TECHNICAL DATA SHEET

AS1420-100
1 Part Non-Corrosive Neutral Cure Adhesive Sealant and Potting Material (Electronic Grade)

Description

This is a heat cured, non-corrosive, neutral cure, 1-part, silicone adhesive sealant. It is one in a range of Addition cure products which are solvent free. It exhibits primerless adhesion to many substrates when cured at temperatures above 100°C. It cures to form a very tough resilient silicone elastomer. This product will not corrode copper or its alloys and is suitable for use with electronic components.

Key Features

- Fast cure with heat
- Thermally conductive
- Contains additives for a consistent bond layer thickness of 100 microns
- Non corrosive, tough protective elastomer

Application

Electronics, flame resistant, self gapping TIM

Use and Cure Information

This product is a ready to use 1-Part system. It is recommended that liquid versions be thoroughly mixed prior to use, particularly thermally conductive products which are supplied in tubs or pails. Ensure that all surfaces of the substrate are clean and degreased. The work area should be free of contaminants such as organic compounds of sulphur, phosphorus, nitrogen and tin, which act as catalyst poisons.

The rate of cure will depend on how long it takes for the sealant to reach the required curing temperature. Small beads of 1 to 2mm diameter, used as formed-in-place gaskets, can be cured quickly with hot air guns e.g. paint stripper types. With larger sections of sealant or when using as an encapsulant, cure times will increase and the use of an oven will be needed. Increasing the temperature will reduce cure times and maximum cure temperature should not exceed 200ºC. All times are based on the actual time in an air-circulating oven at the stated temperature. Note: Improved adhesion is achieved by post cure at 120 to 150ºC for 1 to 2 hours.

“For pneumatic dispensing of 310 ml cartridges, the recommended pressure is 2.25 to 3.45 bar (40 to 50 psi). Dispensing pressure above the recommended limits may lead to gas bypassing the piston, causing spluttering at the nozzle and poor bead quality”

Health & Safety

Health and Safety

Safety Data Sheets available on request.

Packaging

CHT Adhesives are available in a variety packaging including cartridges and bulk containers. Please contact our sales department for more information.

Revision Date	12 Feb 2024
Revision No	2
Download Date	22 May 2025

Property	Test Method	Value
Uncured Product		
Cure Profile		**20 - 30 mins at 100°C, 15 - 20 mins at 120°C, 10 - 15 mins at 150°C, 1 - 5 mins at 175°C**
Cure Type		**Addition Heat Cure**
Rheology		**Flowable**
Self Bonding		**Yes**
Viscosity Mixed	Brookfield	**43000 cP**
Cured Product		
After 1 hour at 50°C		
Color		**Grey**
Density	BS ISO 2781	**2.06 g/cm3**
Elongation at Break	ISO 37	**70 %**
Hardness Shore A	ASTM D 2240-95	**67**
Linear Coefficient of Thermal Expansion (ppm/°C)		**187 ppm/°C**
Linear Shrinkage (%)		**2 %**
Max Working Temp		**260 °C / 500 °F**
Min Working Temp		**-50 °C / -58 °F**
Tensile Strength	ISO 37	**3.1 N/mm2 / 450 psi**
Thermal Conductivity		**1.38 W/mK**
Volume Coefficient of Thermal Expansion (ppm/°C)		**562 ppm/°C**
Electrical Properties		
Dielectric Constant	ASTM D-150	**6**
Dielectric Strength (V/mil)		**571 V/mil**
Dielectric Strength kV/mm	ASTM D-149	**22.5 kV/mm / 572 V/mil**
Volume Resistivity (Ohms cm)	ASTM D-257	**7.7E+15 ohms cm**
Storage		
Max Storage Temperature		**15 °C / 59 °F**
Min Storage Temperature		**-5 °C / 23 °F**
Shelf Life		**6 mths**

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