Sure-Form Gap Filling Gel

Product Code: 52057

TECHNICAL DATA SHEET

Developmental Product Description

AOS Sure-Form Gap Filling Gel 52057 is a one part, non-silicone, synthetic-based thermal grease that is twice as conductive as our 52022. This gray product is very tacky, resists vibration and shock, will stay in place and not run, even under elevated use temperatures. This product is very viscous. The initial yield point is very high. The material will flow under higher shear, will increase in viscosity slightly over time and will cure at the air exposed edges while remaining compliant in the interface providing excellent long term stability. This solid is able to withstand temperatures in excess of 180 ^{o}C for short periods of time. 52057 was developed by AOS in response for a moderately priced product that adheres very well initially and stays put in place while still providing increased thermal transfer efficiency. The material appears compatible with most electronic materials. The material does not phase separate.

Product Features & Benefits

- **AOS 52057** retains all the unique advantages of AOS Heat Sink Compound (Product Code: 52038) with the added benefit of high temperature use. The non-silicone, "no creep" feature extends OEM service life. It is compatible with most metal and plastic components. It has a five year minimum shelf life in its unopened container. Additional benefits include excellent thermal conductivity and thermal resistance over a wide operating temperature range.

- **AOS 52057** is a much more cost effective gap filling solution compared to pre-formed gap pads. The product has considerably greater thermal conductivity than our standard non-silicone thermal grease, and can be modified by customer request.

Typical Properties

Property	Value	Test Method
Specific Gravity, @ 25°C	2.5	ASTM D-70
Bleed, @ 200°C, 24 Hrs., %/Wt	0	FTM-321 MODIFIED
Evaporation, @ 200°C, 24 Hrs., %/Wt.	0	FTM-321 MODIFIED
Thermal Conductivity, @ 36°C		
W/m-K	1.7	ASTM D-5470-06 @ (1, 2, 5,and 20 mils)
Thermal Resistance, @ 50 ^{o}C		Oracle TTV model
^{o}C/W	0.1740	270-7806-01
Anticipated Minimum Bond Line (mils)		
Based on filler Dimensions	5 mil	
Electrical Properties		
Dielectric Strength, 0.05" gap, V/mil	318	ASTM D-149
Dielectric Strength after exposure to 85°C/85% R.H. for 48 hours	212	
Dielectric Constant, 25°C @ 1,000 Hz	5.0	ASTM D-150
Dissipation Factor, 25°C @ 1,000 Hz	0.0027	ASTM D-150
Volume Resistivity, ohm-cm	2.15 x 10^{15}	ASTM D-257
Operating Temperature Range	-40°C to 180°C	
Flow Rate grams/min (2 mm orifice @ 50 psi/min. @ 74 ± 2°F). Newtonian Flow	3-6	AOS METHOD
Appearance	Gray Paste	

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