welding or fastening is commonplace throughout a wide range of industries. In many applications these traditional methods can be replaced by using MMA adhesive which will:

- ✓ Increase productivity by reducing manufacturing steps which eliminates drilling and sealing
- ✓ Increase stress distribution by the adhesive benefit of elongation, strength and fatigue resistance
- ✓ Decrease surface marks and leaks by the adhesive benefit of reduced readthrough and enhance design capabilities

SCIGRIP range of metal bonding MMA's are formulated so that **there is no need for a primer**. No priming is perfect for bonding of stiffeners or ribs to a wide range of materials, it enables production to be leaner and quality is also improved by avoiding potential priming errors.

What we can bond to:

- Carbon steel • Cold rolled steel • Stainless Steel • Aluminium
- Electrocoated steel



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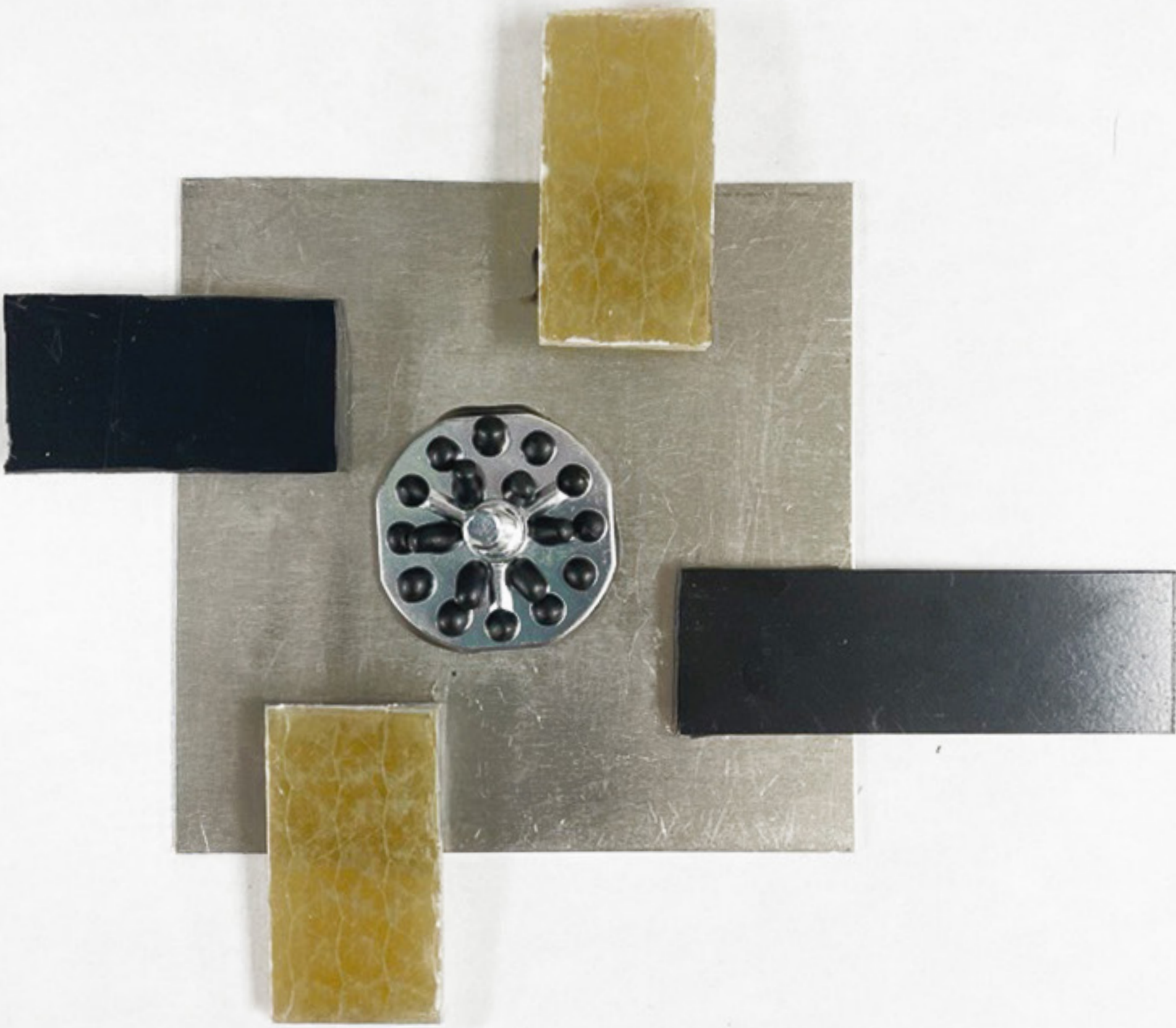
Dissimilar material bonding

The SCIGRIP range of MMAs are perfect when joining two different substrates

Traditional assembly is always difficult with different substrates and SCIGRIP MMAs offer the perfect solution. Using MMA adhesive will:

- ✓ Reduce joint failure rate - traditional fixings can cause leaks and lead to increases in repair time
- ✓ Increase freedom of design and aerodynamics - face fixings are unsightly and hinder correct airflow movement
- ✓ Eliminate surface preparation - adhesives are primerless to most substrates

SCIGRIP's range will bond together a wide variety of metals (aluminium, stainless steel, coated metals etc.), composites (polyester resins, carbon fibre epoxy systems, vinyl ester resins etc.) and plastics (ABS, PVC, Acrylics etc).



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Composites

The SCIGRIP range of MMAs are perfect when joining composite materials for example FRP which is widely used in the automotive, building and marine industries

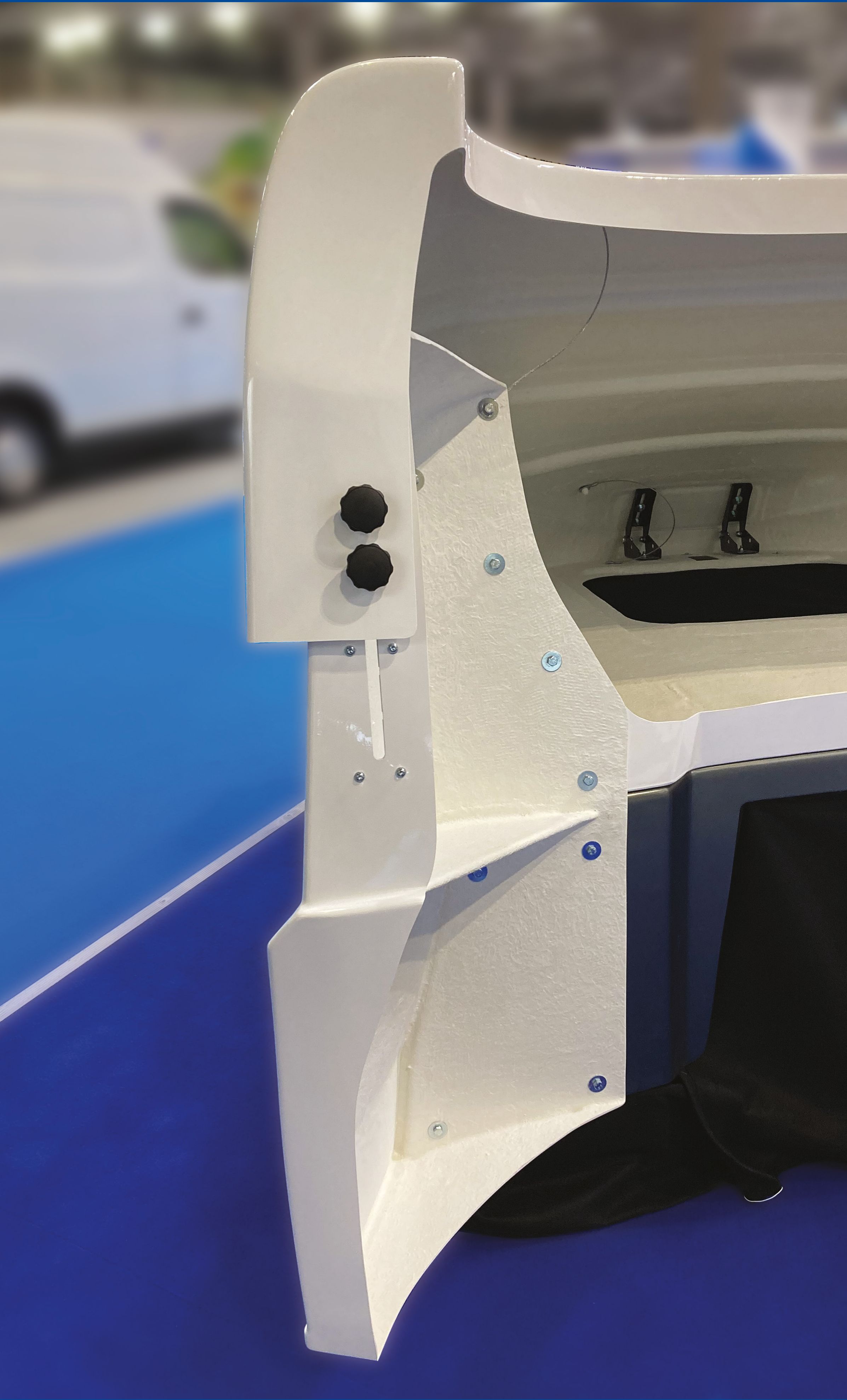
A very important topic at the moment is light weighting, the concept used to create lighter, more corrosion resistant, fuel efficient vehicles. Bonding composites to make strong, complex but lightweight designs and avoid the use of metal reinforcements and fixings is a rapidly growing market. Using MMA on composites will:

- ✓ Bond a wide range of composites with our adhesive complimenting or supporting the composite strength
- ✓ Reduce bond line read through on post finishing requirements
- ✓ Offer excellent fatigue, impact and environmental resistance properties including harsh environments

Composite components often require thick glue lines to cope with dimensional inaccuracies. SCIGRIP has unique technology to permit selected MMA products to support up to 39mm bondline thickness without boiling.

What we can bond to:

- Unsaturated polyester • Vinyl ester • Gelcoat
- Sheet moulding compound (SMC)
- Resin transfer moulding (RTM) • Phenolic • Epoxy



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Plastics

SCIGRIP’s new MMA SG400LSE, now bonds polyolefins with no surface preparation required

SCIGRIP range of MMAs include products to join thermoplastics (ABS, Acrylics, PVA/CPVC/Styrenics) and Composites (Polyester, cellulose acetate butyrate, polycarbonate & DCPD modified) for extruded cell cast and continuous cast as well as moulded parts and some cross linked sheet. Using MMA on plastics:

- ✓ Offers good clarity retention which is important for the sign industry and in manufacturing and repair of aquariums, museum quality cases and other plastic fabrication industries
- ✓ Reduce post finishing requirements
- ✓ Excellent fatigue, impact and shock load resistance

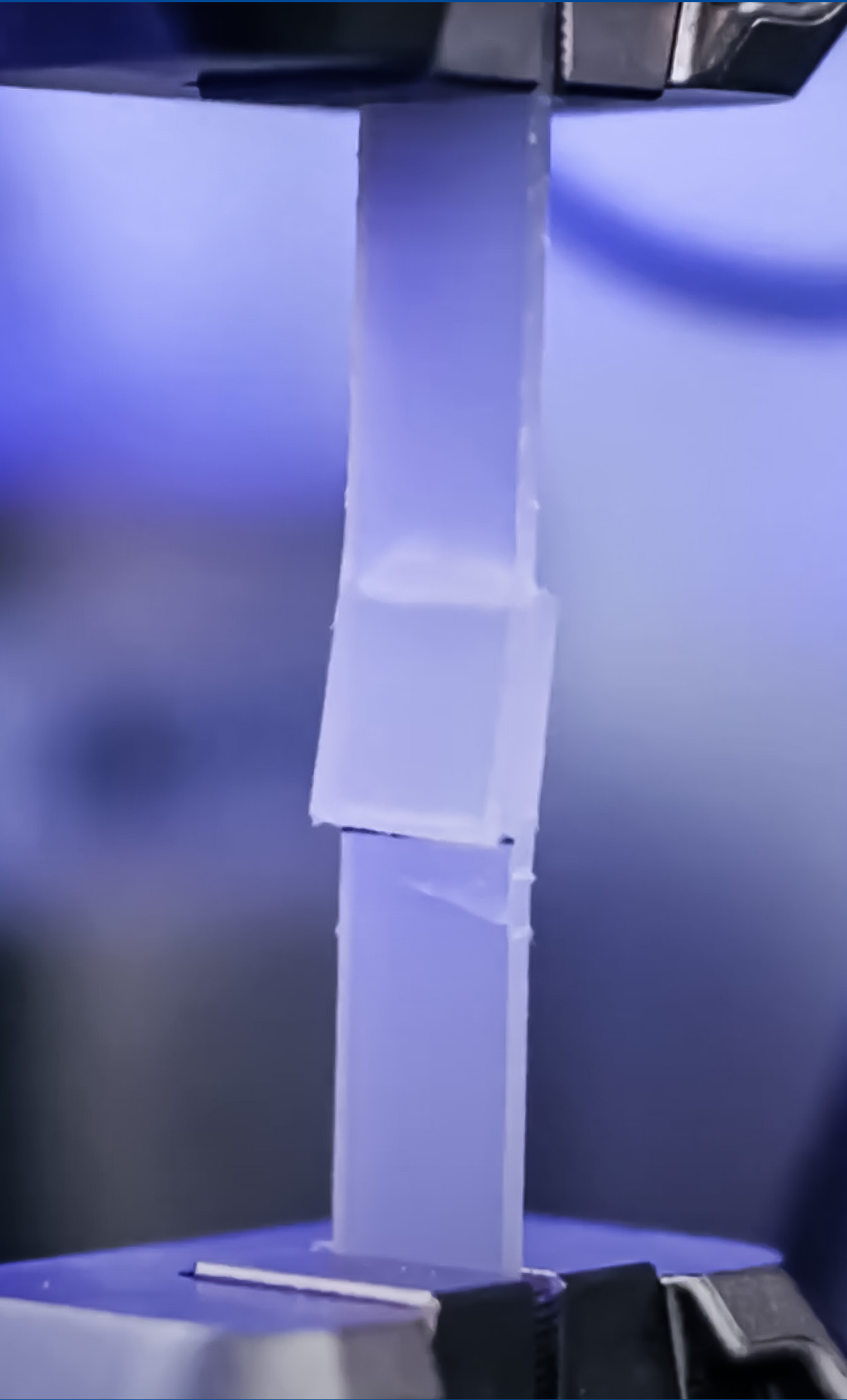
Low Surface Energy Substrates

SCIGRIP’s new MMA SG400LSE, now bonds polyolefins with no surface preparation required. It bonds polypropylene, polyethylene and will cross bond to metals including aluminium and stainless steel

- ✓ Offers no surface preparation, saving time and cost during the assembly process
- ✓ Cross bonding polyolefins with metals

What we can bond to:

- Acrylics • ABS and blends • Polypropylene
- Polycarbonates and blends • PVC (rigid & flexible) • Styrenics
- Nylon 66 • Low-Density Polyethylene
- Other engineered plastics



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Train applications

Interior/exterior bonding

Interior Panels

Durable, fire-tested composite panels

Bond using SG300/SG5000

- Fast handling
- Minimal preparation
- EN45545-2 compliant
- Reduce weight and minimise fasteners

Roof Structure

Weather-resistant composites/metals

Bond using SG230HV/SG300

- Non-sag
- Watertight
- Ensures adequate working time for assembly of large parts & fast curing for next steps

Interior Parts

Lightweight FRP for durability & aesthetics

Bond using SG300

- Fast dissimilar material bonding
- Minimal surface preparation

Flooring

Lightweight aluminium/composites

Bond using SG230HV/SG300

- Noise-dampening
- Structural stiffening
- Impact-resistant

Dashboard Assembly

Durable, aesthetic composite dashboard

Bond using SG300/SG400LSE

- Dissimilar bonds
- Minimal preparation

Rail Doors

Durable, environmental-resistant metals and composites

Bond using SG230HV/SG300

- Weather-resistant dissimilar bonding

Bracket Assembly

Metal support for underframe

Bond using SG300/SG5000

- Rivet/screw and weld replacement
- Corrosion-resistant

Body Panels

Strong aluminium/FRP, impact-resistant

Bond using SG230HV/SG300

- Dissimilar bonds
- Vibration-resistant

Window Frames

Lightweight aluminium/FRP frames to absorb vibration

Bond using SG230HV/SG300

- Weatherproof sealing
- Impact-resistant



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Agriculture applications

Interior/exterior bonding

Roof Bonding

Fibre-reinforced plastic or aluminium. Must transfer roof load evenly, eliminate stress concentrations and seal watertight

Bond using **SG230HV/SG300**

- Long open time
- Large beads required due to scale of assembly

Door Bonding

Aluminium or FRP/GRP used to deliver aesthetics, strength and impact resistance

Bond using **SG230HV/SG300**

- Strong
- Weather-resistant bonds for panels subject to impact and vibration

Trim Bonding

Composite materials for lower weight, durability and aesthetics

Bond using **SG300/SSG400LSE**

- Strong bonding of dissimilar materials for small parts

Grain Tank

Steel or aluminium used to provide strength and durability for load-bearing applications

Bond using **SG230HV/SG300**

- Requires exceptionally strong bonds for added stability and durability for large structures

Cabin & Dashboard Assembly

Composite materials for lower weight, durability and aesthetics

Bond using **SG300/SG400LSE**

- Requires bonding of dissimilar materials

Chassis

Steel or aluminium providing strength for load-bearing applications

Bond using **SG230HV/SG300**

- Exceptionally strong bonds
- Stability and durability of large structures

Window Frames

Lightweight aluminium or composite, providing impact/vibration resistance

Bond using **SG230HV/SG300/SG800**

- Dissimilar material bonds
- Weatherproof sealing

Reel

Steel or aluminium used for strength, vibration and impact resistance

Bond using **SG230HV/SG300**

- Bond must be able to withstand harsh conditions and constant vibration

Floor Panel Bonding

Steel or aluminium used for strength and impact resistance to secure floor to frame

Bond using **SG300**

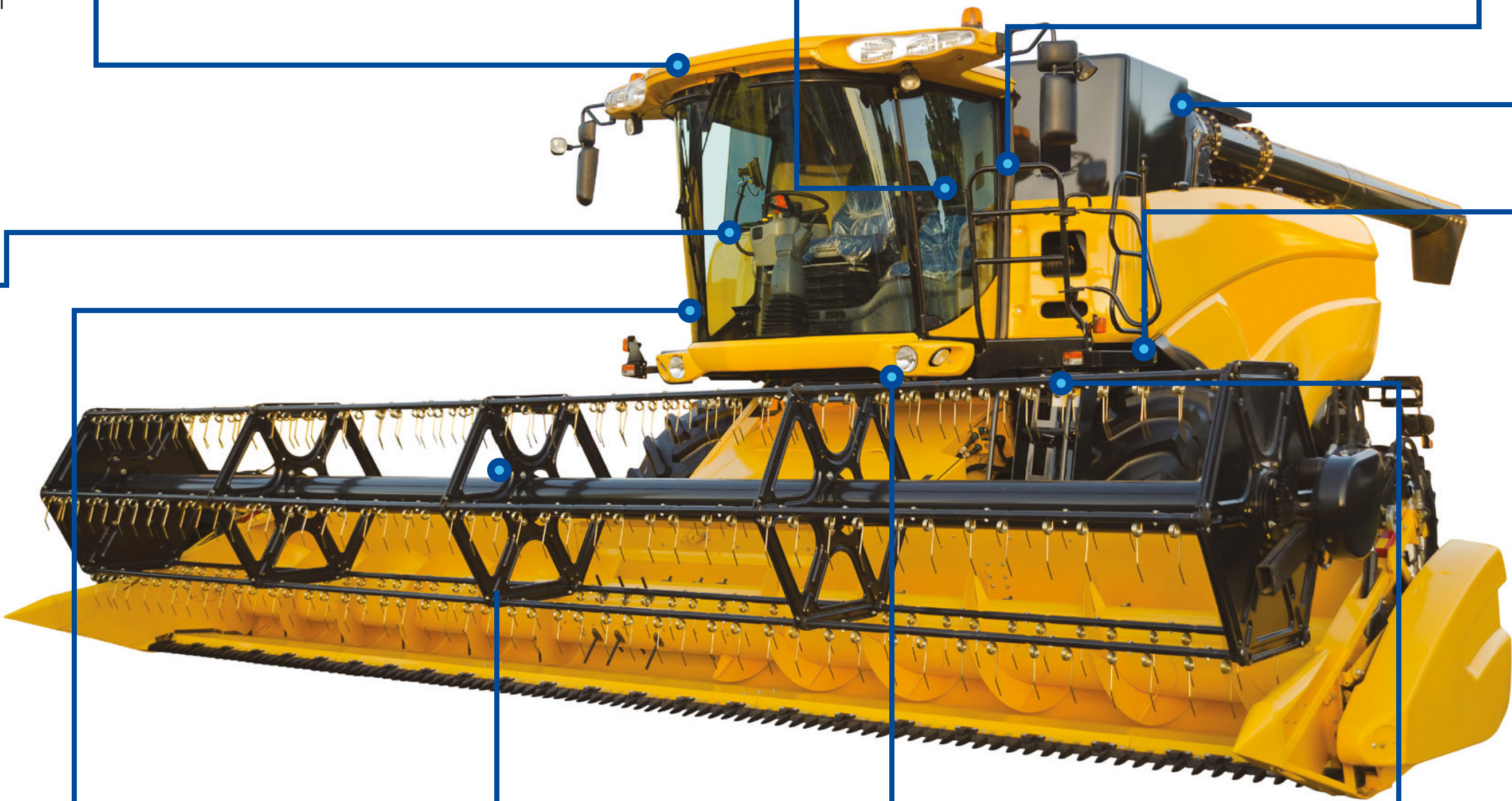
- Strong metal bonding
- Durability to sustain consistent impact and vibration

