



AOS Thermal Compounds, LLC

AOS HEAT SINK COMPOUND 400

Product Code: 52032

TECHNICAL DATA SHEET

Product Description

AOS Heat Sink Compound-400, created by AOS, is an exceptionally soft, non-silicone thermal grease. In addition to solving the problems of contamination and migration associated with traditional silicone-based thermal grease, this unique material can be spread into an extremely thin film while remaining a homogenous mixture.

The primary advantage of this non-silicone product is long-term material stability. This means that the compound remains intact and in-place over the full operable life of your hardware. Exhibiting virtually no bleed or evaporation over a wide operating temperature range - even in a vacuum atmosphere (10^{-5} tor/mil, 24 hrs. @ 100°C). Compound will not leach, dry, harden, or melt in normal use.

Silicone-based compounds have an undesirable tendency to physically migrate and contaminate components nearby. This interferes with circuit operation long after hardware installation to cause unexpected, untimely and often inaccessible problems. The AOS Heat Sink Compound **no creep** feature extends circuit life by protecting components longer and by eliminating premature failure of adjacent components caused by migrating silicone base fluid.

Product Features & Benefits

Specially formulated with a softer consistency so material can be spread easily and evenly over a thin surface as on a microfilm or in a silk screening application. No creep feature extends OEM service life. Compatible with metal and plastic components; no solder bath contamination; very low bleed and evaporation. 5 year minimum shelf life; excellent thermal conductivity and thermal resistance; wide operation range; meets KS 21343 spec and Military Specification MIL-C-47113B; will not dry, harden or melt in normal use; easy to apply and clean-up; safe to use.

Major Applications

Ideal for silk screening; hi-speed automated dispensing, or wherever the thinnest possible thermal grease interface is required. Other applications include mounting semiconductor devices; mounting power transistors and diodes; coupling entire heat generating assemblies to chassis; heat transfer medium on ballast; thermal joints; thermocouple wells; mounting power resistors; transfer medium on calorods; for any device where efficient cooling is required; major industries served include electronic (computer, appliance, wireless, etc.), automotive, and electrical.

Typical Properties

<u>Property</u>	<u>Value</u>	<u>Test Method</u>
Consistency (Penetration, worked, 60x)	390-410	ASTM D-217
Bleed , @ 200°C, 24 Hrs., %	0.1	FTM-321 MODIFIED
Evaporation , @ 200°C, 24 Hrs., %	0.6	FTM-321 MODIFIED
Specific Gravity , @ 25°C	2.7	ASTM D-70
Thermal Conductivity , @ 25°C		
Cal/Sec, cm°C	16.7×10^{-4}	HOT WIRE METHOD
BTU.In/(Hr.Ft ² .°F)	4.8	PER
W/m°C	0.70	MIL-C-47113
Operating Temperature Range	-40°C to 200°C	N/A
Electrical Properties		
Dielectric Strength, 0.05" gap, V/mil	305	ASTM D-149
Volume Resistivity, ohm-cm	1.65×10^{14}	ASTM D-257
Dielectric Constant, 25°C @ 1,000 Hz	4.5	ASTM D-150
Dissipation Factor, 25°C @ 1,000 Hz	0.0029	ASTM D-150
Appearance	Smooth, White Paste	Visual
Flow Rate grams/min.	20	AOS Method

Please know that customers are responsible for testing AOS Thermal Compounds materials for their proposed use. Any information furnished by AOS Thermal Compounds and its agents is believed to be reliable, but AOS Thermal Compounds does not guarantee the results to be accurate and makes no warranties as to the fitness, merchantability, or suitability of any AOS material or product for any specific or general use and shall not be held liable for incidental or consequential damages of any kind. (040201)

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