

S2049

HIGH PERFORMANCE POLYURETHANE CONTACT ADHESIVE



PRODUCT INFORMATION

Alpha S2049 is a polyurethane-based contact adhesive. S2049 has been specifically developed for bonding PVC and polyurethane fabrics to themselves and to GRP in the manufacture of rigid hull inflatable boats, but is also suitable for use in many other industrial applications. The adhesive can be used as a 1-part adhesive, but enhanced properties are achieved when used in conjunction with S 5001 Part B as a 2-part adhesive.

KEY INFORMATION

- High performance adhesive system
- Excellent adhesion to PVC and polyurethane materials
- Good adhesion to natural and synthetic rubbers
- Salt water resistant
- Good resistance to atmospheric oxidation, oil, some chemicals, aviation fuels, mild acids and alkalis

TYPICAL APPLICATIONS

Alpha S2049 is suitable for the following applications:

- Bonding PVC and polyurethane fabrics to themselves and to composite materials
- Inflatable liferafts and boats
- Upholstery furniture and seating furniture
- Footwear industry
- General rubber products
- Numerous industrial applications

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: Clear B: Dark Brown
Base	A: Polyurethane rubber B: Isocyanate
Consistency	Both: Liquid
Specific Gravity (20°C)	A: 0.86 B: 1.30
Total Solids Content	A: 21.5-24.5 % B: 19.0-21.0 %
Viscosity (20°C)	A: 2400-3200 cP B: N/A
Mix Ratio	100 parts A : 6 parts B (by weight) 100 parts A : 4 parts B (by volume)
Coverage	2 – 3 m ² of bonded material / litre*
Open Joint Time (mixed adhesive)	5 – 15 minutes*
Pot Life (mixed adhesive)	up to 4 hours at 20°C
Cure Time (mixed adhesive)	7 days
Heat Resistance (cured material)	1 Part: 60°C 2 Part: 120°C

* dependent upon ambient temperature, relative humidity and the materials used.

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
T-Peel Test (20°C, 65% RH)	Polyurethane	>100 N / 50mm
T-Peel Test (20°C, 65% RH)	PVC	>100 N / 50mm
T-Peel Test after Heat Exposure	Polyurethane	>100 N / 50mm (up to 120°C)
T-Peel Test after Heat Exposure	PVC	>100 N / 50mm (up to 120°C)
T-Peel Test after Cold Exposure	Polyurethane	>100 N / 50mm (down to -40°C)
T-Peel Test after Cold Exposure	PVC	>80 N / 50mm (down to -40°C)
T-Peel Test after Humidity Exposure	Polyurethane	>100 N / 50mm (30 - 98% RH)
T-Peel Test after Humidity Exposure	PVC	>100 N / 50mm (30 - 98% RH)

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 substrates must be clean of any dust, grit, loose material, wax, grease and oil using Alpha T161 or a suitable cleaner. The materials to be bonded should be dry.
Adhesive Application	<p>TWO-WAY STICK</p> <ol style="list-style-type: none"> Alpha S2049 is supplied as a pre-weighed kit that has the correct mix ratio. Ensure that the S2049 Part A has been stirred. If the user wants to use a smaller amount, mix 100 parts of Alpha S2049 Part A with 6 parts of Alpha S5001 Part B (by weight). Stir thoroughly until an even consistency is achieved. It is important that both parts of the bonding system are thoroughly mixed prior to application on to surfaces. Using a brush or roller coater, apply an even coating of adhesive to both of the surfaces. Allow the first coat to become touch dry (approximately 10 to 20 minutes). Apply a second coat to both surfaces and allow to dry until tacky (approx. 5-15 min). Position carefully and consolidate bond by firm even pressure over the whole area. A hand roller is recommended wherever possible.
Curing	The immediate high contact bond strength increases appreciably within the next 48 hours and will develop still further in service. For the best performance and heat resistance, leave at room temperature for 7 days, before subjecting to high in-service temperatures.
Cleaning	Alpha Cleaner T161 should be used to remove residues from surfaces.

HEALTH & SAFETY INFORMATION

Alpha S2049 Part A and Alpha S5001 Part B are classified as hazardous according to Directive EC 1272/2008. Please refer to the Alpha S2049 Part A and Alpha S5001 Part B Safety Data Sheets for further health & safety information.

STORAGE

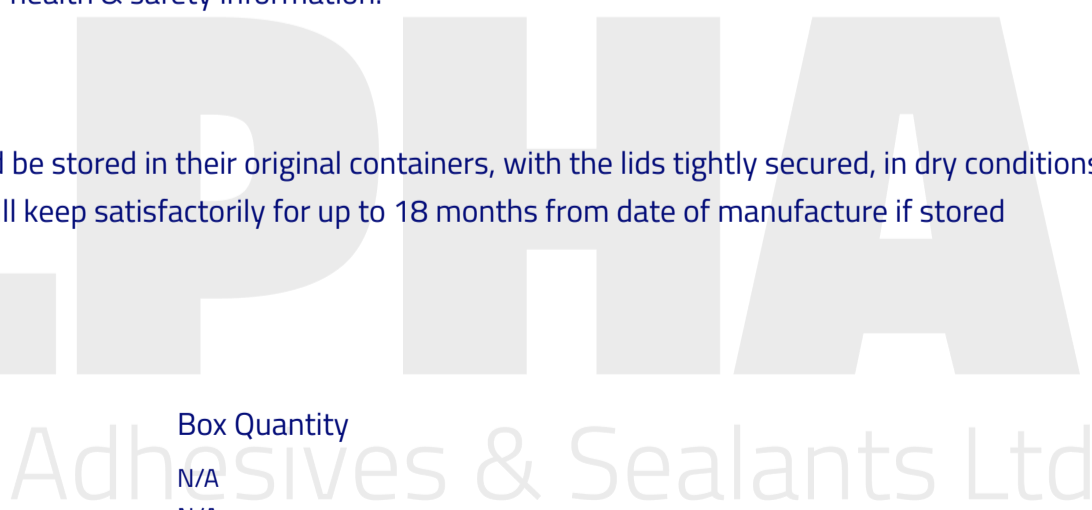
Both components of the Alpha S2049 bonding system should be stored in their original containers, with the lids tightly secured, in dry conditions and at temperatures between 5°C and 25°C. Alpha S2049 will keep satisfactorily for up to 18 months from date of manufacture if stored according to the recommended conditions.

PRODUCT AVAILABILITY

Product Reference	Pack Size	Container	Box Quantity
Alpha S2049 Part A	205 L	Drum	N/A
Alpha S2049 Part A	25 L	Drum	N/A
Part A/Part B	4.275 L / 170 ml	Tin / Bottle	N/A

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