Engine Compartment

Aluminium or FRP/GRP to withstand high temperatures without adhesive failure

Bond using **SG230HV/SG300/SG800**

- Dissimilar material bonding
- High temperature resistance



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Bus applications

Interior/exterior bonding

Roof Bonding

Transfers roof load evenly, eliminates stress concentrations and seals watertight

Bond using SG230HV/SG300

- Long open time
- Large beads required due to scale of assembly

Window Frames

Lightweight aluminium/FRP for fuel efficiency

Bond using SG230HV/SG300/SG800

- Dissimilar material bonds
- Weatherproof sealing

AC Cover

Protects AC unit, lightweight aluminium/FRP

Bond using SG230HV/SG300/SG800

- Dissimilar materials
- Temperature resistance

Roof Hatch

Variety of materials for weather resistance

Bond using SG230HV/SG300/SG800

- Dissimilar material bonds
- Weatherproof

Interior Parts

Lightweight thermoset components such as luggage racks, seats, ceilings

Bond using SG300/SG400LSE/SG5000

- Fast dissimilar material bonding
- Low surface energy plastics for efficient assembly

Engine Cover

High-temp aluminium/FRP

Bond using SG800

- Dissimilar bonds
- High-temperature durability

Luggage Doors

Durable and lightweight aluminium/FRP

Bond using SG230HV/SG300

- Impact resistance
- Corrosion resistance

Door Panels

Lightweight, impact-resistant aluminium/FRP panels

Bond using SG230HV/SG300

- Strong
- Weather-resistant bonds
- Quick strength build up reduce assembly cycle time

Side Panels

Large aluminium/FRP surfaces for aesthetics and strength

Bond using SG230HV/SG300

- Non-sag
- Large bead
- Minimal surface preparation
- Various curing speeds up to 90 mins

Front Dash & Panel

Lightweight thermoset composite parts

Bond using SG300/SG400LSE/SG5000

- Fast dissimilar material bonding including low surface energy plastics

Front & Rear Shell

Stainless steel frame ensures structural integrity, built to sustain vibration and flex

Bond using SG230HV/SG300

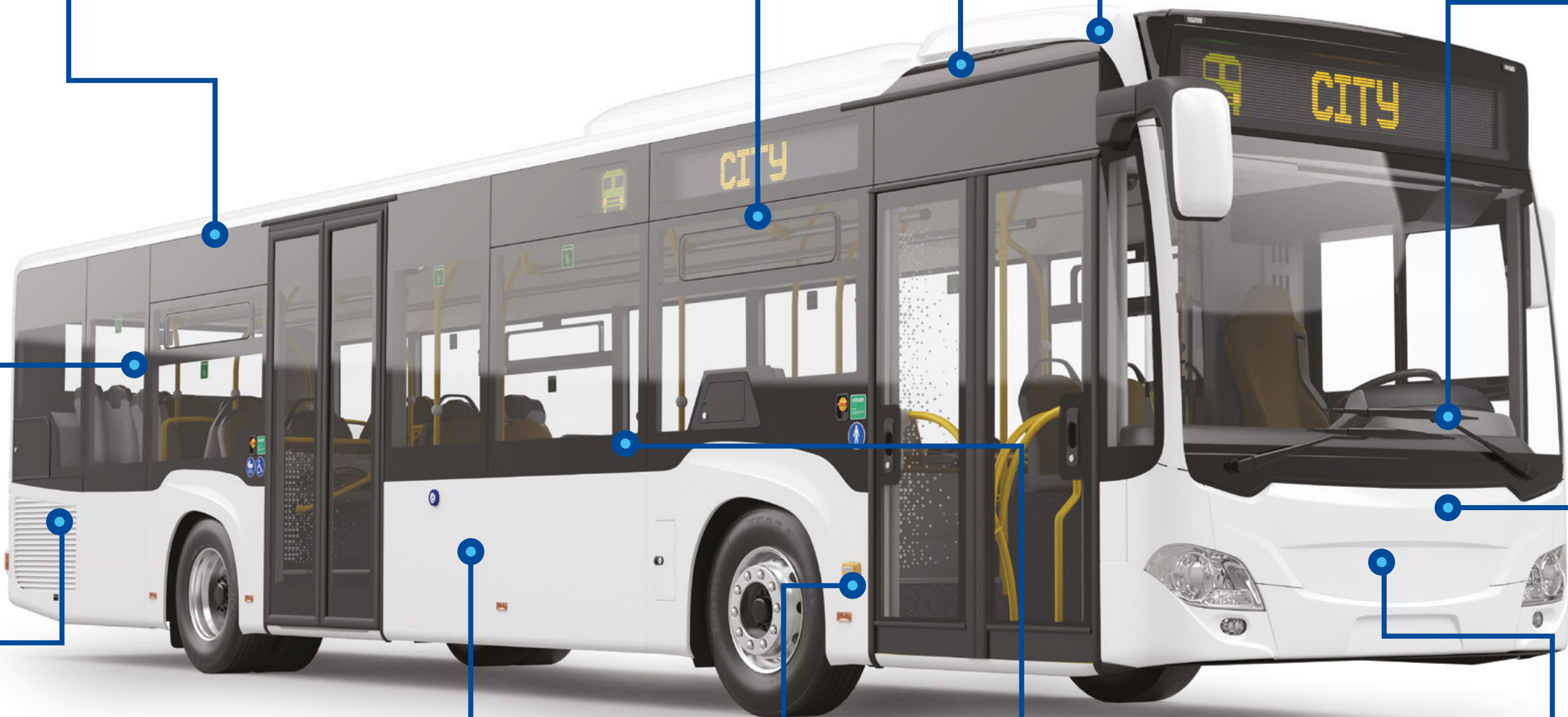
- Impact resistant
- Fatigue resistant

Front Bumper & Grille

Variety of composites for Door Panels: strength, low weight and impact

Bond using SG230HV/SG300

- Strong
- Weather-resistant
- Impact and corrosion resistant bonds



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Construction vehicle applications

Interior/exterior bonding

Roof Bonding

Fibre-reinforced plastic or aluminium. Must transfer roof load evenly, eliminate stress concentrations and seal watertight

Bond using **SG230HV/SG300**

- Long open time
- Large beads required due to size of assembly

Boom Arm

Steel structure connecting the cab to the bucket

Bond using **SG230HV/SG300**

- Exceptionally strong bonds for added stability and durability

Brackets

Structurally bonded metal brackets/supports throughout the vehicle

Bond using **SG300**

- Exceptionally strong bonds for stability, durability and longevity

Cabin & Dashboard Assembly

Composite materials for lower weight, durability and aesthetics

Bond using **SG300/SG400LSE**

- Dissimilar material bonding
- Minimal surface preparation

Trim Bonding

Composite materials for lower weight, flexibility and aesthetics

Bond using **SG300/SG400LSE**

- Requires strong bonding of dissimilar materials for small parts

Door Bonding

Aluminium or FRP/GRP used to deliver aesthetics, strength and impact resistance

Bond using **SG230HV/SG300**

- Strong
- Weather-resistant bonds
- Ideal for panels subject to impact and vibration

Window Frames

Lightweight aluminium or composite, providing impact/vibration resistance

Bond using **SG230HV/SG300/SG800**

- Dissimilar material bonds
- Weatherproof sealing

Chassis

Steel or aluminium providing strength for load-bearing applications

Bond using **SG230HV/SG300**

- Exceptionally strong bonds
- Stability and durability of large structures

Engine Compartment

Aluminium or FRP/GRP to withstand high temperatures without adhesive failure

Bond using **SG230HV/SG300/SG800**

- Dissimilar material bonding
- High temperature resistance

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Marine applications

Interior/exterior bonding

Bulkhead and Stringer

Key structural elements that add strength and rigidity to the hull. Made from composites, plywood and metals

Bond using SG230HV/SG300/SG2000

- Withstand vibration, dynamic loads, and harsh marine conditions

Transom

Made from aluminium or FRP/GRP to provide strength and support to the hull and the rear of the boat

Bond using SG230HV/SG300/SG2000

- Strong bonding in harsh environmental conditions
- For parts subject to constant impact and vibration

Interior Parts

Primarily comprised of FRP/GRP and plastic parts for durability, light weight and aesthetics

Bond using SG300/SG350L/SG400LSE

- Strong
- Fast sealing
- Bonding of dissimilar materials with no sagging or surface preparation
- Lightweight and aesthetically pleasing

Hull

Most commonly made of glass-reinforced plastic (GRP) or aluminium alloys, the hull is responsible for keeping the boat afloat

Bond using SG230HV/SG300/SG2000

- Offers strength
- Impact and environmental resistance

Console Assembly

Designed with composite materials for lower weight, durability and aesthetics

Bond using SG300/SG350L/SG400LSE

- Requires bonding of dissimilar materials
- Limited preparation

Mounting Hardware

Primarily made of steel or aluminium and affixed to various boat surfaces to secure dock lines and ropes

Bond using SG100/SG300

- Bond dissimilar materials
- Ideal for demanding and consistently harsh environments

Flooring

Aluminium and composites are the preferred materials for strength, low weight and noise/vibration resistance

Bond using SG230HV/SG300/SG2000

- Bonding of dissimilar materials
- Provides impact resistance
- Noise dampening
- Structural stiffening

Deck Hatch

This being the largest opening below deck, it must be resistant to water, UV exposure and temperature extremes. Made from metals, plastics and composites

Bond using SG100

- Sealing and bonding dissimilar materials
- Impact and fatigue resistance

Window Frame

Steel, aluminium or FRP/GRP window frames of various sizes built to secure glass while protecting it from external force

Bond using SG230HV/SG300/SG350/SG2000

- Strong bonding of dissimilar materials
- Weather-proof sealing
- Corrosion resistance

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Truck applications

Interior/exterior bonding

Trailer Capping

Aluminium and composite bonded to the rear of the trailer for protection and aesthetics

Bond using SG300

- Strong bonds for environmental conditions

Trailer Roof

Composite and metals for even weight distribution

Bond using SG230HV/SG300

- Large surfaces requiring non-sag and maximum bead size
- Minimal surface preparation

Sun Visor

Acrylic sheet bonded to mounting brackets with excellent UV resistance

Bond using SG230HV/SG300/SG800

- Dissimilar material bonding
- High wind and temperature resistance plus enhanced aesthetics

Roof Spoiler

Composite material bonding for aerodynamics

Bond using SG230HV/SG300

- Dissimilar material bonding
- High wind and weather resistance

Trailer Load Lockers

Metal protection rails attached to the trailer side walls

Bond using SG300

- Strong bonds to protect cargo from damage and withstand consistent use

Panel Bonding

Strong but lightweight composites for fuel conservation

Bond using SG230HV/SG300

- Strong
- Seamless panel bonding
- Environmental and shock resistance

Window Sealing

Aluminium and composite window frames providing environmental and vibration resistance

Bond using SG300

- Dissimilar material bonding
- Weather-proof sealing and longevity

Brackets

Structurally bonded metal brackets/supports throughout the vehicle

Bond using SG300/SG5000

- Exceptionally strong bonds
- Stability
- Durability and longevity

Door Extension

Composite bonded to metal frame for durability and aesthetics

Bond using SG230HV/SG300

- Dissimilar material bonding
- Strong
- Vibration resistance

Headlight Surround

Metal lamp housing bonded to frame to secure headlights

Bond using SG300/SG800

- Strong bonds
- Environmental, vibration and temperature resistance

Bumper End Caps

Composite bonded to metal, providing durability, weather and impact resistance

Bond using SG230HV/SG300/SG800

- Strong bonds
- Environmental and vibration resistance

Cabin & Dashboard

Composite materials for lower weight, durability and aesthetics

Bond using SG300/SG400LSE

- Dissimilar material bonding
- Minimal surface preparation

Front Grille

Metal for durability and environmental resistance

Bond using SG230HV/SG300

- Strong weather resistant bond
- Vibration resistance

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Wind applications

Interior/exterior bonding

Yaw Mechanism

Designed with composite materials for strength, light weight and durability to rotate the turbine towards the wind

Bond using **SG300/SG350L**

- Requires fast strong bonding of dissimilar materials
- Weather-proof sealing
- Corrosion resistance

Rotor Hub

Composite shell enclosing cast-iron heavy-duty, componentry connecting the nacelle to the rotor blades. Requires strength to support heavy blades and vibration resistance from continuous motion

Bond using **SG230HV/SG300/SG350L**

- Requires strong, fast bonding and sealing of dissimilar materials
- Withstand variable weather conditions and constant movement

Rotor Blades

Constructed from composites for high strength and rigidity with minimal weight; built to ensure impact, vibration and harsh environmental conditions

Bond using **SG230HV/SG300/SG350L**

- Requires fast, no sag, strong bonding of dissimilar materials
- Subject to variable weather conditions and constant vibration

Tower

Built from steel or concrete to support the nacelle and blade weight, needs to withstand harsh environments and remain stable during continuous turbine motion

Bond using **SG300/SG350L**

- Fast, no sag, strong bonding and sealing in harsh environmental conditions
- Subject to constant impact and vibration

Nacelle

The housing on the top of the tower containing the key turbine componentry made of composites for strength, durability and aerodynamic design to sustain extreme weather conditions

Bond using **SG230HV/SG300/SG350L**

- Strong, fast bonding of dissimilar materials
- Provide impact and vibration resistance without altering the profile or function of the mechanism

Drill and Fill Repairs

Drill-and-fill to fix internal defects in composite materials

Repair using **SG350L**

- Repair internal debonding, delamination adhesive voids with SG350L
- Does not boil at large bonding gaps up to 150mm

Vortex Generators

Thermoplastic devices designed to improve aerodynamic performance by manipulating airflow patterns

Bond and retrofit using **SG300/SG350L/SG400LSE**

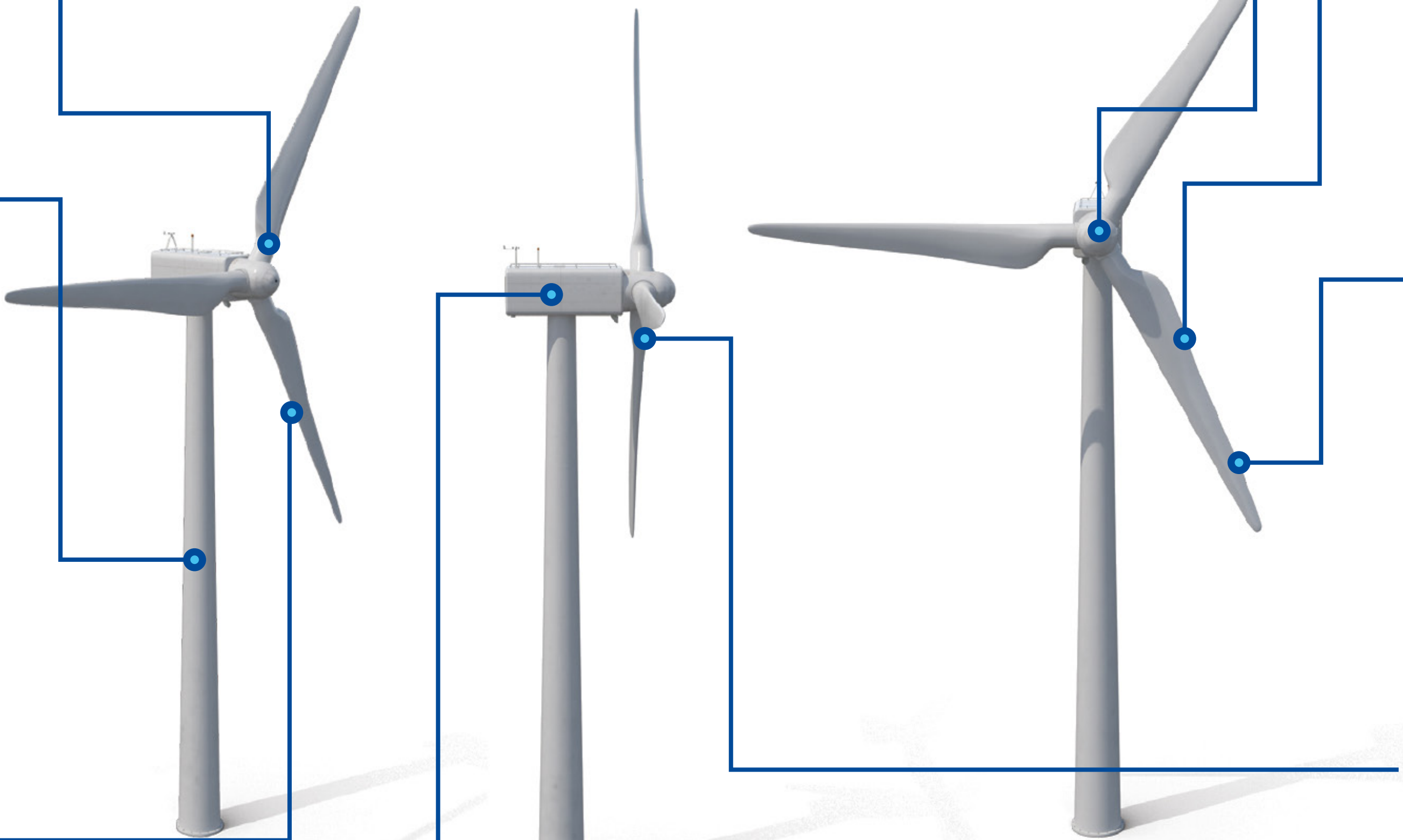
- Requires fast, no sag, strong bonding in harsh environmental conditions
- Subject to constant impact and vibration

Field Repairs

Repairs of trailing edge splits, lightning strike damage or shipping damage

Repair and retrofit using **SG350L**

- No boiling at large bonding gaps up to 150mm
- No surface preparation required
- Fast injection and rapid curing
- Well suited for repair or backfill



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Interior/exterior bonding

Adhesive Benefits:

Bonding dissimilar materials

High elongation suitable for different expansion coefficients between metals, plastics and composites

Bond using [SG230HV/SG300](#)

Eliminating mechanical fasteners

Maintains bond strength without degradation at points of adhesion

Bond using [SG100/SG200/SG230HV/SG300/SG400LSE/SG800/SG2000/SG5000](#)

Sealing and strengthening joints

Offers protection from harsh environmental conditions

Bond using [SG100/SG200/SG230HV/SG300/SG800/SG2000/SG5000](#)

