



TECHNICAL DATA SHEET

Product Description

AOS Non-Silicone 52041 Heat Sink Compound was developed by AOS in response to the need for power electronics cooling. The gap filler is available in easy-handling sheets. The material is sandwiched between two 0.002” PET Polyethylene terephthalate plastic) liners. The liners are readily removed and the material is easy to place on the surfaces to be cooled. Product code 52041 sheets are available thicknesses ranging from 0.06 – 0.5”. The thermal compound is also available as a high viscosity paste.

The Non-Silicone Advantage

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’s *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

- This easy-to-handle, pre-formed, sheet product retains all the unique advantages of AOS Heat Sink Compound (product code 52052) but has over **2 times the thermal conductivity** of standard non-silicone heat sink compounds on the market. The material exhibits virtually no bleed or separation after hundreds of thermal cycles between 0 – 150 °C.
- While other products in this range become costly, **AOS Non-Silicone HSC**, remains comparable in cost to our standard AOS Heat Sink Compound.
- As with our entire line of Heat Sink Compounds, the AOS technical staff can modify **AOS Non-Silicone HSC** to meet your exacting specifications.

Typical Properties

<u>Property</u>	<u>Value</u>	<u>Test Method</u>
Specific Gravity, @ 25°C	2.7	ASTM D-70
Bleed, @ 200°C, 24 Hrs., %/Wt	0.0 %	FTM-321 MODIFIED
Viscosity, 1 sec⁻¹, 25°C/50°C	1,200,000/800,000	ARES RHEOMETER
Evaporation, @ 200°C, 24 Hrs., %/Wt.	0.5 %	FTM-321 MODIFIED
Thermal Conductivity, @ 36°C	2.2 W/m-K	ASTMD 5470-06
Thermal Resistance, @ 50°C	0.15 °C/W	Oracle TTV Model 270-7806-01
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 200°C	
Flow Rate	4 to 6.5 g/min	AOS Method
Appearance	Gray Solid Between PET Sheets	
Shelf Life	5 Years	

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. (040206)

Tel. (732)389-5514 22 Meridian Road, Suite 6, Eatontown, NJ 07724 Fax (732)389-6380

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