

AS1421

SILCOTHERM 1 Part flowable heat cured 2.1 W/mK silicone adhesive

Introduction

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

- UL94V0 approved file Number E334038
- Adhesion and 3mm cure through at 125°C after only 10 minutes
- Thermally conductive
- Shelf life = >12 months at <5°C

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 200°C. 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 150°C 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 and Safety

Safety Data Sheets available on request.

Packaging

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

Revision Date : 02/11/2017

Download Date : 22/01/2019

Property

Uncured product

Appearance
Cure Type
FDA
Max Cure Mins @ 100 °C
Rheology
Self Bonding
Viscosity A-Part mPas
Viscosity Mixed mPas

Test Method

CFR (21) 177.2600

Brookfield
Brookfield

Value

Grey paste
Addition
No
16 mins
Paste
Yes
140000 mPas
140000 mPas

Cured product

After 1 hour at 125°C

CTE Linear ppm/°C
CTE Volumetric ppm/°C
Colour
Duro Shore A
Elongation %
Max Working Temp +°C
Min Working Temp - °C
Modulus Youngs MPa
SG
Tensile MPa
Thermal Conductivity W/mK
UL 94V-0

ASTM D 2240-95
ISO 37
AFS_1540B

BS ISO 2781
ISO 37

195 ppm/°C
586 ppm/°C
Grey
56
105 %
210 °C
-50 °C
0.752 MPa
2.18
2.2 MPa
2.1 W/mK
Yes

Storage

Max storage temperature °C
Min storage temperature °C
Shelf life

5 °C
-5 °C
12 mths

Electrical properties

Dielectric Strength kV/mm ASTM D-149
Volume Resistivity ohms cm ASTM D-257

>18 kV/mm
3.5E+13 ohms cm

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