Vibration dampening

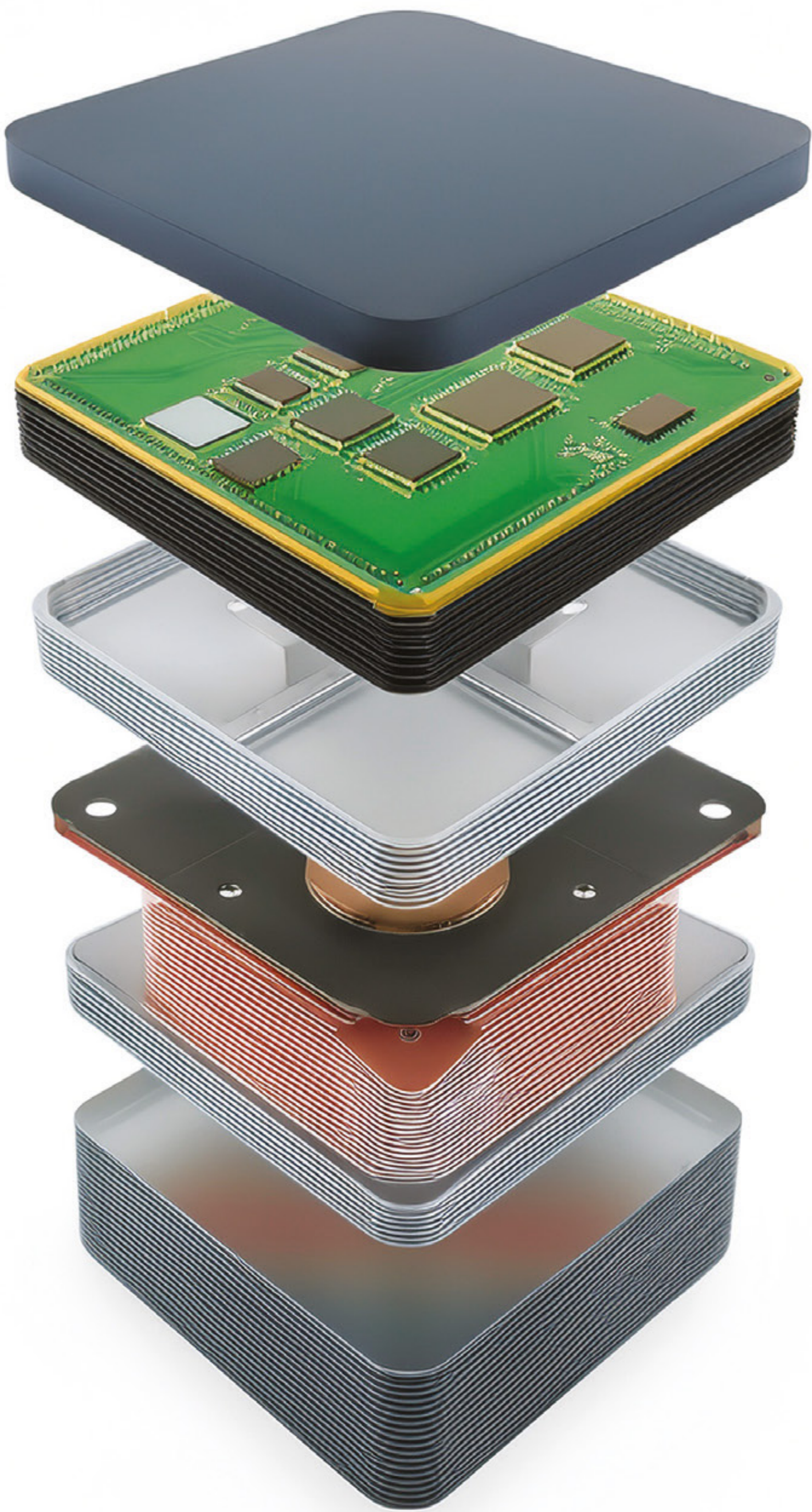
Maintains integrity of joints by minimizing the impact of vibration

Bond using [SG230HV/SG300/SG2000](#)

Load distribution

Distributes stress evenly across the bond area

Bond using [SG100/SG200/SG230HV/SG300/SG400LSE/SG800/SG2000/SG5000](#)



Assembly Efficiency:

Faster assembly times

Curing times that align with application requirements

Bond using [SG100/SG200/SG230HV/SG300/SG400LSE/SG800/SG2000/SG5000](#)

One adhesive for multiple substrates

Less changeover during assembly due to wide substrate compatibility

Bond using [SG300/SG5000](#)

Less rework – precision bonding

Ability to pinpoint application to bonding surface with limited waste

Bond using [SG100/SG200/SG230HV/SG300/SG400LSE/SG800/SG2000/SG5000](#)

Cleaner aesthetic finish – seamless appearance

Adheres to surfaces without compromising design – no need for unsightly welds, rivets or fasteners

Bond using [SG100/SG200/SG300/SG400LSE/SG800/SG5000](#)

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SG100 series

10:1 mix, designed for exterior applications
manufacturing requirements

Why choose the SG100 series?

- UV resistant, bright white colour ideal for colour critical applications
- Non-sag application characteristics
- Two working speeds: 15 & 40 minutes
- Minimal surface preparation for bonding FRP, gel coated surfaces and thermoplastics
- Excellent environmental resistance

Applications

- Attaching exterior trim to gel coated surfaces on boat exteriors
- Non-sag characteristics to apply on non-level surfaces
- Long lasting UV resistant white colour to blend in with gel coated surfaces

Great for:

- UV
- Bright white exterior



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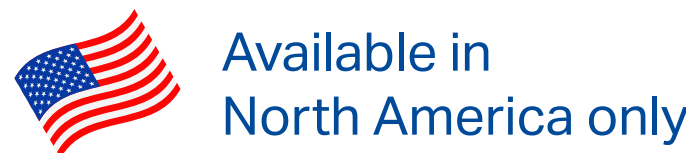
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SG200 series

10:1 mix, designed for small structures

Why choose the SG200 series?

- Minimal surface preparation required
- No sagging, even when vertical
- Variable working times
- Good flow and ease of dispensing
- Excellent environmental and chemical resistance
- Perfect for general plastic bonding

Applications:

- Widely used in marine, transportation and general plastic bonding applications

Great for:
- Multipurpose composite



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SG230 series

10:1 mix, designed for strength and toughness

Why choose the SG230 series?

- Excellent choice for bonding FRP composites with little to no surface prep
- Unrivalled sag resistance, stacking/Non sag characteristics to fill gaps
- Large range of working times: 30, 40, 60, 80 minutes
- Bonds a broad range of substrates: PMMA, PVC, Thermosets (Vinyl ester, Polyester, Gelcoats, and Epoxies), primed metals
- Excellent environmental and chemical resistance
- Outstanding fatigue and shock load resistance. High strength capable of carrying static and dynamic loads

Applications for assembly:

- Quicker fixture time allows parts to be bonded and moved earlier
- Vertical sag resistance to ensure important areas are bonded securely
- Bond strength maintained after extended exposure to marine environments

Applications for capping and gap filling on boats:

- High strength capable of carrying static and dynamic loads
- Impact resistance
- Stacking/Non sag characteristics to fill gaps
- Fatigue resistance as vibrating motor is attached on the bonded area

Watch the SG230 in action

- Great for:
- Large Bead/Gap
 - Long working time
 - Vibration



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SG300 series

10:1 mix, designed for metal bonding applications

Why choose the SG300 series?

- Used to bond metals, composites and plastics. Ideal for bonding dissimilar materials
- Non-sag on non-level surfaces
- A variety of working times: 5, 15 & 40 minutes
- Primerless bonding to metals & requires minimal surface preparation
- Reduced bond line read through and post finishing requirements
- Excellent fatigue, impact & environmental resistance properties including harsh environments

Applications:

- Metal bonding** including but not limited to: Aluminium, mild steel (CRS), stainless steel, coated metals
- Composite bonding** including but not limited to: Epoxy, vinyl ester, gelcoats, polyester & DCPD modified
- Plastic bonding** including but not limited to: ABS, acrylics, PVC/CPVC, styrenics

Watch the SG300 in action

- Great for:
- Dissimilar Materials
 - Minimal surface prep
 - “Only want one adhesive for all bonding”



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SG350L series

10:1 mix, designed for high-performance bonding of mixed materials

Why choose the SG350L series?

- High-strength bonding on metals, plastics and composites
- No sagging when vertical
- Variable working times (5 to 15 minutes)
- No surface treatment required on most metals
- Does not boil at larger gaps up to 150mm
- Excellent environmental and chemical resistance

Applications:

- Well suited for repair or backfill of large composite structures
- Streamlined, lightweight product designs



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SG400LSE

10:1 mix, designed for bonding low surface energy substrates

Why choose the SG400LSE?

- 💧 Translucent methyl methacrylate for cross bonding polypropylene and polyethylene to metals like aluminium and stainless steel
- ⚙️ Product is non sagging, making it an excellent choice for assembly and other fabrication or manufacturing uses
- ⌚ No surface preparation required, saving time and cost during the assembly process
- ✓ Good flow and ease of dispensing
- ⚡ Bonds polyolefins (low surface energy plastics) in assembly and fabrication applications

Applications:

- ◆ Bonding low surface energy plastics like polypropylene and polyethylene to metals, FRP and other plastics

Watch the SG400 in action ▶

- Great for:
- Low Surface Energy (LSE)
 - Polypropylene
 - Roto mould repair



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SG42 series

10:1 mix, crystal clear plastic bonder

Why choose the SG42 series?

- 💧 SCIGRIP 42 is specially formulated to bond acrylic, including extruded cell cast and continuous cast, as well as, moulded parts and some crosslinked sheet
- 🔗 It will bond acrylic to polyester, cellulose acetate butyrate, and other materials
- ⌚ Working time of 15 minutes
- 🛡️ Two component, clear, medium bodied reactive acrylic adhesive.
- ⚡ Excellent choice for bonding of acrylic plastics especially where good clarity retention is required

Applications:

- ◆ Bonding low surface energy plastics like polypropylene and polyethylene to metals, FRP and other plastics



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SG46C series

10:1 mix, optically clear, high strength structural adhesive

Why choose the SG46C series?

- 💧 A clear, thixotropic, reactive acrylic adhesive for bonding primer-less aluminium or other metals and acrylics
- ⚙️ No sag application, which means reduced slide or sag even on inverted surfaces
- 🛡️ Formulated for assembly and fabrication applications that require clear bond lines with no read through
- ⚡ High bond strength which can reach up to 2,200 lbs/in² after 24 hours (aluminium)

Applications:

- ◆ Excellent choice for sign assembly and other fabrication or manufacturing where sagging, short fixture time and good clarity retention are required
- ◆ SG46C is a strong, clear adhesive which is a game changer when it comes to bonding Acrylic to aluminium or Acrylic to Acrylic and polycarbonate to polycarbonate
- ◆ It cures optically clear, with no bond lines and it reduces finishing time to ensure a flawless finish



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SG600 series

10:1 mix, designed for composite/plastic bonding

Why choose the SG600 series?

- Used to bond metals (Primed), composites and plastics. Ideal for bonding dissimilar materials
- Non-sag on non-level surfaces
- A variety of working times: 5 & 10 minutes
- Good flow and ease of dispensing
- Excellent fatigue, impact & environmental resistance properties including harsh environments
- Bonds a range of substrates: Acrylic, PVC, ABS, Coated Metals, Thermoset Composites (Vinylester, Polyester, Gelcoats, and Epoxy) and other Thermoplastics

Applications:

- Plastic bonding including but not limited to: ABS, acrylics, PVC/ CPVC, styrenics
- Example: Agricultural Vehicles
- Particular benefits: Availability of fast curing times for small components, ease of application, rheology benefits



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SG800 series

10:1 mix, designed for high temperature applications

Why choose the SG800 series?

- 💧 Primerless bonding to metals & requires minimal surface preparation
- ⚙️ Non-sag on non-level surfaces
- 🕒 A variety of working times: 5 & 10 minutes
- 📋 Used to bond metals, composites and plastics
- ✅ Good fatigue, impact & environmental properties including harsh environments
- ⚡ High temperature resistance up to 150°C

Applications:

- ◆ Metal bonding including but not limited to: Aluminium, mild steel (CRS), stainless steel, coated metals
- ◆ Example: Bonding metal components prior to undergoing a paint bake cycle
- ◆ Example: Bonding metal and plastic components in the automotive industry for use in the engine bay
- ◆ Particular benefits: High temperature resistance over prolonged periods, minimal surface preparation prior to application



- Great for:
- High Temperatures
 - Post-Bake
 - Powder Coat

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SG2000 series

1:1 formula, making product mixing easy

Why choose the SG2000 series?

- No surface pretreatment required on composites
- No sagging, even when vertical
- Working time between 100-120 minutes
- Reduced bond line read through means less post finishing requirements
- Excellent environmental resistance
- Does not boil at larger bonding gaps up to 39mm

SCIGRIP® SG2000 is a two-component 1:1 ratio methacrylate adhesive, designed for bonding composite parts with minimal surface preparation. Ideal for large structural projects, it provides extended working times and can fill deep gaps up to 1.5 inches (39mm).

SG2000 enhances bonding on uneven surfaces, ensuring strong adhesion even with misaligned parts. By filling gaps, it contributes to the structural integrity of the assembly, preventing movement or flexing that could weaken the bond over time.

- Great for:
- 1:1
 - High elongation
 - Large bead/gap



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SG5000 series

1:1 mix, multi-purpose adhesive

Why choose the SG5000 series?

- Primerless bonding to metals & requires minimal surface preparation
- High tensile and shear strengths
- A variety of working times: 3, 6, 13 & 40 minutes
- Used to bond metals, composites and plastics
- Medium/low viscosity
- Excellent chemical resistance properties providing permanent bonds in harsh environments

Applications:

- Composite bonding:** including but not limited to: Epoxy, vinyl ester, gelcoats, carbon fibre, polyester & DCPD modified
Benefits: High strength, excellent adhesion to carbon fibre
Example: Bonding carbon fibre brackets in motorsports seat
- Plastic bonding:** including but not limited to: ABS, acrylics, PVC/ CPVC, styrenics
Benefits: Availability of varying curing times for different sized components, ease of application, can bond a wide range of plastics & metals
Example: Bonding plastic panels and metal fixtures in vehicles
- Mould repair example:** When part of the mould is cracked the area is sanded and SG5000 is then spread across the damaged area. Once the adhesive is cured it is sanded to leave a level surface. The area is then quenched with styrene to prevent bond line read through and a gelcoat is applied

- Great for:
- Low viscosity injectable
 - Mould repair
 - Carbon fibre



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Product comparison

Series	SG100	SG200	SG230HV	SG300	SG400LSE	SG800	SG2000	SG5000
Features, benefits & applications	- Excellent UV & environmental resistance - Exterior colour critical applications - Intermediate shear strength - Thermoplastics, Composites, Metals	- Small structure plastic bonding applications - Max toughness/ Minimum surface preparation - High shear strength - Composites, plastics, primed metals  Available in North America only	- Large structures, marine, transportation & construction - No sag, perfect for large gaps and long working times - Intermediate shear strength - Composites, plastics, primed metals	- Wide variety of assembly operations - Low read through/ Minimum surface preparation - High shear strength - Composites, plastics, metals	- Bonding polyolefins in assembly & fabrication - No surface preparation / Cross bonds to metals - Strength results in substrate failure - Low surface energy plastics, metals, composites	- Temperature resistant metal bonder - No Sag / Fast working & Fixture times - High lap shear strength - Cross bonds plastics, FRP and primerless metals	- 1:1 Adhesive for large structures - Unique gap fill formulation up to 39mm - Long working time - Permanent strength and toughness - Composites  Available in Europe only	- 1:1 Adhesive for metal bonding & mould repair - Metal bonding without surface treatment & repair of fibreglass moulds - High shear strength - Composites, plastics, metals
Colour characteristics & size options	White 490 ml cartridge or bulk container	Off-white 490 ml cartridge or bulk container	Gray or black 490 ml cartridge or bulk container	Black or off-white 490 ml cartridge or bulk container	Translucent 50 & 490 ml cartridges	Black 490 ml cartridge or bulk container	Amber 400 ml cartridge or bulk container	Amber or black 50 & 490 ml cartridges or bulk container
Gap fill (inch) (mm)	(0.02 – 0.5) (0.50 – 12.7)	(0.02 – 0.5) (0.50 – 12.7)	(0.02 – 1.54) (0.50 – 39.0)	(0.02 – 0.375) (0.50 – 9.5)	(0.02 – 0.375) (0.50 – 9.5)	(0.02 – 0.375) (0.50 – 9.5)	(0.02 – 1.54) (0.50 – 39.0)	(0.02-.2) (0.50 - 5.0)
Working time (min)	SG100-15: 12 – 18 SG100-40: 35 – 45	SG200-10: 8 – 12 SG200-20: 17 – 22 SG200-40: 35 – 45	SG230-30: 25 – 30 SG230-40: 35 – 45 SG230-60: 50 – 70 SG230-80: 70 – 90	SG300-05: 4 - 6 SG300-15: 13 - 17 SG300-40: 35 - 45	1 - 3	SG800-05: 4 – 5 SG800-15: 13 – 17	80 – 100	SG5000-03: 2 - 5 SG5000-06: 5 - 8 SG5000-15: 14 - 19
Fixture time (min)	SG100-15: 30 – 45 SG100-40: 80 – 100	SG200-10: 25 – 30 SG200-20: 35 – 42 SG200-40: 80 – 90	SG230-30: 45 – 55 SG230-40: 60 – 75 SG230-60: 140 – 170 SG230-80: 180 – 210	SG300-05: 15 - 20 SG300-15: 30 - 40 SG300-40: 80 - 90	6 hours	SG800-05: 15 – 20 SG800-15: 30 – 40	180 – 210	SG5000-03: 6 - 8 SG5000-06: 10 - 12 SG5000-15: 20 - 25
Ratio A:B volume/weight	10:1 6.42:1	10:1 8.10:1	10:1 8.4:1	10:1 9.0:1	10:1 9.5:1	10:1 6.0:1	1:1 1.01:1	1:1 1:1
Density g/cc A,B	A: 0.95 B: 1.48	A: 0.95 B: 1.18	A: 0.97 B: 1.15	A: 1.01 B: 1.12	A: 0.95 B: 1.03	A: 0.96 B: 1.62	A: 0.95 B: 0.94	A: 0.96 B: 0.97
Viscosity, cPs (000)	A: 150 – 220 B: 70 – 180	A: 170 – 220 B: 70 – 180	A: 900-1,400 B: 120-180	A: 175 – 275 B: 120 – 180	A: 30 – 50 B: 10 – 20	A: 150 – 250 B: 50 – 120	A: 250 - 350 B: 350 - 450	A: 90 – 150 B: 150 – 0250
Tensile Strength psi (MPa) % Elongation	2,500 – 2,900 (17.2 – 20) 15 – 35	2,500 – 3,000 (17 – 21) 60 – 100	3,000 - 3,500 (21 – 24) 40 – 60	1,700 – 2,200 (12 – 15) 40-60	–	2,800 – 3,100 (19 – 21) 25 – 50	>2,500 (17) >130	5,076 - 5,802 (35 – 40) 5 - 10
Shear Strength psi (MPa)	2,000 – 2,400 (14 – 16)	2,200 – 2,500 (15 – 17)	2,050 – 2,400 (14 – 16)	2,300 – 2,800 (16 – 19)	750 (5.2)	2,600 – 2,900 (18 – 20)	>1,500 (10)	2,611 – 3,626 (18 – 25)

Product comparison

Series	SG 350L	SG600	SG42	SG46C
Features, benefits & applications	- High performance bonding of mixed materials - No boil for large gaps up to 150mm - High shear strength - Metals, plastics and composites  Available in Europe only	- Good flow; ease of dispensing - No sag on vertical surfaces - High shear strength - Acrylics, plastics, metals, composites  Available in Europe only	- Acrylic plastics bonder - Clear, acrylic adhesive - Meets Military Spec A-8576C Type III - Acrylics  Available in Europe only	- UL 746C approval for use in electrical equipment assemblies - No sag on vertical surfaces - Metals, acrylics  Available in Europe only
Colour characteristics & size options	Black, amber 50ml, 490ml	Black, off white 490ml, bulk	Crystal clear 50ml, 230ml	Crystal clear 50ml, 490ml
Gap fill (inch) (mm)	(<05.9) (<150)	(<.039) (<10)	(<.012) (<3)	<0.2 (<5)
Working time (min)	SG350L-05: 4-6 SG350L-15: 12-16	SG600-05: 4-6 SG600-10: 8-12 SG600-20: 15-20	15 min	6-9 min
Fixture time (min)	SG350L-05: 14-18 SG350L-15: 32-38	SG600-05: 15-18 SG600-10: 25-30 SG600-20: 35-45	120 min	15-25 min
Ratio	10:1	10:1	10:1	10:1
Density g/cc A,B	A: 0.97-4.01 B: 1.30-1.34	A: 0.95 B: 1.12		A: 0.99 B: 1.17
Viscosity, cPs (000)	A: 150 – 220 B: 70 – 180	A: 150-250 B: 120-180	A: 2.8-3.8 B: 1.4-1.7	A: 75-125 B: 2.5-4.5
Tensile Strength psi (MPa) % Elongation	700-1100 (17-19)	>3,000 (21) >65	<5	800-2,200 (5.5-15.2) >3.5
Shear Strength psi (MPa)	(18-20)	>3,000 (21)	2,100-3,000 (>15)	(>15)

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How to dispense SCIGRIP structural adhesives

SCIGRIP structural adhesives can be applied in two different ways:

Manual dispensing equipment:

- ◆ Cartridge use only
- ◆ Pumped by hand
- ◆ For small parts/components
- ◆ Short bond lines
- ◆ Irregular/short term dispensing

Pneumatic dispensing equipment:

- ◆ Cartridge or bulk equipment (Metered Mix)
- ◆ Requires compressed air line
- ◆ Medium to large parts/components
- ◆ Large bond lines
- ◆ Regular/long term/constant dispensing



Proper application of SCIGRIP structural adhesives

Prior to any bonding surface preparation is the most important step and is dependent on the combination of the substrate and the adhesive.

