



AOS Thermal Compounds

AOS HEAT SINK COMPOUND

Product Code: 52022



TECHNICAL DATA SHEET

Product Description

AOS Non-Silicone Heat Sink Compound was created developed over 35 years ago by AOS to solve the problems of contamination and migration associated with silicone-based products. The compound is a unique synthetic-based thermal grease used to insure quick, efficient heat transfer and dissipation. The primary advantage of this non-silicone product is **long-term material stability**. This means that the compound stays put and on the job 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 industrial 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

No creep 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 operating 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

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; and for any device where efficient cooling is required. Major industries served include electronic (computer, appliance, wireless, etc.), automotive, and electrical.

Typical Properties

Property	Value	Test Method
Consistency (Penetration, worked, 60x)	320	ASTM D-217
Specific Gravity , @ 25°C	2.7	ASTM D-70
Bleed , @ 200°C, 24 Hrs., %/Wt	0.1	FTM-321 MODIFIED
Evaporation , @ 200°C, 24 Hrs., %/Wt.	0.6	FTM-321 MODIFIED
Thermal Conductivity , @ 36°C W/m-K	0.92	ASTM D5470-95 (modified)
Electrical Properties		
Dielectric strength, 0.05" gap, V/mil	305	ASTM D-149
Dielectric constant, 25°C @ 1,000 Hz	4.50	ASTM D-150
Dissipation factor, 25°C @ 1,000 Hz	0.0029	ASTM D-150
Volume Resistivity, ohm-cm	1.65×10^{14}	ASTM D-257
Operating Temperature Range	-40°C to 200°C	
Flow Rate grams/min.	4 to 6.5	AOS Method
Appearance	Smooth, Off-White Paste	

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