

# SAS 521

TOUGHENED EPOXY ADHESIVE



## PRODUCT INFORMATION

SAS 521 is a two-part room temperature cure toughened adhesive offering exceptionally high peel, shear and impact strength, high temperature resistance and tolerance to oil contaminated surfaces. SAS 521 is ideal for structural engineering, electronics, maintenance and repair.

SAS 521 is supplied in a handy to use twin cartridge, ensuring full mixing of both components and easy application of adhesive.

## KEY INFORMATION

- Cures at room temperature
- Slump resistant due to its thixotropic consistency
- Excellent impact resistance
- Resistant to dilute acids, dilute alkalis, hydrocarbon solvents and most other chemicals encountered
- Excellent resistance to water and can be applied in damp conditions

## TYPICAL APPLICATIONS

Alpha SAS521 is suitable for the following applications:

- Structural bonding for the automotive, marine and transportation industries
- Repair of vehicles
- Bonding of metal structures
- Assembly of electronic components

## PRODUCT CHARACTERISTICS

The following technical information and data should be considered representative or typical only. Therefore, the information should not be used for specification purposes.

Property	Data
Colour	A: Translucent B: Amber
Base	A: Epoxy resin B: Amine hardener
Consistency	Viscous liquid
Total Solids Content	100 %
Mix Ratio	1:1 Part A to Part B
Pot Life (20°C)	20 – 45 minutes
Cure Time (20°C)	Handling Strength: 6 hours Full Cure: 24 hours
Gap Filling	up to 5mm
Coverage	150-250 grams per m <sup>2</sup>
Heat Resistance	Room Temperature Cure: -60 to 70°C 100°C Cure: -60 to 110°C

## PRODUCT PERFORMANCE

The performance data presented here has been determined by Alpha Adhesives & Sealants Limited standard test methods and are average values that should not be used for specification purposes. Our recommendations on the use of this product are based on tests believed to be reliable. It is advised that users conduct their own tests to determine the suitability of the product for their specific application.

Test	Substrates	Results/Observations
Shear Strength	Mild Steel	20 N/mm <sup>2</sup> 24 hours cure at 25°C
Shear Strength	Mild Steel	25 N/mm <sup>2</sup> 60 minutes cure at 75°C
Shear Strength	Mild Steel	29 N/mm <sup>2</sup> 20 hours cure at 100°C
Shear Strength	Aluminium	11 N/mm <sup>2</sup> 7 days cure at 20°C
Shear Strength	Aluminium	10.40 N/mm <sup>2</sup> 7 days cure at 20°C + 7 days soaked in red diesel
Peel Strength	Mild Steel	5.2 KN / 25mm bond width (0.3 mm bondline)
Impact Strength	N/A	0.3 J / cm

## HANDLING & APPLICATIONS

The general application information presented here is based upon typical conditions determined by Alpha Adhesives & Sealants Limited testing. Our recommendations on the use of this product are based on methods believed to be reliable. It is advised that users conduct their own tests to determine the suitability of the product for their specific application.

Process Step	Guidelines
Surface Preparation	All substrate surfaces should be abraded using abrasion paper or air-driven narrow belt sander. It is imperative that the surfaces are then cleaned of any dust, grit, loose material, wax, grease and oil using a suitable cleaner such as Alpha T559.
Adhesive Application	<ol style="list-style-type: none"><li>1. Unscrew the cap from the cartridge and remove the plug.</li><li>2. Attach the provided mixer nozzle and screw the cap back in to place to secure the nozzle.</li><li>3. Fit the SAS 521 cartridge in to a suitable twin-cartridge dispensing gun.</li><li>4. Begin to dispense adhesive. It is advised that a small amount is discarded upon dispensing to ensure that the adhesive is mixing sufficiently within the mixer nozzle.</li><li>5. Apply the mixed SAS521 adhesive to one of the surfaces to be bonded.</li><li>6. Position the substrates together into the desired final position and clamp together until the handling strength is achieved (approximately 6 hours at room temperature).</li><li>7. Remove the mixer nozzle after use to prevent further reaction. Ensure that the plug and cap have been replaced and tightly closed.</li></ol> <p>Heat can be applied to speed up the rate of cure of SAS521 and will result in a tougher cured product. Approximate times for heat curing are:</p> <ul style="list-style-type: none"><li>• 75°C – 60 minutes</li><li>• 100°C – 20 minutes</li></ul>
Curing	Handling strength is achieved approximately 6 hours after bonding. Full cure is achieved 24 hours after bonding.
Cleaning	A suitable solvent cleaner such as Alpha T559 should be used to clean uncured adhesive prior to curing. When fully cured, Alpha SAS 521 will require mechanical sanding to remove material.

## HEALTH & SAFETY INFORMATION

Alpha SAS521 is classified as hazardous according to Directive EC 1272/2008. Please refer to the Alpha SAS521 Safety Data Sheets for further health & safety information.

## STORAGE

Alpha SAS521 should be stored in its original container, with the syringe cap tightly secured, in dry conditions and at temperatures between -20°C and +35°C. Alpha SAS521 will keep satisfactorily for up to 24 months from date of manufacture if stored according to the recommended conditions.

## PRODUCT AVAILABILITY

Product Reference	Pack Size	Container	Box Quantity
Alpha SAS521	400ml	Twin Cartridge	N/A

**ALPHA**  
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