SCIGRIP recommends all substrate surfaces be cleaned and degreased with a solvent or SCIGRIP's dedicated surface cleaner & degreaser: A061 (contains adhesion promoters).

Metal surfaces will require priming with MP100 when using: SG100, SG200, SG230HV, SG600. In some cases abrasion may be necessary.

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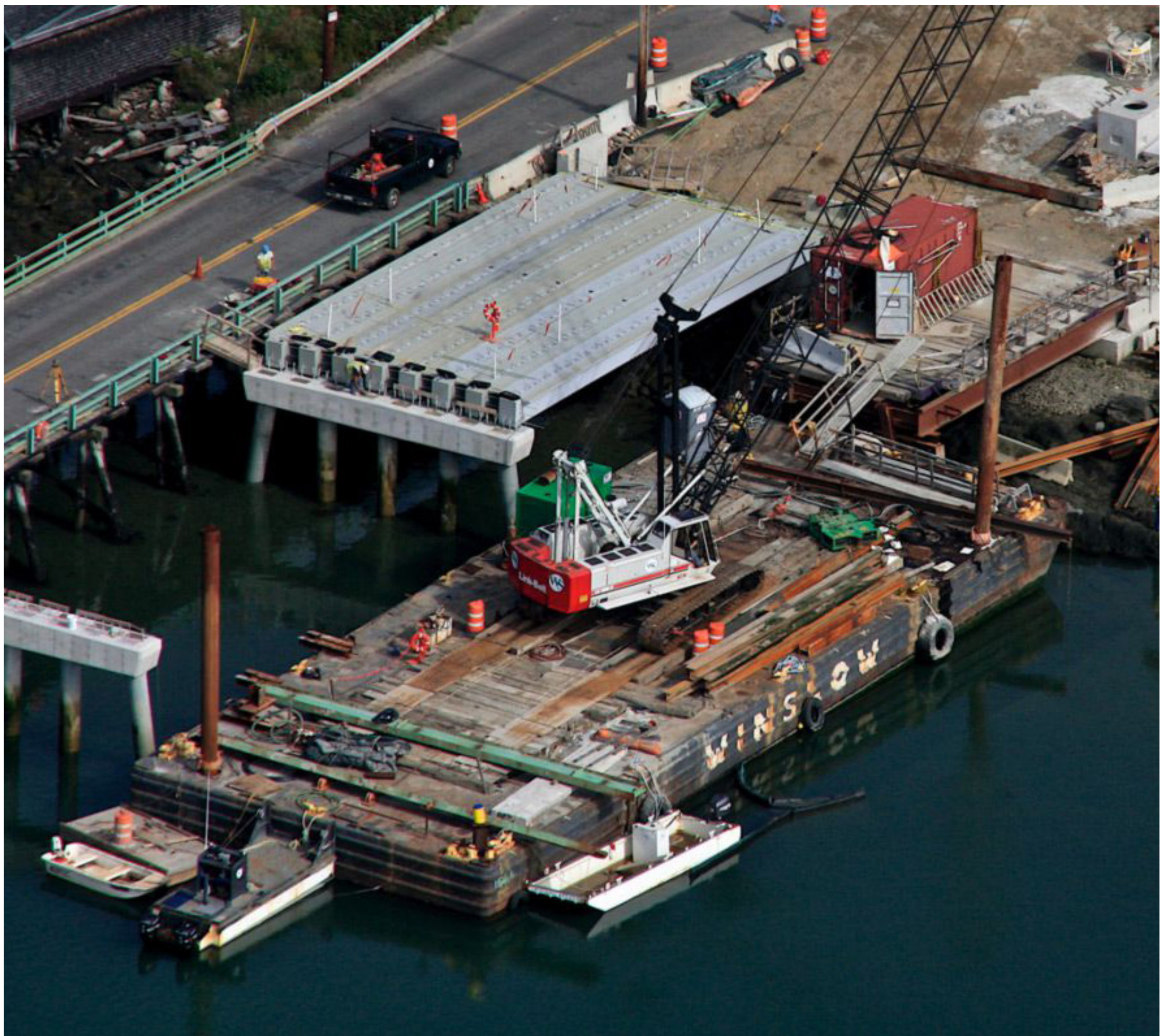
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SCIGRIP specified for composite bridge beams

Harbor Technologies needed a reliable adhesive and dispensing system to bond composite tops to concrete and steel-filled composite beams.

The Problem

The adhesive had to meet rigorous strength and performance standards, particularly in harsh environments. This structural hybrid composite beam or HCB, combines the best of reinforced plastic composites, concrete and steel to produce bridge beams that are one-tenth the weight of steel yet strong enough to carry railroad locomotives and freight cars.

The Solution

[SCIGRIP® 230 HV](#) adhesive not only met these demanding requirements but exceeded expectations. Its unique combination of tensile, elongation and shear strength properties and its proven performance bonding composites which are subjected to harsh operating environments.

The beams have already been used in several highway projects.

Currently, Harbor Technologies has completed fabrication of 647, 70-foot-long beams that will be used on a 520-foot long causeway.

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SCIGRIP Transforms Griffon Hovercraft Assembly Process with SG230HV

The 12000TD hovercraft is the world’s longest running commercial hovercraft service that offers the fastest way to cross the Solent between Southsea, Portsmouth and Ryde, Isle of Wight.

The Problem

Traditionally, Griffon Hoverwork has adopted welding methods to assemble the key components of their vessels. However, this method can result in heat distortion that leads to dimensional instability and other problems such as porosity or localised stress points.

The Solution

It was therefore critical the adhesive system they selected could withstand harsh and demanding conditions.

SCIGRIP specified [SG230HV](#), a high strength structural bonding system developed especially for marine applications. The two-component, high viscosity MMA adhesive was trialled with success and used to bond the 12000TD’s aluminium floor to the aluminium superstructure.

This operation was carried out using pneumatic dispensing guns by a team of operators trained onsite by SCIGRIP. This allowed a great deal of flexibility ensuring access into difficult and restricted areas.

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SCIGRIP SG230 HV structural adhesive

Composite Advantage, a leading manufacturer of large structural composite products, faced a challenging project at Wolf Trap National Park in Vienna, VA.

The Problem

The bridge needed to be installed rapidly during the night, with each span requiring only 15 minutes of road closure. To meet these stringent requirements, the team sought a high-performance adhesive capable of delivering strong, reliable bonds under time-sensitive and demanding conditions.

The Solution

[SCIGRIP® 230 HV](#), renowned for its **lightweight properties**, **ease of application**, and **exceptional performance** on large structures with variable bond lines, proved to be the ideal solution for this critical application.

This was recommended for its ability to work with a selection of activators to provide workers with a **wide range of working times** from 30 to 120 minutes, with **minimal surface preparation**.

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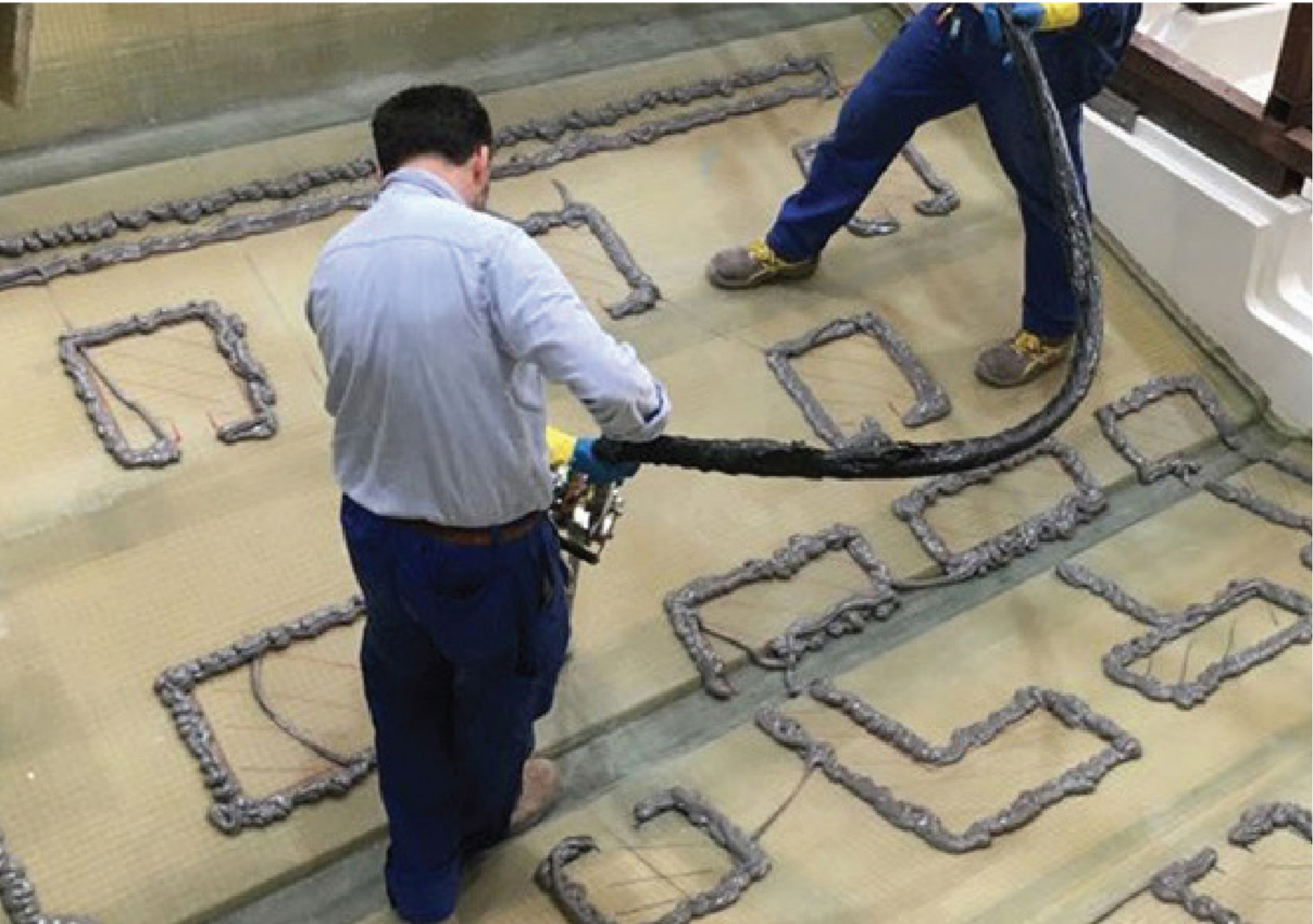
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Key structural bonding processes at Ferretti Group

SCIGRIP began working with the Ferretti Group with the aim of qualifying [SG230 HV](#) and improving production efficiencies through smarter composite bonding processes.

The Problem

Ferretti and SCIGRIP explored the possibility of replacing classic polyester-based adhesives with SCIGRIP's innovative methacrylate adhesives. An intensely productive collaboration took place between the two companies, strengthened on one hand by Ferretti's decades of expertise in building leisure boats and on the other with SCIGRIP's bonding knowledge.

The Solution

[SCIGRIP's SG230 HV](#) adhesive is a two-part methacrylate with an average mixing ratio of 10:1. Thanks to its application characteristics and excellent mechanical performance it was a perfect match for the hull manufacturing process used in the Ferretti assembly lines.

The production lines at the M&S Composite Manufacturing Yard, Ferretti's assembly department, are based on the concept of bonding together structural elements that are built off-site to maximise repeatability in the building stages, resulting in shorter production cycle times. Adopting this reliable and certified process for marine use were key requirements.

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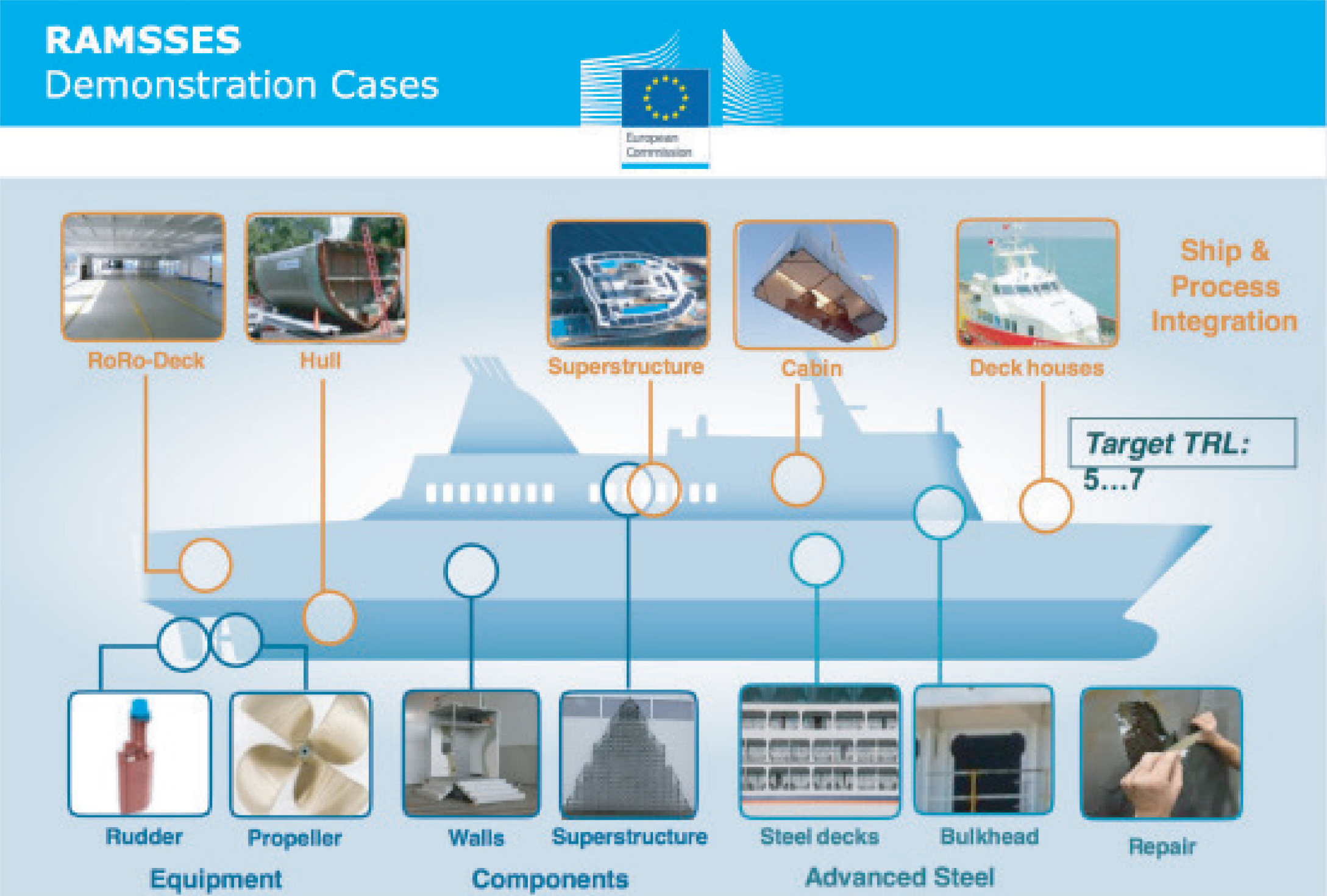
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SG300 provides its strength at scale to project Ramsses

While this isn't the first time [SG300](#) has been used to bond steel and composite parts, it is the first time it has been done with such large-scale parts while also using vertical injection technology.

The Problem

At Damen Shipyard in Vlissingen, the Netherlands, the Ramsses consortium is constructing more sustainable and efficient ships through the research and realization of advanced composite materials that could lead to ships that are up to 50 percent lighter.

The Solution

Building the ship of the future is no small task. Just one of its components--the huge, six meter high hull panels were successfully achieved through trials backed by the expertise of partners Airborne and InfraCore. They used their technology of sandwich-style structures and reinforcement materials, combined with a vertical infusion technology to make the panels a reality and ready for testing.

For its part, SCIGRIP representatives also worked with InfraCore and MVP dispensing equipment of CT Platen (flow and measurement specialists) to make sure the injection of [SG300](#) was successfully executed for its bonding applications.

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SCIGRIP adhesives bond key components in Swift Motorhomes

The Swift Group in the production of the Esprit Motorhome. As a leading manufacturer of high quality and well-engineered caravans, motorhomes and holiday homes in the United Kingdom.

The Problem

Swift were seeking a tough, reliable product that would bond the structural lips of a GRP closed mould for a fuel filler cap to an existing filler cap lid. This component would be located on the side of the vehicle. No mechanical fasteners or fixings were to be used in the assembly of the fuel filler and weight considerations were critical.

The Solution

SCIGRIP's fast cure and high strength product [SG5000-06](#) was specified and selected for the task. It features a MMA based 1:1 mix ratio with high viscosity ensuring a 'non-sag' application. SG5000 is capable of bonding on metals, coated metals and GRP parts and requires minimal surface preparation, perfectly fitting Swift's construction criteria.

"SCIGRIP supplied us with a bonding solution that delivered on every level."

- Bill Kirby, GRP Engineer, The Swift Group.

