

SE2020 (ESP581-1) Two Part Thermally Conduvtive Gap Filling Silicone Compound

Introduction

SE2020 is a two part, thermally conductive, thixotropic material, which cures at room temperature or can be accelerated with heat. It is specifically formulated to give low hardness and resistance to slump and features low and high temperature mechanical and chemical stability. SE2020 has a natural low level tack, ideal for applications where a strong mechanical or chemical bond is not required. SE2020 has a controlled volatile content and an easy 1 to 1 mix ratio by volume or weight.

Key Features

- > Controlled volatile content
- > Thermally conductive
- Semi flowable paste for low pressure extrusion from package

Use and Cure Information *How to Use*

IMPORTANT: SE2020 Part A contains the platinum catalyst, great care should be taken when using automatic dispensing equipment. Please ensure that it is not contaminated by residual hydride containing rubber in the dispensing equipment, as curing will result. If in doubt, it's advised to thoroughly purge the equipment with a suitable hydrocarbon solvent or silicone fluid.

Curing Conditions

The following table offers a guide to the rate of cure of **SE2020** at various temperatures, mixing of the components between 15 and 25°C is recommended to ensure adequate pot life for degassing and handling. The pot life can be extended to several hours by chilling the components.

Temperature, °C Max Cure Time

25 **5** hrs 100 **2** mins

Inhibition of Cure

Great care must be taken when handling and mixing all addition cured silicone elastomer systems, that all the mixing tools (vessels and spatulas) are clean and constructed in materials which do not interfere with the curing mechanism. The cure of the rubber can be inhibited by the presence of compounds of nitrogen, sulphur, phosphorus and arsenic; organotin catalysts and PVC stabilizers; epoxy resin catalysts and even contact with materials containing certain of these substances e.g. moulding clays, sulphur vulcanised rubbers, condensation cure silicone rubbers, onion and garlic.

Property Uncured Product	Test Method	Value	
Colour A Part:		Pale grey	
Colour B Part:		Black	
Appearance:		Paste	
Viscosity A Part:	Brookfield	108000 mPa.s	
Viscosity B Part:	Brookfield	140000 mPa.s	
Catalysed viscosity	Brookfield	174000 mPa.s	
Pot Life:		60 minutes *	
SG 'A'Part		2.3	
SG 'B'Part		2.3	
* measured at 23+/-2°C and 65% relative humidity			

Cured Elastomer

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Colour		Black
Hardness:	ASTM D 2240-95	62 Shore 00
Specific Gravity:	BS 903 Part A1	2.3
Linear Shrinkage:		0.1 %
Thermal Conductivity:		2.0 W/m
Coefficient of Thermal Expan	nsion:	
Volumetric		558 ppm / °C
Linear		186 ppm / °C
Min. Service Temperature:		-60°C
Max. Service Temperature:	AFS 1540B	200 °C

(after 7 days cure at 23+/-2°C and 65% relative humidity)

Electrical Properties Surface Resistivity

Volume Resistivity:	ASTM D-257	9.6E+12 Ω.cm
Dissipation Factor at 1MHz:	ASTM D-150	4.5

Adhesion

Self Bonding No

All values are typical and should not be accepted as a specification.

Health and Safety - Material Safety Data Sheets available on request.

Packages – SE2020 is supplied in 50 ml twin cartridges and 2 x 600 ml cartridge kits. Please contact your Regional Sales Manager for alternative packaging options

Arrangements can be made to supply in other pack sizes.

Storage and Shelf Life – Expected to be **6** months in original, unopened containers below 25°C

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