

PSA550

Technical Data Sheet

Pressure Sensitive Adhesive

PSA550 Product Description

PSA550 is a low viscosity silicone pressure sensitive adhesive which dries to a low tack. It has an overall balance of peel strength, cohesion, lap shear strength and high temperature holding power which provides a versatility that makes this product useful in a wide variety of applications, even for the fastening and bonding of dissimilar materials. PSA silicone adhesive may be applied and heat cured on high speed laminating lines or at room temperature in a broad range of fastening applications. PSA550 silicone adhesive has exhibited good adhesion to many difficult to bond substrates. It is ideal for the bonding of silicone-coated material, silicone strips and foam.

PSA550 Application

PSA550 Silicone adhesive is supplied at a viscosity suitable for most conventional coating operations. It may be thinned by the addition of a solvent of appropriate KB value. Make sure all surfaces are clean and dust free, apply PSA550 to both surfaces that will be adhered together. Once the PSA550 is tack free (typically 10-30 minutes) it becomes a pressure sensitive adhesive, at this point the surfaces should be pressed firmly together. The adhesive will continue to harden for about 3 days.

Useful Temperature Ranges for Cured PSA550

Constant Temperature Range : -30°C to 165°C
Intermittent temperature range : -50°C to 200°C

Solvent Removal from Backing Film

To achieve optimum adhesive properties, it is essential to optimise the drying step of the process in order to assure that the solvent is removed from the adhesive film before the curing step of the process starts. Improper drying will result in residual solvent entrapment within the adhesive. If the adhesive is then exposed to temperatures higher than 93.5°C (200°F), decomposing peroxide in the catalyst can cause a cross linking reaction between solvent molecules and adversely affect the properties of the adhesive. Typical temperature range for the drying step of the process is 83°C (180°F) to 90°C (194°F). A typical drying cycle is 2 minutes at 90°C (194°F).

PSA550 Bonding Applications and Curing Process

PSA550 may be applied by brush, roller or any suitable coating device. Thinning, if required, may be done with a suitable solvent. Both surfaces to be bonded should be thoroughly cleaned with a suitable cleaning solvent and the adhesive should be applied to them and allowed to dry either in room temperature or at an elevated temperature. The length of drying time will depend on the solvent used, adhesive thickness and temperature it is exposed to. The

PSA550 Technical Data Sheet 11/06/2014

recommended adhesive thickness is between 1 to 4 mm. After the solvent has completely evaporated from the adhesive, the surfaces to be bonded should be firmly pressed together and the adhesive should be allowed to cure.

For the recommended solvent please contact your sales representative.

Typical Cure Rates at room temperature (21°C to 25°C) will require 3-7 days for the catalysed adhesive to develop maximum strength. The cure time can be shortened by elevating the temperature to a maximum 165°C. A typical shortened cure cycle is 24 hours at 25°C followed by 24 hrs at 100°C.

NOTE: Use in a well-ventilated area.

PSA550 Handling and Safety

Material Safety Data Sheets are available upon request from Silicone Solutions Ltd. When solvents are used, proper safety precautions must be observed.

PSA550 Storage Warranty Period

The warranty period is 6 months from date of shipment if stored in the original unopened container at 25°C (77°F)

Limited Warranty

Silicone Solutions warrants that its product will conform to Silicone Solutions Ltd internal specifications at the time of application or use, provided that the product is stored in accordance with Silicone Solutions Ltd recommendations and used or applied before the earliest of (1) the “use before date” indicated on the product package, (2) six months from the date of shipment, or (3) expiration of such other period or recommended storage time stated in the Silicone Solutions Ltd literature for the product. If notified in writing of a claim within six months of the products use of application, Silicone Solutions Ltd will at its option replace or refund the purchase price of any Silicone Solutions product with does not satisfy the foregoing warranty.

Limitation of Liability

Silicone Solutions Ltd shall in no event whether the claim is based on warranty, contract tort, strict liability, negligence or otherwise be liable for incidental or consequential damages, or for any other damages in excess of the amount of the purchase price. Note: For many products, Silicone Solutions Ltd may be able to offer a more extensive application specific warranty. For further information, contact Silicone Solutions Ltd Sales.

Legal Disclaimer

Each user bears the full responsibility for making its own determination as to the suitability of the Supplier’s materials, products, services recommendations or advice for its own particular purpose. Each user must identify and perform test and analyses sufficient to assure that its finished parts will be safe and suitable for use under end-use conditions. Because actual use of products by the user is beyond the control of the supplier, such use is within the exclusive responsibility of the user, and the supplier cannot be held responsible for any loss incurred through incorrect or faulty use of products. Further no statement contained herein concerning a possible or suggested use of any material product, service or design is intended or should be construed to grant any license under any patent or other intellectual property right of supplier or any of its subsidiaries or affiliated companies or as a recommendation for the use of such material, product. Service or design in the infringement of any patent or other intellectual property right.