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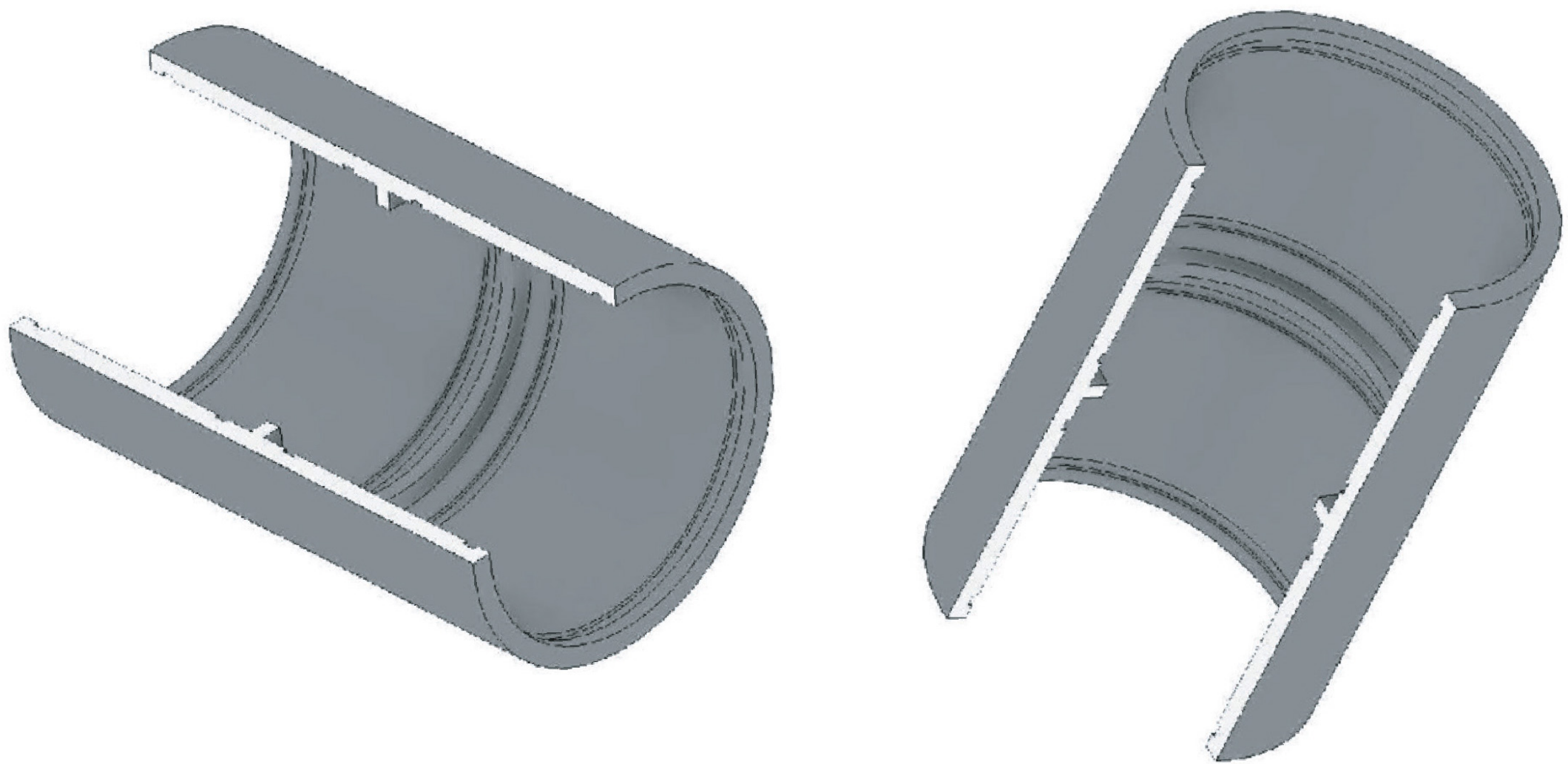
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SCIGRIP enables Fiberpipe to develop a new type of GFRP pipe bonding

Fiberpipe manufactures GFRP pipes for various industries, providing a complete service from planning to installation. In partnership with SCIGRIP, they developed an advanced solution for joining GFRP pipes by using our fatigue-resistant adhesive solutions.

The Problem

In 2018, Fiberpipe installed GFRP pipes in a power plant using the standard sanding and over-lamination method, but the process proved unsatisfactory due to excessive styrene evaporation, grinding dust, and overall mess. Although Fiberpipe had patented a new bonding technique in 2007, it was incompatible with conventional epoxy adhesives, creating the need for a new technique.

The Solution

Along with our distributor, SCIGRIP decided to use [SG5000](#) as the best solution for connecting those GFRP pipes with Fiberpipe’s patented sockets. [SG5000](#) is a structural adhesive that offers excellent tensile and impact strength. It requires minimal surface preparation and therefore minimises dust or other surface residues. Additionally, the adhesive is compatible with a variety of substrates, from composites to metals or thermoplastics. Fibrepipe in terms of production time (50% faster) and a much better customer experience by completely resolving the issue around styrene emissions and grinding dust.



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SCIGRIP delivers superior bonding solution for Papiorek Gliders

When light aircraft and glider manufacturer Papiorek was looking to streamline their assembly processes, they turned to SCIGRIP for technical support and assistance.

The Problem

Prior to SCIGRIP’s involvement in their manufacturing processes, Papiorek’s technicians had been using a myriad of chemical compounds to bond the pilot canopies to the gliders structure.

“Their assembly techniques were **unnecessarily time consuming**. The Polymethyl Methacrylate (PPMA) products that were being applied to the critical joint areas were bubbling on application and **taking up to 12 hours to cure**.”

- Marcin Skrzatek, SCIGRIP.

The Solution

With the help of SCIGRIP’s technical support team, Papiorek was advised to trial SCIGRIP’s SG42 system - **a two component, clear**, reactive adhesive and [SG5000](#), a methyl methacrylate (MMA) high viscosity, **fast cure**, structural bonder.

Thanks to its translucent formulation, **the results were impressive** with a seamless bond line and crystal clear joint, perfect visibility was achieved through the pilot’s window.

Technical data sheets



Technical data sheets

SG100 series

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DESCRIPTION

SCIGRIP® SG100 Series Methacrylate Adhesives are two-component, 10:1 mix ratio products for bonding thermoplastics¹, metals², composites and combinations thereof. These bright white, UV resistant products are particularly well suited in color critical applications without compromising physical properties. Minimal surface preparation^{1, 2} combined with a choice of 15 and 40 minute working times, provide reduced labor and production cycle time. Packaging options include 490 ml cartridges and 5 and 50 gallon (19 and 189 liters) in bulk containers for application with meter-mix dispense equipment.

PERFORMANCE BENEFITS

• UV resistant	➡	Bright white with improved ultraviolet resistance
• Choice of 15 and 40 minute working times	➡	Selection to fit application and process requirements
• Minimal surface preparation ^{1, 2}	➡	Reduced labor cost and cycle time
• Non-sag handling 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	White	White
Mix ratio by volume	10	1	—
Mix ratio by weight	6.42	1	—
Density, g/cc	0.95	1.48	1.00
Density, lb/gallon	7.90	12.35	8.33
Viscosity, cps	150,000 – 220,000	70,000 – 180,000	—

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

Tensile Strength psi (MPa)	2,250 – 2,500 (15.5 – 17.2)	Lap Shear Strength ⁴ psi (MPa)	2,000 – 2,400 (14 – 16)
Maximum Tensile Elongation (%)	80 - 120	Service Temperatures °F (°C)	-40 to 180 (-40 to 82)
Tensile Modulus ³ psi (MPa)	90,000 – 110,000 (620 – 758)		

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 70% of ultimate strength in lap shear)⁴

Cartridge	Adhesive / Activator	Working Time (minutes)	Fixture Time (minutes)
SG100-15	SG115 A / SG115 B	12 – 18	30 – 45
SG100-40	SG140 A / SG115 B	35 – 45	80 – 100

NOTES:

1. Polyolefins, thermoplastic polyesters, fluorocarbon plastics and other low surface energy plastics are generally not bondable.
2. Prepare metal for bonding by removing all dust, loose scale, rust, and other surface residue including oil and grease. Use of MP100 Metal Primer is a necessity and strongly recommended for stainless steel and aluminum bonding. Heavy grinding or sanding may interfere with the chemical action of MP100 and is not recommended, especially with aluminum and stainless steel. For maximum bond strength on steel, abrade the mating surfaces prior to bonding. See notes a, b and c on reverse side. Value will depend on strength and stiffness of substrate.
3. Tensile modulus as measured in the linear portion of the stress strain curve.
4. Lap shear strength of aluminum to aluminum bond pretreated with MP100 Metal Primer and based on ASTM D1002 method.

SAFETY AND HANDLING Read Material Safety Data Sheet before handling or using this product. Adhesive component A contains flammable methyl methacrylate monomer. 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.

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 0.375 inch (10 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: 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.

DISPENSING EQUIPMENT: Dispensing directly from disposable cartridges or meter-mix dispense equipment is strongly 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 (5.9 and 8.3 bars) 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 or aluminum or have a sufficient thickness of chemically resistant material that prevents contact between the adhesive components and the base metal. 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. Natural rubber, nitrile rubber (BUNA), neoprene and Viton® are not acceptable. Ethylene-propylene rubbers, such as Nordel® may be used for ram follower plate o-rings, but a polyethylene sheet must be used to prevent direct contact with the adhesive.

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 previously opened or 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 these products. Test the curing adhesive at the edges for fingernail hardness before removing clamps or fixtures. Use a soft faring tool to remove excess adhesive from the bonded assembly. Masking tapes or other protective barriers should be used to prevent contamination on any cosmetically sensitive areas. Partially cured adhesive can be removed with a sharp knife and any cured adhesive may be removed by sanding or scraping.

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.

SHELF LIFE & STORAGE CONDITIONS: The shelf life of adhesive and activator

in unopened containers is nine (9) 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 (18°C) and 80°F (27°C). Exposure to temperatures below 65°F (18°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.

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.

Important Notes

- a. SUPSTRATE 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.*

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.



Technical data sheets

SG200 series

Return to product

 Available in North America only

DESCRIPTION

SCIGRIP® SG200 Series Methacrylate Adhesives are two-component, 10:1 mix ratio products for bonding composites, thermoplastics¹, metals² and combinations thereof. Minimal surface preparation^{1, 2} combined with a choice of 10, 20 and 40 minute working times, provide reduced labor and production cycle time. These products are widely used for marine, transportation and general plastic bonding applications. Packaging options include 490 ml cartridges and 5 and 50 gallon (19 and 189 liters) in bulk containers for application with meter-mix dispense equipment.

PERFORMANCE BENEFITS

• Choice of 10, 20 and 40 minute working times	➡	Selection to fit application and process requirements
• Minimal surface preparation ^{1, 2}	➡	Reduced labor cost and throughput times
• Non-sag application characteristics	➡	Facilitates application on non-level surfaces
• Excellent environmental resistance	➡	Permanent bonds in harsh operating environments
• Permanent toughness and high elongation	➡	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	White	Off White
Mix ratio by volume	10	1	—
Mix ratio by weight	8.10	1	—
Density, g/cc	0.95	1.18	0.97
Density, lb/gallon	8.00	9.85	8.10
Viscosity, cps	170,000 – 220,000	70,000 – 180,000	—

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

Tensile Strength psi (MPa)	2,500 – 3,000 (17 – 21)	Lap Shear Strength ⁴ psi (MPa)	2,200 – 2,500 (15 – 17)
Maximum Tensile Elongation (%)	60 – 100	Service Temperatures °F (°C)	-40 to 180 (-40 to 82)
Tensile Modulus ³ psi (MPa)	60,000 – 75,000 (413 – 517)		

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 70% of ultimate strength in lap shear)⁴

Cartridge	Adhesive / Activator	Working Time (minutes)	Fixture Time (minutes)
SG200-10	SG208 A / SG208 B	8 – 12	25 – 30
SG200-20	SG218 A / SG208 B	17 – 22	35 – 42
SG200-40	SG218 A / SG218 B	35 – 45	80 – 90

NOTES:

1. Polyolefins, thermoplastic polyesters, fluorocarbon plastics and other low surface energy plastics are generally not bondable.
2. Prepare metal for bonding by removing all dust, loose scale, rust, and other surface residue including oil and grease. Use of MP100 Metal Primer is a necessity and strongly recommended for stainless steel and aluminum bonding. Heavy grinding or sanding may interfere with the chemical action of MP100 and is not recommended, especially with aluminum and stainless steel. For maximum bond strength on steel, abrade the mating surfaces prior to bonding. See notes a, b and c on reverse side. Value will depend on strength and stiffness of substrate.
3. Tensile modulus as measured in the linear portion of the stress strain curve.
4. Lap shear strength of aluminum to aluminum bond pretreated with MP100 Metal Primer and based on ASTM D1002 method.

SAFETY AND HANDLING: Read Material Safety Data Sheet before handling or using this product. The A component adhesive 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.

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 0.375 inch (10 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: The term working time is the approximate time after mixing components A and B, depending on the 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 develop sufficient strength to allow careful movement, unclamping or demolding 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.

DISPENSING EQUIPMENT: Dispensing directly from disposable cartridges or meter-mix dispense equipment is strongly 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 (5.9 and 8.3 bars) 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 or aluminum or have a sufficient thickness of chemically resistant material that prevents contact between the adhesive components and the base metal. 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. Natural rubber, nitrile rubber (BUNA), neoprene and Viton® are not acceptable. Ethylene-propylene rubbers, such as Nordel® may be used for ram follower plate o-rings, but a polyethylene sheet must be used to prevent direct contact with the adhesive.

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 previously opened or 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 the SG200 series products. Test the curing adhesive at the edges for fingernail hardness before removing clamps or fixtures. Use a soft faring tool to remove excess adhesive from the bonded assembly. Masking tapes or other protective barriers should be used to prevent contamination on any cosmetically sensitive areas. Partially cured adhesive can be removed with a sharp knife and any cured adhesive may be removed by sanding or scraping.

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.

SHELF LIFE & STORAGE CONDITIONS: The shelf life of adhesive and activator in unopened containers is nine (9) 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 (18°C) and 80°F (27°C). Exposure to temperatures below 65°F (18°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.

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.

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.*

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.



Technical data sheets

SG230 series

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.¹ 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:

1. 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.

2. Polyolefins, thermoplastic polyesters, fluorocarbon plastics and other low surface energy plastics are generally not bondable.

3. Lap shear strength of PRIMED aluminium to aluminium based on ASTM D1002 method.

4. Brookfield HB, T-E 2.5rpm

5. Tensile strength, modulus and elongation based on ASTM D638, Type IV

6. Tensile modulus as measured in the linear portion of the stress strain curve.

RECOMMENDED FOR BONDING		
Composites	Metals ¹	Thermoplastics ²
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)³

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 ⁴	900,000-1,400,000	120,000-180,000	-

TYPICAL PHYSICAL PROPERTIES @75°F (24°C)	
Tensile Strength ^a PSI (MPa)	>3,000 (21)
Maximum Tensile Elongation ⁵	>100%
Tensile Modulus ^{5,6} PSI (MPa)	80,000 – 103,000 (552 – 710)
Lap Shear Strength ³ 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 UHMWV 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.

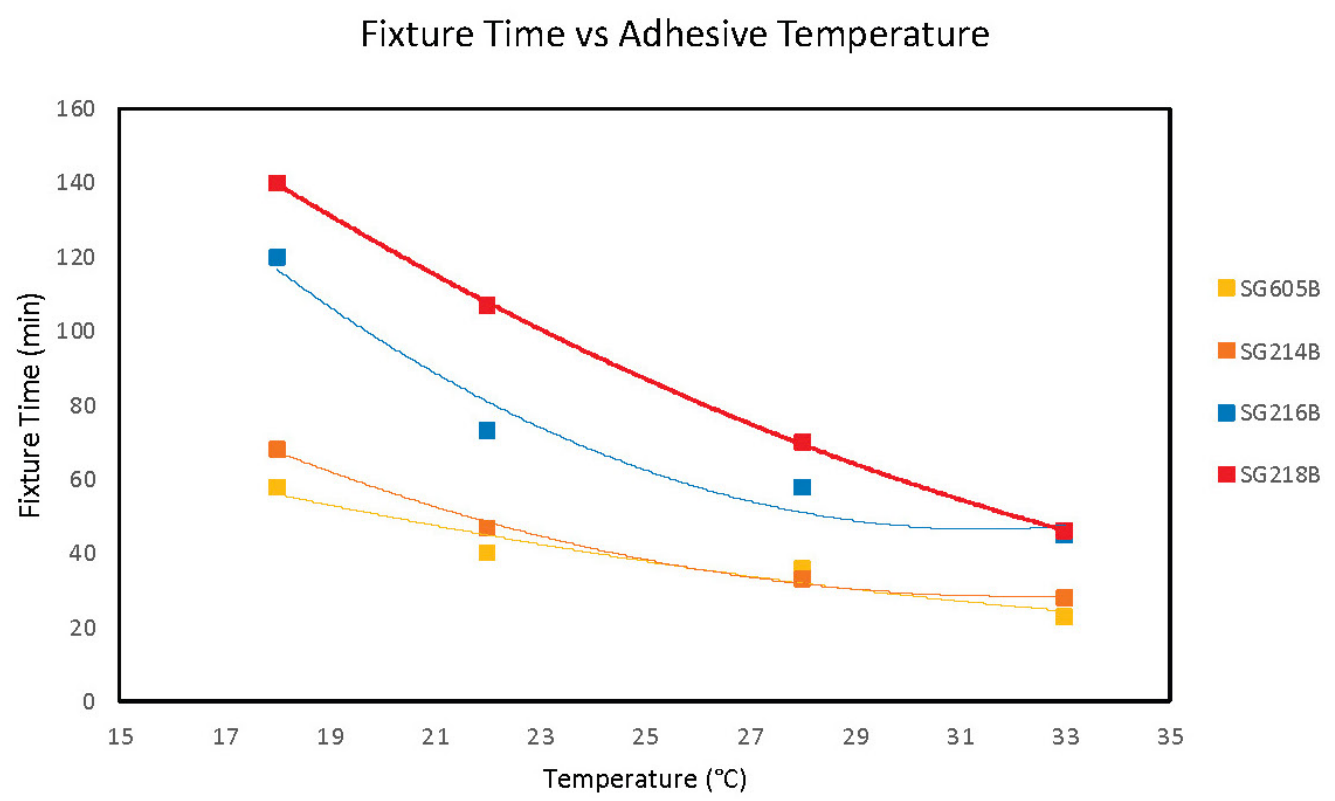
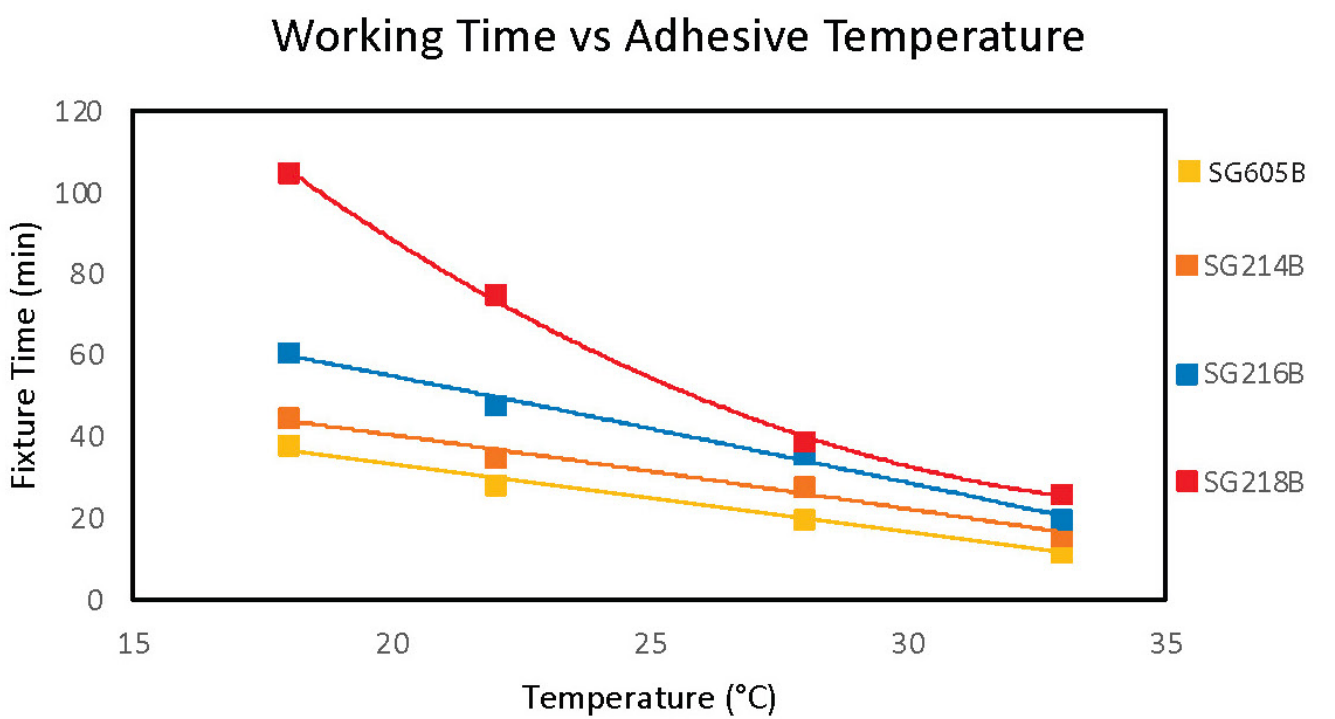
CLEAN UP: Adhesive components and mixed adhesive should be removed from mixing and application equipment with a suitable industrial solvent or cleaner before the mixed adhesive cures. Once the adhesive cures, soaking in a strong solvent or paint remover will be required to soften the adhesive for removal.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

[Return to product](#)



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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.

Technical data sheets

SG300 series

SG300: Superior Strength and Flexibility for a Variety of Assembly Operations

- Formulated to bond multiple substrates used in transportation and industrial markets



SCIGRIP® SG300 Series are two component, 10:1 ratio Methacrylate Adhesives for bonding metals, composites and other plastic parts² These advanced products are designed to work in a variety of transportation and industrial applications, including reduced read through on show surfaces. The combination of minimum surface preparation¹, primerless metal bonding and low read through makes the SG300 series products ideal for a variety of assembly operations.

Performance Benefits

FEATURE	BENEFIT
Variable working times (5,15, & 40 mins)	Selection to fit application/process requirements
Primerless Metal Bonding	No surface prep needed on most metals ¹
Environmental resistance	Permanent bonds in harsh environments
No-sag application characteristics	Stays put with reduced slide or sag even on inverted surfaces
Reduced bond line read through	Reduces post finishing requirements
Permanent strength and elasticity	Excellent fatigue, impact, and shock load resistance

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:

1. 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.

2. Polyolefins, thermoplastic polyesters, fluorocarbon plastics and other low surface energy plastics are generally not bondable.

3. Lap shear strength of UNPRIMED aluminium to aluminium based on ASTM D1002 method.

4. Brookfield HB, T-D 4 rpm

5. Tensile strength, modulus and elongation based on ASTM D638, Type IV

6. Tensile modulus as measured in the linear portion of the stress strain curve.

RECOMMENDED FOR BONDING		
Composites	Metals ¹	Thermoplastics ²
Epoxy	Aluminum	ABS
Polyester/DCPD	Carbon Steel	Acrylics
Vinyl Ester	Stainless Steel	PVC/CPVC
Gelcoats	Coated Metals	Styrenics

PRODUCT PROPERTIES (In Minutes)			
Cartridge	Adhesive*	Working Time	Fixture Time
SG300-05	SG305A	4 - 6	15 - 20
SG300-15	SG315A	13 - 17	30 - 40
SG300-40	SG340A	35 - 45	80 - 90

*Use activator SG605B (for black finished colour) or SG208B (for off-white finished colour)
Time to reach 70% of ultimate strength in lap shear @75°F (24°C)³

TYPICAL ADHESIVE CHARACTERISTICS @75°F (24°C)			
SG300 SERIES Uncured	Part A Adhesive	Part B Activator	A+B Mix
Color	Off White	Black or Off White	
Mix ratio/volume	10	1	-
Mix ratio/weight	9.0	1	-
Density, g/cc	1.01	1.12	1.02
Density, lb/gallon	8.40	9.35	8.51
Viscosity, cps ⁴	175,000-275,000	120,000-180,000	-

TYPICAL PHYSICAL PROPERTIES @75°F (24°C)	
Tensile Strength ⁵ PSI (MPa)	>1,700 (12)
Maximum Tensile Elongation ⁵	>40%
Tensile Modulus ^{5,6} PSI (MPa)	>30,000 – 40,000 (207 – 276)
Lap Shear Strength ³ PSI (MPa)	>2,300 (16)
Service Temperatures	-40 to 180 °F (-40 to 82 °C)

PACKAGING & AVAILABILITY		
Cartridges 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.

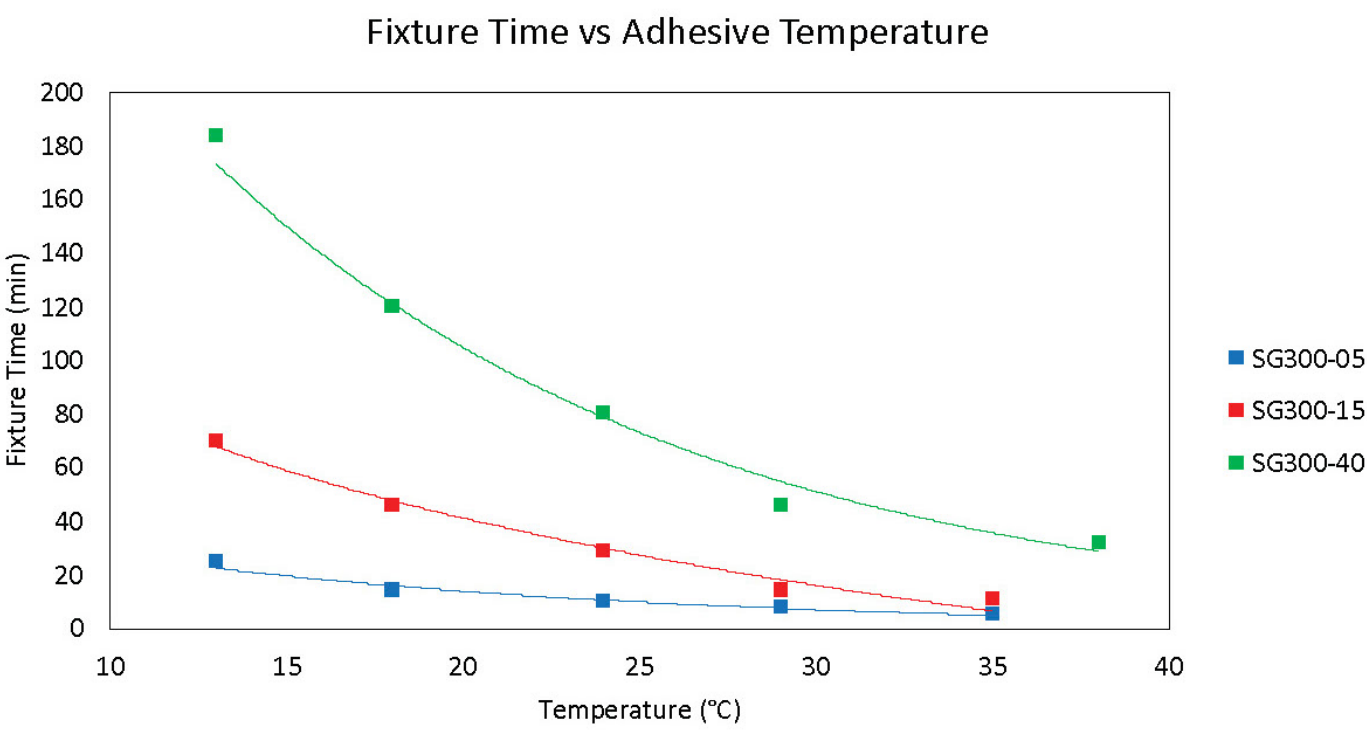
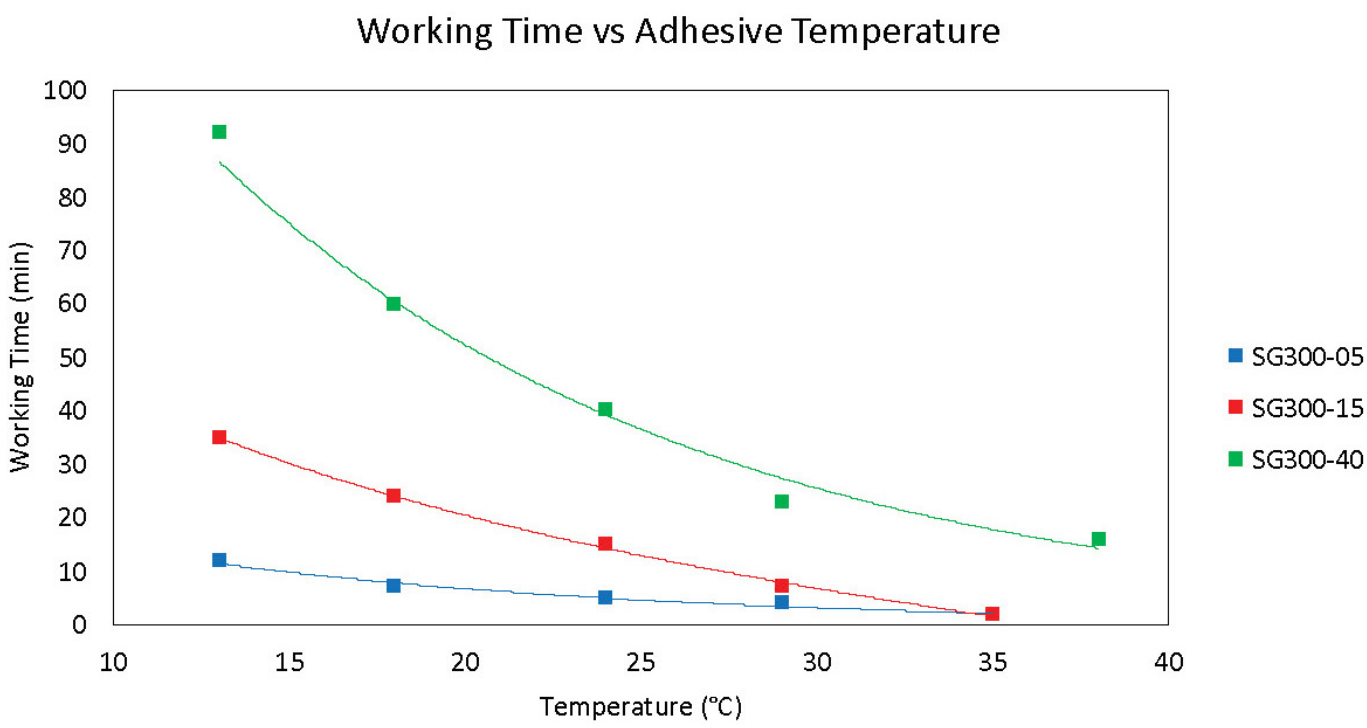
CLEAN UP: Adhesive components and mixed adhesive should be removed from mixing and application equipment with a suitable industrial solvent or cleaner before the mixed adhesive cures. Once the adhesive cures, soaking in a strong solvent or paint remover will be required to soften the adhesive for removal.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

SHELF LIFE & STORAGE CONDITIONS: The shelf life of adhesive and activator in unopened containers is nine (9) months from the date of manufacture 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.

[Return to product](#)



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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.

SG350L series

SG350L: Two-Component, Fast Curing, Toughened Structural Adhesive with High Elongation

Formulated for primerless adhesion to substrates commonly used in the commercial vehicle industry



SCIGRIP® SG350L Series is designed for mixed material bonding applications with stringent aging resistance requirements. The ratio between open time and fixture time is advantageous as compared to other methyl methacrylate systems.

This product does not boil at larger bonding gaps, you can gap fill until 100mm without boiling. This means it is well suited for repair or backfill of large composite structures.

Performance Benefits

FEATURE	BENEFIT
Variable working times (5 to 15 mins)	Selection to fit application/process requirements
Primerless Metal Bonding	No surface prep needed on most metals ¹
Environmental resistance	Permanent bonds in harsh environments
No-sag application characteristics	Stays put with reduced slide or sag even on inverted surfaces
Reduced bond line read through	Reduces post finishing requirements
Permanent strength and elasticity	Excellent fatigue, impact, and shock load resistance

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:

1. 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.
2. Polyolefins, thermoplastic polyesters, fluorocarbon plastics and other low surface energy plastics are generally not bondable.
3. Lap shear strength of UNPRIMED aluminium to aluminium based on ASTM D1002 method.
4. Brookfield Spindle 7, 20rpm (23C)
5. Tensile strength, modulus and elongation based on ASTM D638, Type IV
6. Tensile modulus as measured in the linear portion of the stress strain curve.

RECOMMENDED FOR BONDING		
Composites	Metals ¹	Thermoplastics ²
GRP Epoxy	Aluminum	ABS
GRP Polyester	Stainless Steel	ABS/PC
CFRP	Cold Rolled Steel	PVC
Gelcoats		
SMC		

Not recommended for galvanised steel

PRODUCT PROPERTIES (In Minutes)			
Cartridge	Adhesive*	Tack Time	Fixture Time
SG350L-05	SG350LA	4 - 6	14 - 18
SG350L-15	SG350LA	12 - 16	32-38

*Use activator SG500B

TYPICAL ADHESIVE CHARACTERISTICS @75°F (24°C)			
SG350L SERIES Uncured	Part A Adhesive	Part B Activator	A+B Mix
Color	Off White	Black or Off White	Black or Amber
Mix ratio/volume	10	1	-
Mix ratio/weight	9.0	1	-
Density, g/cm³	0.97 - 1.01	1.30 - 1.34	1.00 - 1.04
Viscosity ⁴	100,000-200,000	TBD	-

TYPICAL PHYSICAL PROPERTIES @75°F (24°C)	
Tensile Strength ⁵ (MPa)	17 - 19
Maximum Tensile Elongation ⁵	70 -90%
Tensile Modulus ^{5,6} (MPa)	700 - 1100
Lap Shear Strength ³ (MPa)	18 - 20
Service Temperatures	-40 to 90 °C (-40 to 194 °F)
Shore D Hardness	50 - 60

PACKAGING & AVAILABILITY	
Cartridges 50 ML	Cartridges 490 ML

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 15°C (60°F) and 30°C (85°F). 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.

APPLICATION

CARTRIDGE APPLICATION:Check each cartridge to ensure that the openings are free of obstruction and debris that would prevent flow. Scigrip SG350 series is applied through an 8mm x 18-element helical static mixer. Before bonding, dispense a small amount of material through the static mixer (purge) until the product exiting the mixer appears to be uniformly mixed.

BULK APPLICATION:Scigrip SG350L series can be applied using meter-mix dispensing equipment. 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 aluminium. 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.

BONDING PROCESS:Parts should be mated and in final position before the expiration of the open time and should remain in position, unstressed and undisturbed, until the end of the fixture time has passed.

Use enough adhesive to completely fill the desired bond area, and avoid entrapping air within the joint. Avoid over squeezing the joint causing insufficient material to remain in the bond area once the clamps or jig is removed.

SG350L curing procedures are exothermic reaction. Large masses of material can result in overheating the adhesive and substrate. Consult with Scigrip Technical Service staff.

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. 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 dependent 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..

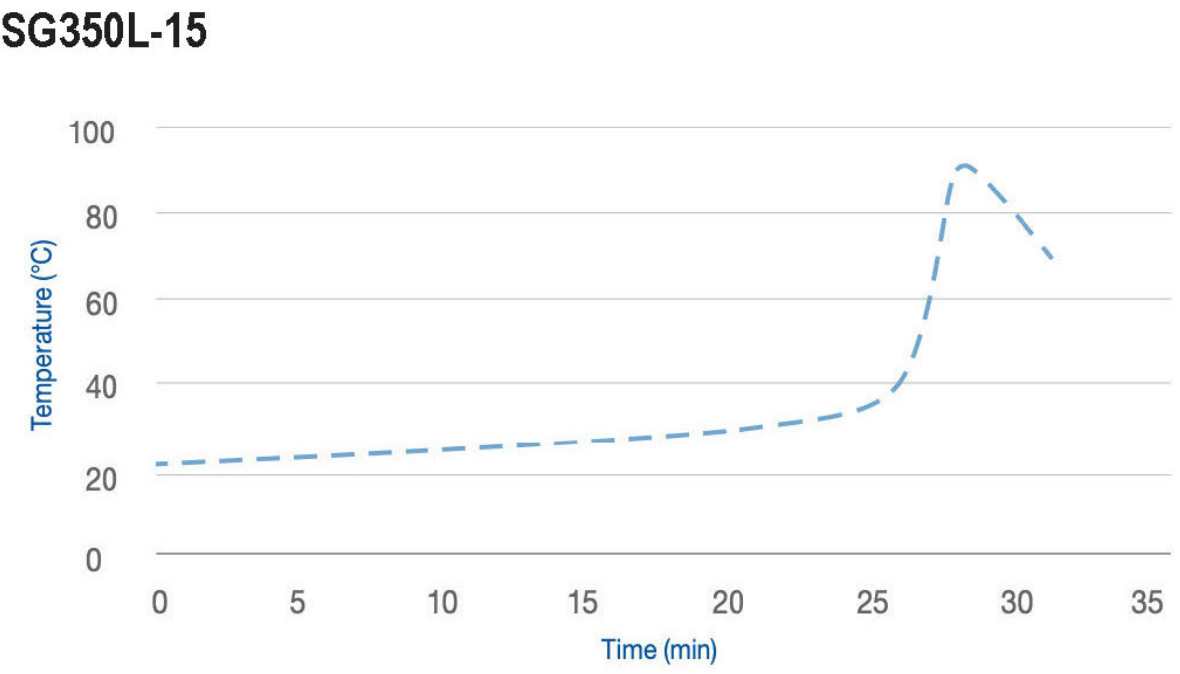
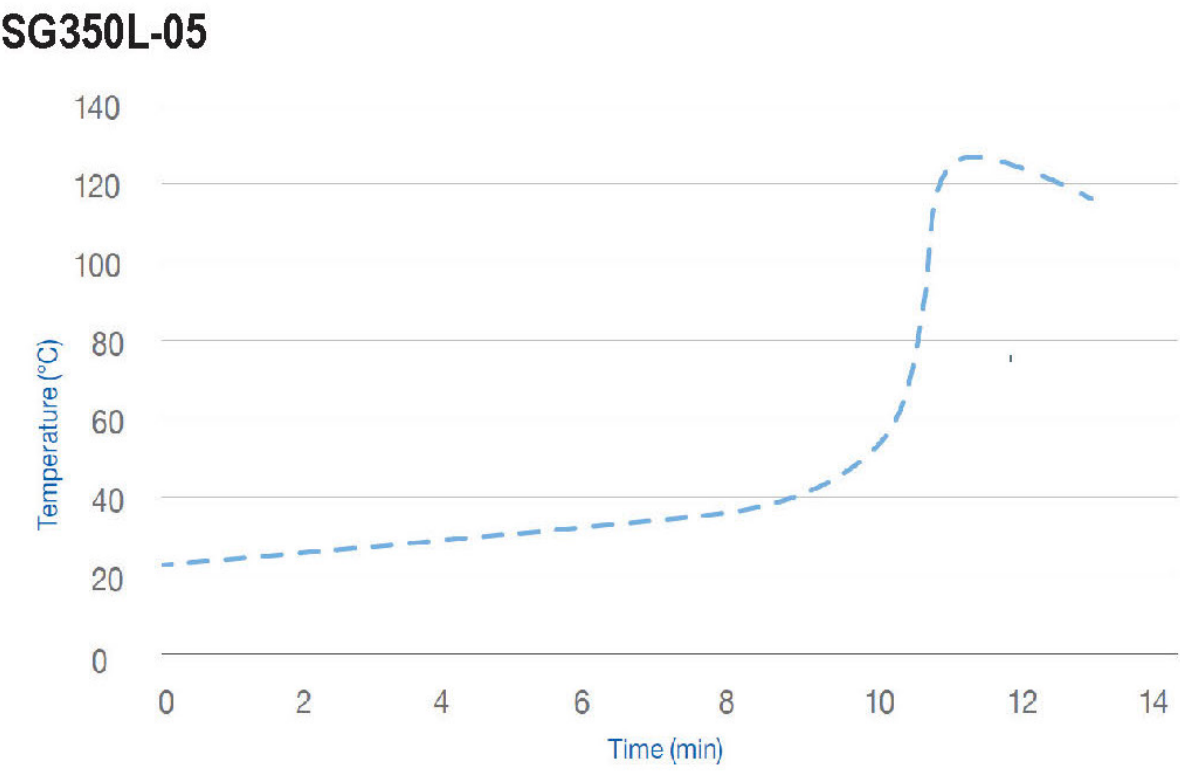
SHELF LIFE & STORAGE CONDITIONS: Best results in paste form within 9 months for the adhesive, 6 months for the activator, and 12 months for the cartridges - stored at less than 25°C [77°F] in original packaging. Long-term exposure to elevated temperature can cause material to lose performance characteristics. Prolonged exposure above 37°C [99°F] quickly diminishes the reactivity of the product and should be avoided.

[Return to product](#)



Available in Europe only

Exothermic Curves



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.

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.



R1 requirement (HL1, HL2, HL3) for rail safety

SG400LSE

SG400LSE: Making Fast Bonds of LSE Substrates Possible with No Surface Prep

Formulated for bonding polyolefins (low surface energy plastics) in assembly and fabrication applications



SCIGRIP 400LSE is a two-component (10:1), translucent, methyl methacrylate adhesive for bonding polyolefins with no surface preparation required. It bonds polypropylene, polyethylene and has the ability to cross-bond to metals like aluminium and stainless steel. Product is non sagging, and has short fixture times, making it an excellent choice for assembly and other fabrication or manufacturing uses.

Performance Benefits

FEATURE	BENEFIT
No surface preparation	Saves time and cost during the assembly process ²
Translucent cure	Allows for invisible lines that show color of substrate
Short working and fixture times	Faster assembly of multi-stage production lines
Cross bonding to metal	Only solvent cleaning required for bonding metals
No-sag application	Holds beads on vertical or inverted surfaces
Substrate failure	Substrates break before the adhesive does

Additional Resources

- Technical questions? Use the [Ask SCIGRIP](#) feature at SCIGRIP.com
- [Find a distributor](#) at scigrip.com/
- [Get more info or request a demo](#) at scigrip.com/contact-us

1. Viscosity measured by Brookfield HB, Spindle TA, 10rpm.
2. It is always recommended surfaces are cleaned appropriately before adhesive is applied, however, no additional surface preparation is needed.

RECOMMENDED FOR BONDING				
Formulated for bonding low surface energy substrates				
PRODUCT PROPERTIES				
Cartridge	Adhesive	Activator	Working Time	Fixture Time
SG400LSE	SG400A	SG400B	1-3 mins	6 hrs

TYPICAL ADHESIVE CHARACTERISTICS @75°F (24°C)		
SG400LSE <i>Uncured</i>	Part A <i>Adhesive</i>	Part B <i>Activator</i>
Color	Off White	Translucent
Mix ratio/volume	10	1
Mix ratio/weight	9.2	1
Density, g/cm³	0.95	1.03
Density, lb/gallon	7.94	8.63
Viscosity, cP ¹	50,000-100,000	4,500-10,000

TYPICAL BOND STRENGTH @75°F (24°C)		
Substrate	Aged Bond Strength, lbs/in² (MPa)	
	24 Hours	Failure Mode
PP	480 (3.3)	Substrate Failure
Glass filled PP	510 (3.5)	Substrate Failure
Talc filled PP	540 (3.7)	Substrate Failure
PP - AI	520 (3.5)	Substrate Failure (PP)
PP - VEFRP	550 (3.8)	Substrate Failure (PP)
PP - ABS	490 (3.4)	Substrate Failure (PP)
PP - Acrylic	540 (3.7)	Substrate Failure (PP)
Nylon 66	580 (4.0)	Substrate Failure
LDPE	730 (5.0)	Substrate Failure
PP-Stainless Steel	560 (3.8)	Substrate Failure (PP)

PACKAGING & AVAILABILITY	
Cartridges 50 ML	Also Available
	- Dispensing Guns - Mixing Tips

DIRECTIONS FOR USE
SCIGRIP 400LSE is packaged in a twin-syringe cartridge that dispenses product in a 10:1 mix ratio. The cartridge must be inserted in the dispensing gun and the mixing tip attached prior to dispensing.

- Insert cartridge into dispensing gun. Open valve. Dispense a small amount of adhesive making sure that both components freely flow from the cartridge.
- Attach the mixing tip to the cartridge. Press the dispensing gun to dispense and discard approximately 1 – 2 inches (2.5 – 5.0 cm) of the product, ensuring that the product is mixed properly in the mixing tip before use. If the mixing tip is left on the cartridge for a sufficient length of time without additional use, the adhesive may cure in the tip. If this happens, remove nozzle and place cap back on cartridge.

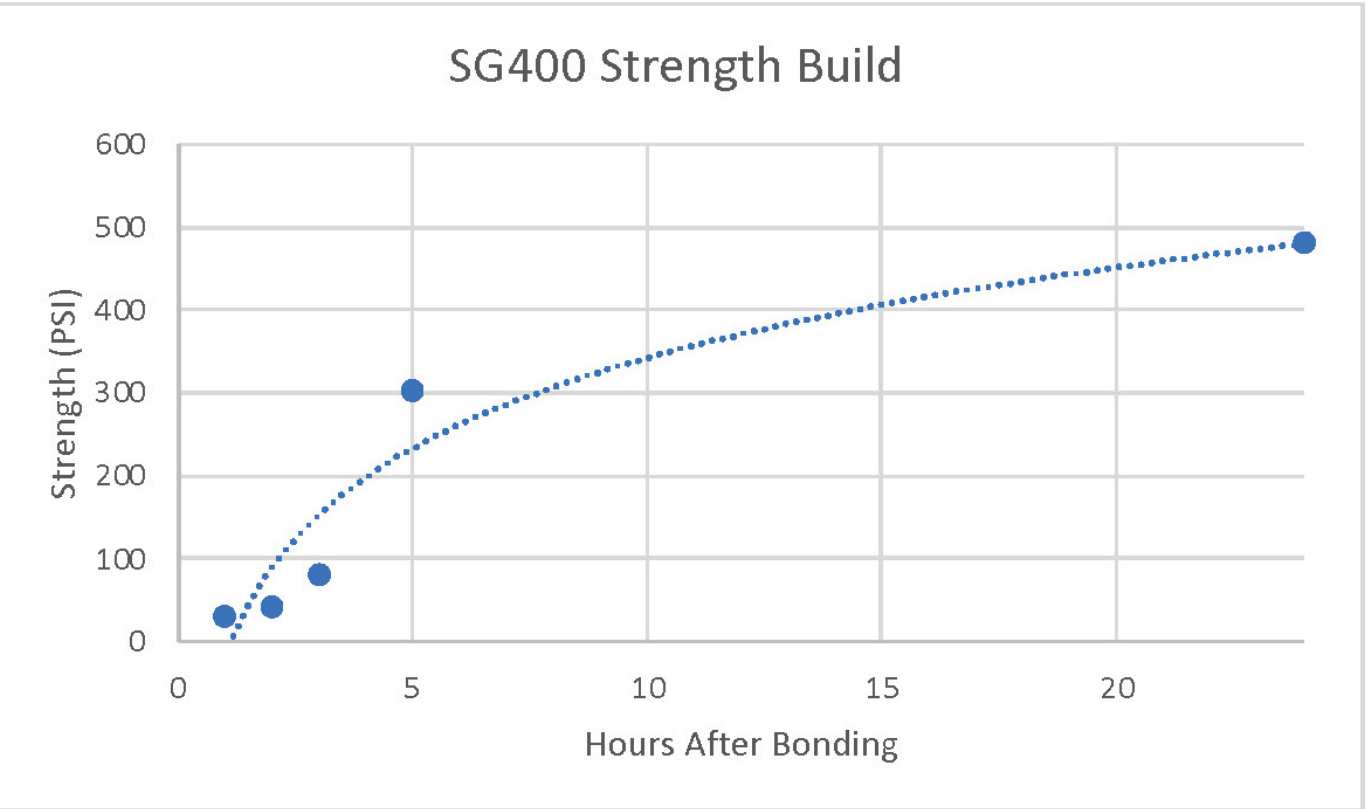
SAFETY AND ENVIRONMENTAL PRECAUTIONS
This product is a flammable, reactive adhesive. It is considered a hazardous material. In conformance with the Federal Hazardous Substance Labeling Act, the following hazards and precautions are given. Purchasers who may re-package this product must also conform to all local, state, and federal labeling, safety and other regulations. VOC emissions do not exceed 75 grams per liter.

WARNING! FLAMMABLE. CAUSES SERIOUS EYE DAMAGE
Keep out of reach of children. Do not take internally. Keep away from heat, spark, open flame and other sources of ignition. Keep container closed when not in use. Store away from direct sunlight in a cool 50° – 80°F (10° – 27° C) dry place. Use only in well ventilated area. Avoid breathing of vapors. Atmospheric levels should be maintained below established exposure limit values contained in Section VIII of Material Safety Data Sheet If airborne concentrations exceed those limits, use of a NIOSH-approved organic vapor cartridge respirator with full face piece is recommended. The effectiveness of an air-purifying respirator is limited. Use it only for a single short term exposure. For emergency and other conditions where short-term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus. Do not smoke, eat or drink while working with this product. Avoid contact with skin, eyes and clothing. May cause eye injury. Protective equipment such as gloves, goggles and impervious apron should be used. Carefully read Material Safety Data Sheet and follow all precautions.

Contains Methyl Methacrylate; 2-methyl propenoic acid. Do not use this product for other than intended use.

“Title III Section 313 Supplier Notification:” This product contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40CFR372. This information must be included in all Material Safety Data Sheets that are copied and distributed for this material.

FIRST AID
Inhalation: If overcome with vapors, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call physician.
Eye Contact: Flush with plenty of water for 15 minutes and call a physician.
Skin Contact: Wash skin with plenty of soap and water for at least 15 minutes. If irritation develops, get medical attention.
Ingestion: If swallowed, give 1 or 2 glasses of water or milk. Do not induce vomiting. Contact physician or poison control center immediately



QUALITY ASSURANCE
SG400LSE is carefully evaluated to assure that consistent high quality is maintained . A batch identification code is stamped on each can and assures traceability of all materials and processes encountered in manufacturing this plastic adhesive for its intended specific application.

SHELF LIFE
6 months shelf life can be expected when stored in a cool 50° – 80°F (10° – 27°C) dry place.

SHIPPING
Proper Shipping Name: Flammable, n.o.s. Hazard Class: 3. Identification Number: UN 1133. Packing Group: II. Label Required: Flammable Liquid.

IMPORTANT NOTE
This product is intended for use by skilled individuals at their own risk. These suggestions and data are based on information we believe to be reliable. Users should verify by test that this product, as well as these methods, is suited to their application.

WARRANTY
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.

Technical data sheets

SG600 series

SG600: A Versatile, Maximum Strength Adhesive that Flows Easily and Stays Put

- Formulated with excellent fatigue and shock load resistance for the transportation industry



SCIGRIP® SG600 Series are two component, 10:1 ratio Methacrylate Adhesives for composites and other plastic parts². These advanced products are designed to meet specific requirements of the transportation industry, including excellent fatigue and shock load resistance. The combination of minimum surface preparation^{1,2}, and reduced read through makes the SG600 series ideal for a variety of assembly operations.

Performance Benefits

FEATURE	BENEFIT
Variable working times (5 and 10 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
No-sag application characteristics	Stays put with reduced slide or sag even on inverted surfaces
Reduced bond line read through	Reduces post finishing requirements
Permanent strength and elasticity	Excellent fatigue, impact, and shock load resistance

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:

1. Primer MP100 is required when bonding metals. 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.

2. Polyolefins, thermoplastic polyesters, fluorocarbon plastics and other low surface energy plastics are generally not bondable.

3. Lap shear strength of PRIMED aluminium to aluminium based on ASTM D1002 method.

4. Brookfield HB, T-D 10rpm

5. Tensile strength, modulus and elongation based on ASTM D638, Type IV

6. Tensile modulus as measured in the linear portion of the stress strain curve.

RECOMMENDED FOR BONDING		
Composites	Metals ¹	Thermoplastics ²
Epoxy	Aluminum	ABS
Polyester/DCPD	Carbon Steel	Acrylics
Vinyl Ester	Stainless Steel	PVC/CPVC
Gelcoats	Coated Metals	Styrenics

PRODUCT PROPERTIES (In Minutes)				
Cartridge	Adhesive	Activator	Working Time	Fixture Time
SG600-05	SG605A	SG605B	4 - 6	15 - 18
SG600-10	SG610A	SG605B	8-12	25-30

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

TYPICAL ADHESIVE CHARACTERISTICS @75°F (24°C)			
SG600 SERIES Uncured	Part A Adhesive	Part B Activator	A+B Mix
Color	Off White	Black	
Mix ratio/volume	10	1	-
Mix ratio/weight	8.5	1	-
Density, g/cc	0.95	1.12	0.97
Density, lb/gallon	7.93	9.35	8.10
Viscosity, cps ⁴	150,000-250,000	120,000-180,000	-

TYPICAL PHYSICAL PROPERTIES @75°F (24°C)	
Tensile Strength ⁶ PSI (MPa)	>3,000 (21)
Maximum Tensile Elongation ⁵	>65%
Tensile Modulus ^{5,6} PSI (MPa)	>100,000 – 120,000 (689 – 827)
Lap Shear Strength ³ PSI (MPa)	>3,000 (21)
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

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 (13°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 demolding 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 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.

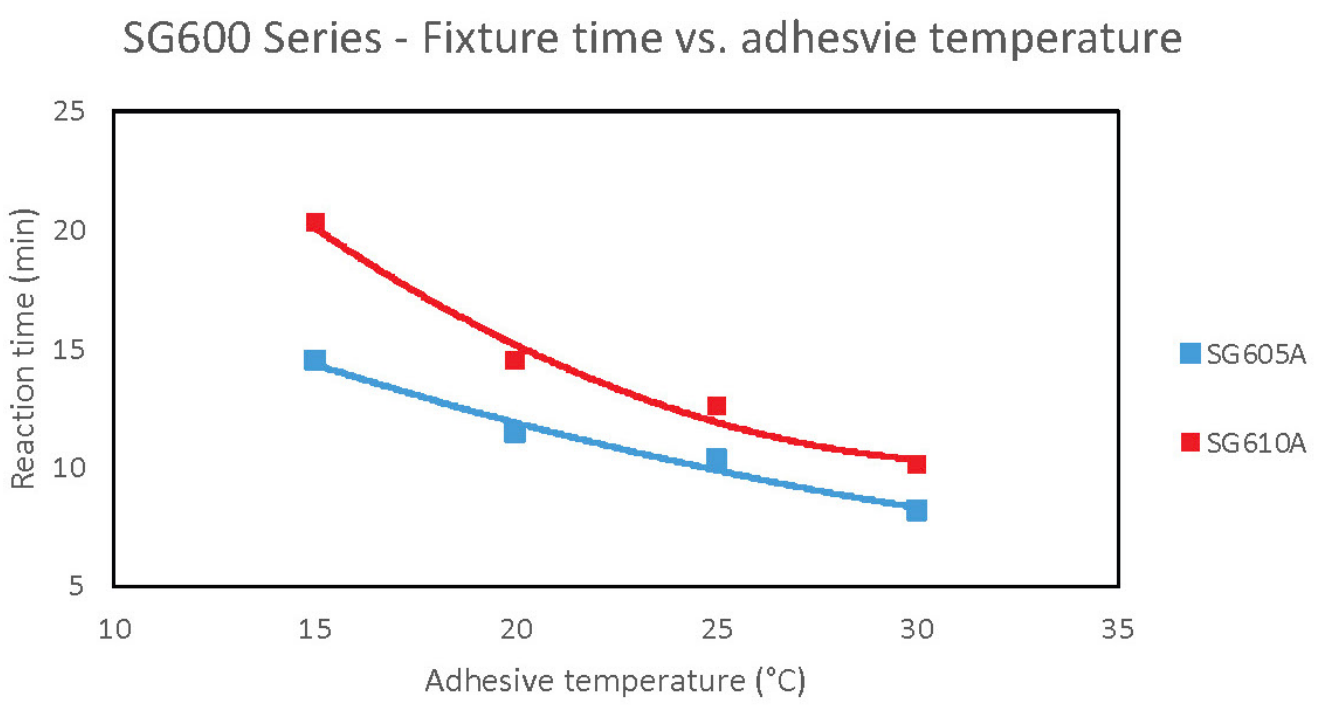
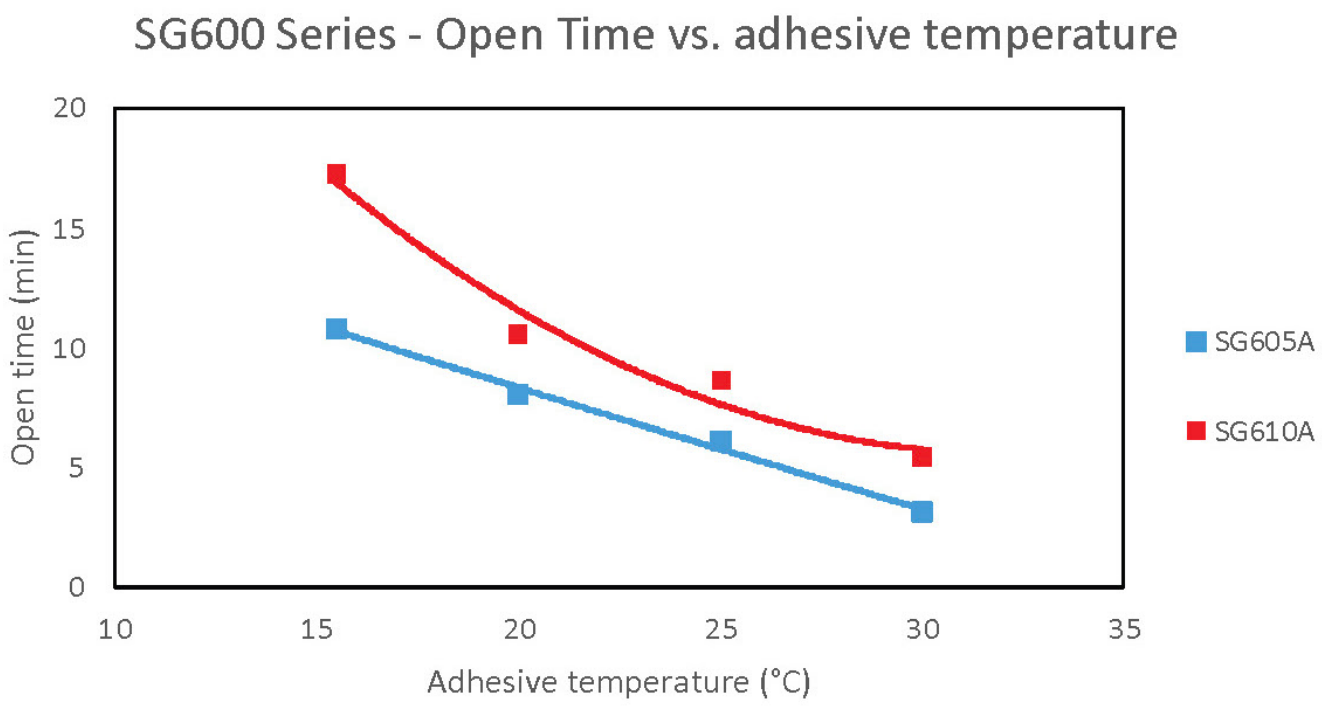
IMPORTANT NOTES

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- TECHNICAL ASSISTANCE.** Contact your SCIGRIP representative for questions or assistance with the selection of adhesives and methods for evaluating adhesives for your intended application.

Return to product



Available in Europe only



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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.

Technical data sheets

SG800 series

SG800: Excellent Fatigue and Impact Resistance at High Temperatures

Formulated to meet the specific needs of the transportation and industrial markets



SCIGRIP® SG800 Series are two component, 10:1 ratio Methacrylate Adhesives for bonding metals at higher temperatures. The SG800 Series is formulated to meet specific requirements of the transportation industry, including high temperature strength, excellent fatigue and impact resistance and low bond-line read through on show surfaces. Minimal surface preparation requirements make the SG800 Series ideal for a variety of assembly operations.

Performance Benefits

FEATURE	BENEFIT
Variable working times (5 - 15 mins)	Can fit application & process requirements
Primerless metal bonding	No surface prep needed on most metals ¹
Environmental resistance	Permanent bonds in harsh environments
High Temperature Resistance	Withstands environments up to 300°F / 149°C continuous, and intermittent exposure ⁷ up to 400°F / 204°C
Excellent Flow Characteristics	High flow at low pressure, easy manual dispensing
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/sg800
- 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 HB, T-D 10rpm
- Tensile strength, modulus and elongation based on ASTM D638, Type IV
- Tensile modulus as measured in the linear portion of the stress strain curve.
- Retains strength and adhesion after 10 minutes direct exposure to 400°F (204°C) when supported.

RECOMMENDED FOR BONDING		
Composites	Metals ¹	Thermoplastics ²
Epoxy	Aluminum	ABS
Polyester/DCPD	Carbon Steel	Acrylics
Vinyl Ester	Stainless Steel	PVC/CPVC
Gelcoats	Coated Metals	Styrenics

PRODUCT PROPERTIES (In Minutes)				
Cartridge	Adhesive	Activator	Working Time	Fixture Time
SG800-05	SG805A	SG805B	4 - 6	12 - 15
SG800-15	SG815A	SG805B	13 - 20	30 - 40

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

TYPICAL ADHESIVE CHARACTERISTICS @75°F (24°C)			
SG800 SERIES Uncured	Part A Adhesive	Part B Activator	A+B Mix
Color	Off White	Black	Black
Mix ratio/volume	10	1	-
Mix ratio/weight	6.0	1	-
Density, g/cc	0.96	1.62	1.02
Density, lb/gallon	7.93	13.6	8.51
Viscosity, cps ⁴	75,000 - 175,000	50,000-120,000	-

TYPICAL PHYSICAL PROPERTIES @75°F (24°C)	
Tensile Strength ⁵ PSI (MPa)	> 2700 (19-21)
Maximum Tensile Elongation ⁵	> 30%
Tensile Modulus ^{5,6} PSI (MPa)	>100,000 - 120,000 (689-827)
Lap Shear Strength ³ PSI (MPa)	>2,600 (18 - 20)
Service Temperatures	-40 to 300 °F (-40 to 150 °C)

PACKAGING & AVAILABILITY		
Cartridges 400 ML	Pails 5 Gal./19 L	Drums 55 Gal./ 189 L
		

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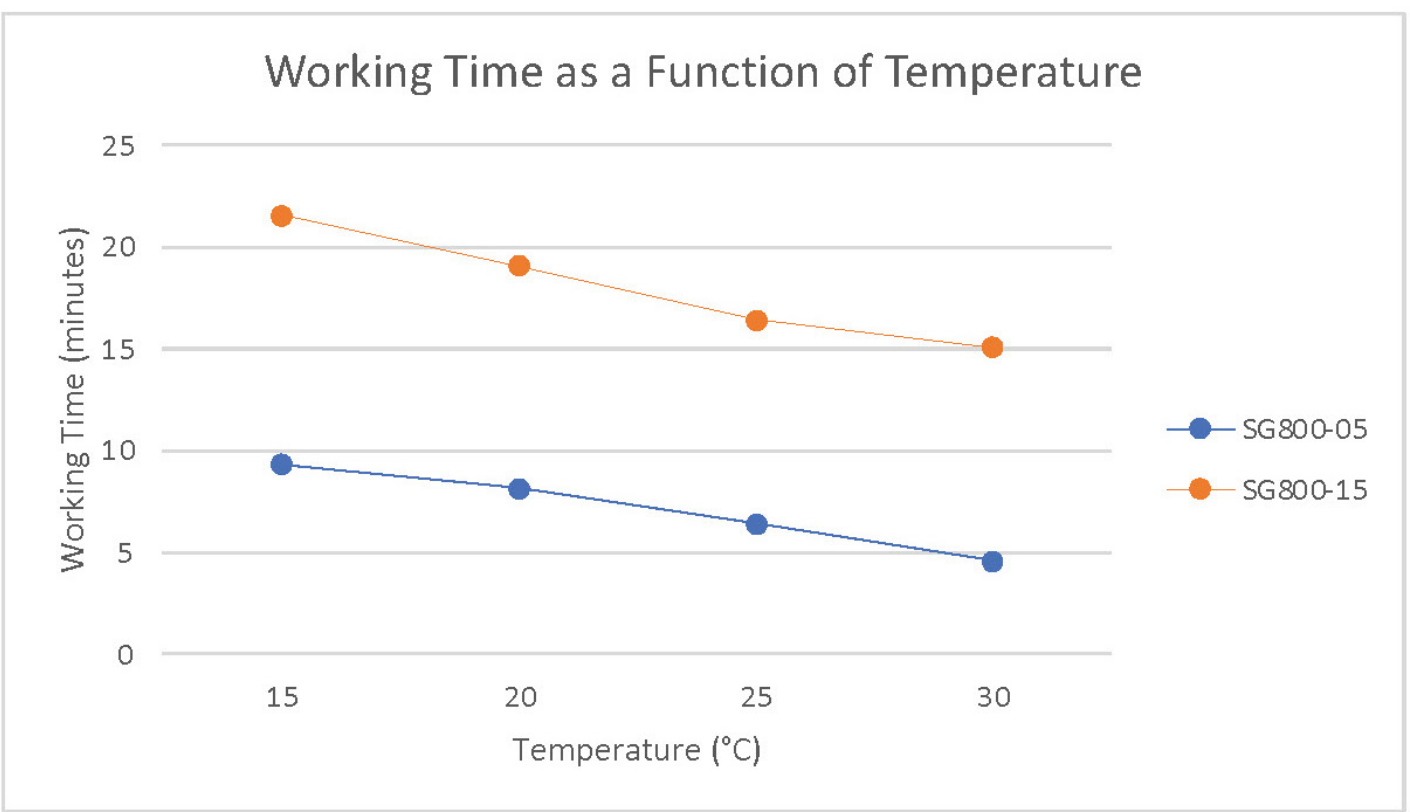
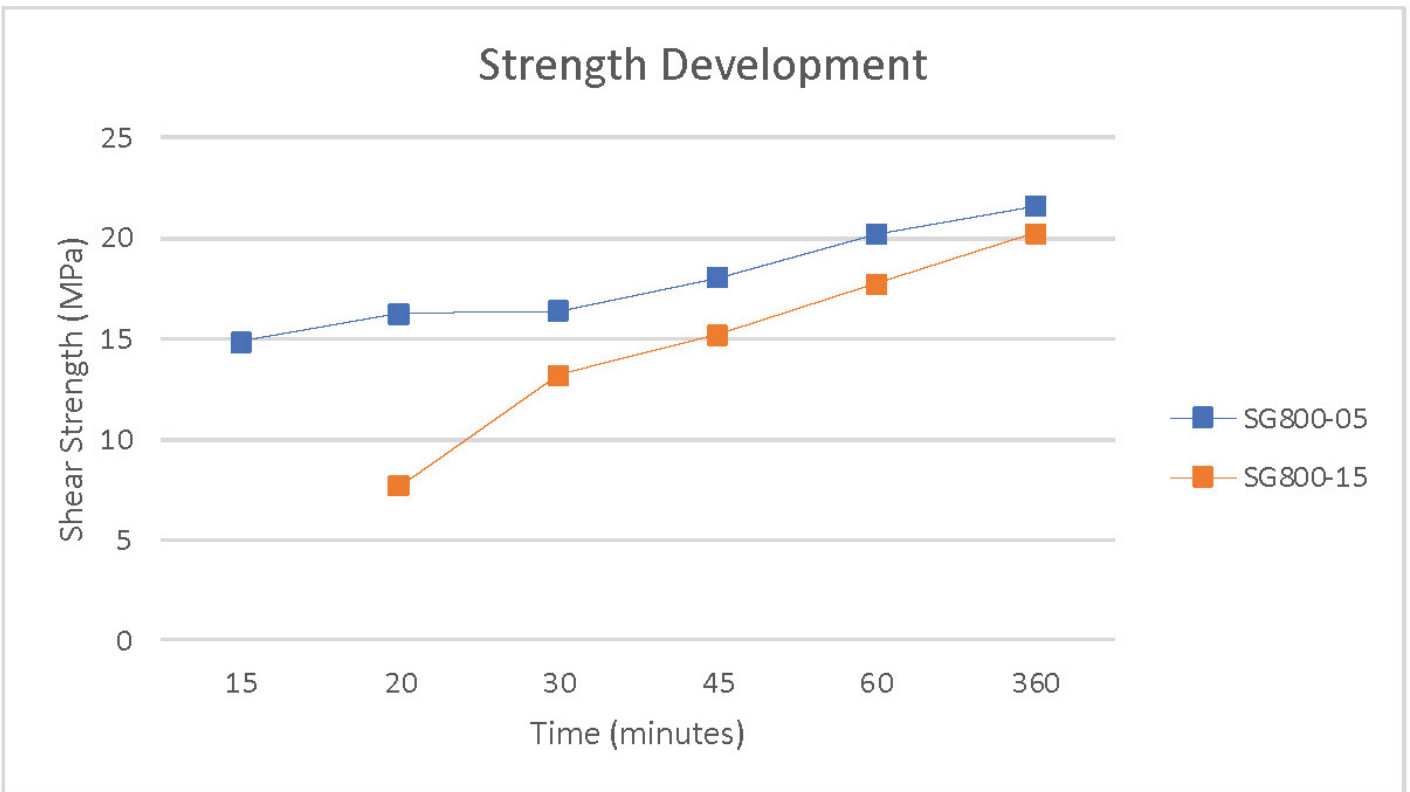
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IMPORTANT NOTES

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Return to product



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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.

Technical data sheets

SG2000 series

SG2000: Durable, Long-Lasting Bonds for Structural Projects Requiring Extended Working Time

- Designed with enhanced gap-filling properties to address the specific requirements of the marine, transportation and construction industries.



SCIGRIP® SG2000 is a two-component 1:1 ratio methacrylate adhesive, designed for bonding composite parts with minimal surface preparation. Ideal for large structural projects, it provides extended working times and can fill deep gaps up to 1.5 inches (39mm). SG2000 enhances bonding on uneven surfaces, ensuring strong adhesion even with misaligned parts. By filling gaps, it contributes to the structural integrity of the assembly, preventing movement or flexing that could weaken the bond over time.

Performance Benefits

FEATURE	BENEFIT
Unique gap fill formulation	Enhances bonding on irregular surfaces—allows for more product use without boiling issues
Ease of use with gap fill	Simplifies assembly by reducing need for precision fitting, saving time and complexity
Minimal surface preparation	No surface prep needed on composites
Environmental resistance	Permanent bonds in harsh environments
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

RECOMMENDED FOR BONDING

Composites	
Epoxy	Vinyl Ester
Polyester/DCPD	Gelcoats

PRODUCT PROPERTIES (In Minutes)

Cartridge	Adhesive	Activator	Working Time	Fixture Time
All Sizes	SG2000A	SG2000B	80 - 100	180 - 210

Time to reach 70% of ultimate strength in lap shear @75°F (24°C)¹

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

SG2000 SERIES Uncured	Part A Adhesive	Part B Activator	A+B Mix
Color	Off White	Amber	Off White
Mix ratio/volume	1	1	-
Mix ratio/weight	1	0.99	-
Density, g/cc	0.95	0.94	0.945
Density, lb/gallon	7.93	7.84	7.88
Viscosity, cps ²	250,000-350,000	250,000-350,000	-

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

Tensile Strength ³ PSI (MPa)	>2,500 (17)
Maximum Tensile Elongation ³	>130%
Tensile Modulus ^{3,4} PSI (MPa)	50,000 (350)
Lap Shear Strength ¹ PSI (MPa)	>1,500 (10)
Service Temperatures	-40 to 180 °F (-40 to 82 °C)

PACKAGING & AVAILABILITY

Cartridges 400 ML 1:1	Pails 5 Gal./19 L	Drums 55 Gal./ 189 L

NOTES:

- Lap shear strength of unprimed aluminium based on ASTM D1002 method.
- Brookfield RV; TD @ 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.

SAFETY AND HANDLING: Read Safety Data Sheet before handling or using this product. Adhesive components A and B 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.

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.

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Available in Europe only

SHELF LIFE & STORAGE CONDITIONS: The shelf life of adhesive and activator in unopened containers is six (6) months from the date of manufacture 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.

***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 IPSA 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.

Technical data sheets

SG5000 series

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, a choice of black or amber, 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

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-  Try our **Substrate Match Tool** at scigrip.com
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NOTES:

1. 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.

2. Polyolefins, thermoplastic polyesters, fluorocarbon plastics and other low surface energy plastics are generally not bondable.

3. Lap shear strength of UNPRIMED aluminium to aluminium based on ASTM D1002 method.

4. Brookfield RV, T-C 2.5 rpm

5. Tensile strength, modulus and elongation based on ASTM D638, Type IV

6. Tensile modulus as measured in the linear portion of the stress strain curve.

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*	SG5000A	SG5000-03B	2 - 5	6 - 8
SG5000-06	SG5000A	SG5000-06B	5 - 8	10 - 12
SG5000-13	SG5000A	SG5000-13B	14 - 19	20 - 25
SG5000-40*	SG5000A	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 <i>Uncured</i>	Part A <i>Adhesive</i>	Part B <i>Activator</i>	A+B <i>Mix</i>
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	8.05
Viscosity, cps ⁴	90,000-180,000	120,000-300,000	-

TYPICAL PHYSICAL PROPERTIES @75°F (24°C)	
Tensile Strength ⁵ PSI (MPa)	>5,076 (>35)
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 & 490 ML	Pails 5 Gal./19 L	Drums 55 Gal./ 189 L
		

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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.

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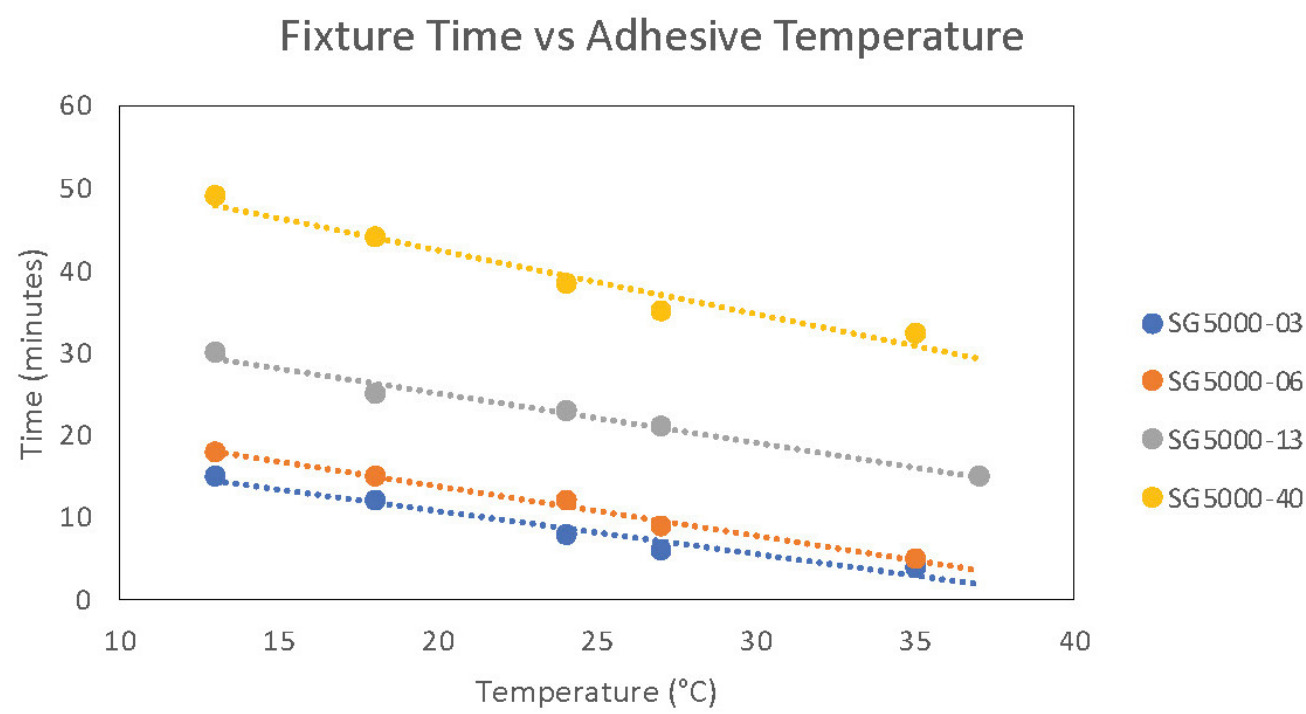
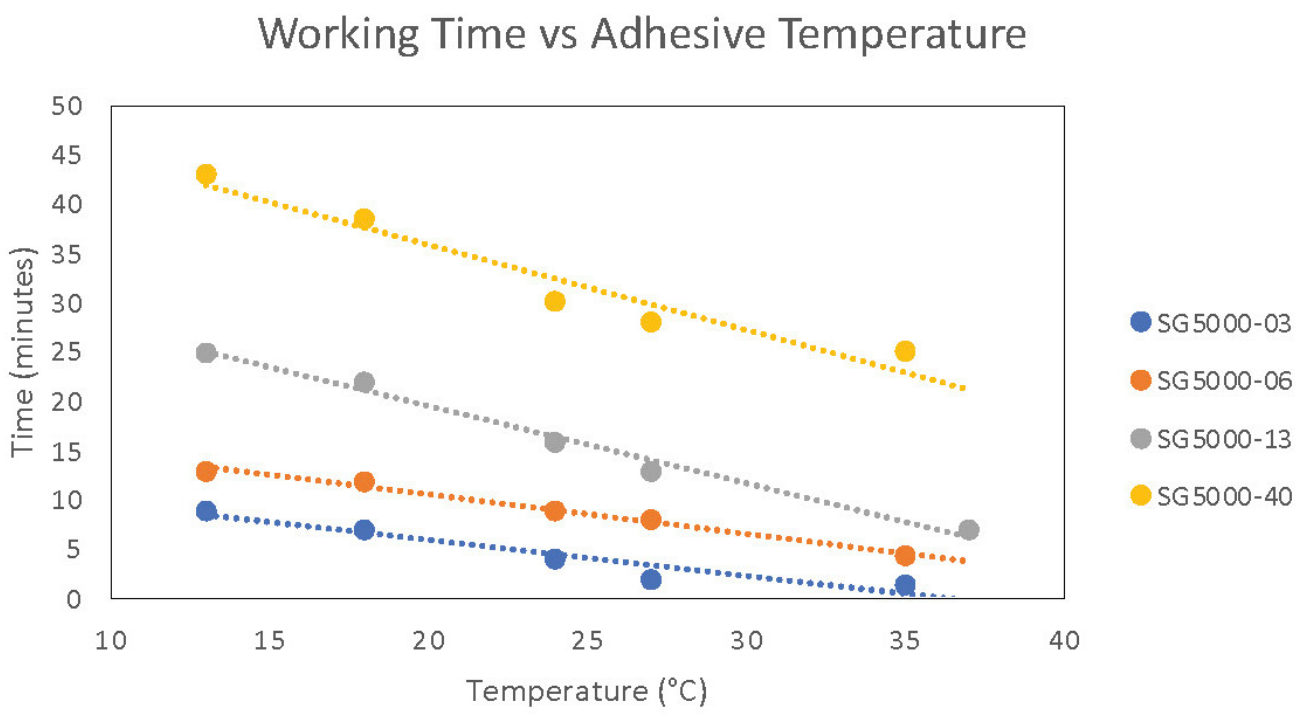
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SHELF LIFE & STORAGE CONDITIONS: The shelf life of adhesive and activator in unopened containers is twelve (12) months from the date of manufacture unless otherwise explicitly stated. Shelf life is based on a continuous, steady state storage temperature 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

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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.



Thank you

Any questions?

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ADHESIVES

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