



Thermal Interface Material X-23-7921-5 (Non-Solvent)

PRODUCT DESCRIPTION

Thermal grease, X-23-7921-5, is a Non-Solvent type of thermal interface material developed by Shin-Etsu Chemical Co., Ltd. (hereinafter SEC) to meet the current and future thermal management requirements of high-performance microprocessors. Its purpose is to increase heat sink effectiveness, and it is used to fill any air gap between the processor and the heat sink, because air is a thermal insulator with a thermal conductivity of only 0.027W/mK. After the processor is in the socket, the grease is applied to the raised area on top of the processor. The heat sink is then centered on the processor top, with the raised areas on the bottom of the heat sink aligned with those on the processor top. You should then gradually but firmly press the heat sink down until you can feel that the metal surface of the heat sink is in contact with the metal top of the processor. Doing so will evenly distribute the thermal grease between the two surfaces. Any excess grease can be removed by wiping with a soft cloth.

PROPERTIES

Property

Viscosity @ 25°C(Pascal Second)	360
Appearance	Gray
Volatile Content after 24hrs. at 50°C(%)	0.44
Specific Gravity	2.5
Thermal Conductivity(W/m °K)	>6.0
Thermal Resistance (mm ² -K/W) @20psi	<7.0
Bond Line Thickness (um) @20psi	25

Packaging Description

Thermal Grease X-23-7921-5 is available in:

Syringes:	0.5 gm, 1.0 gm, 1.5 gm,
Cartridges:	55 gm, 150 gm, 400 gm
Bulk:	2.0 Kg

Custom Sizes Available

Storage Conditions: 60°F to 85°F

APPLICATION

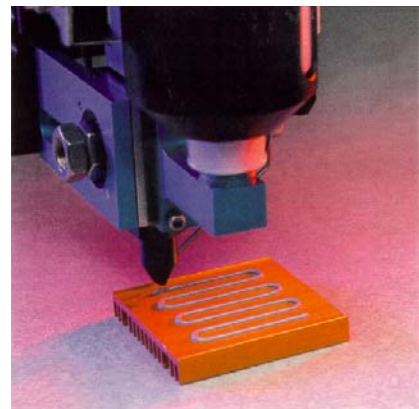
Shin-Etsu MicroSi's X-23-7921-5 material is available in several cost effective packages which include syringes, cartridges and bulk containers.



Shin-Etsu MicroSi's syringes are ideal for manual applications. Pre-filled syringes assure that a consistent shot weight is applied to the intended surface. Shin-Etsu MicroSi's SQC processes provide a consistent dispense weight with each syringe. The Syringe Delivery Method provides the most flexibility for an organization, with the ability to utilize the

same product package for production and field requirements without additional investment in application tools.

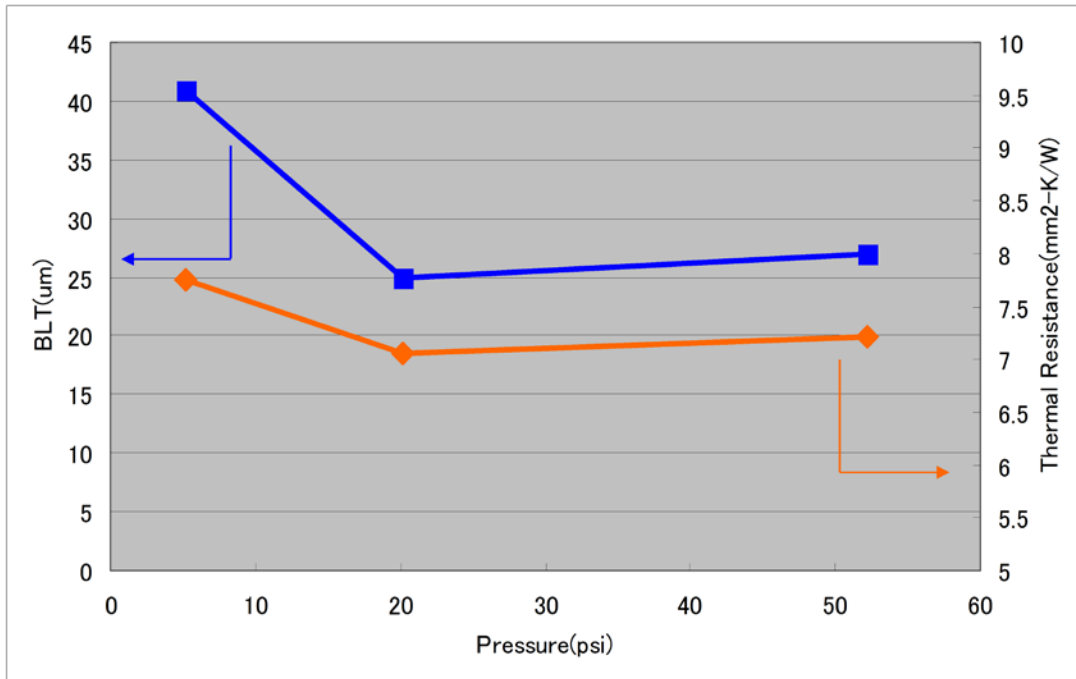
For medium to large production applications, Shin-Etsu MicroSi can provide X-23-7921-5 in cartridges. The cartridge delivery system can be utilized with either manual, automated or silk-screening equipment. The cartridge delivery system allows dispensing of the material, while protecting the integrity and exposure level of the unused portion.



Bulk delivery provides the lowest possible unit cost. Bulk purchases are available for large scale production facilities where material is consumed at a rapid rate.

PERFORMANCE

Pressure (psi)	BLT (um)	Thermal Resistance (mm2-K/W)
5.2	41	7.76
20.2	25	7.05
52.2	27	7.22



A key factor in selecting a thermal interface material is the relationship between bond line thickness (BLT) and thermal resistance. The chart above illustrates the thermal resistance at different bond line thicknesses.

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Shin-Etsu MicroSi

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- Thermal Interface Materials
- KJR Liquid Coating Materials
- Contrast Enhancement Materials
- Mask Blanks
- PBN Crucibles
- Photoresists / Developers
- Quartz Substrates & Wafers
- Liquid Underfill Materials
- Barrier Coast
- Pellicles
- Flexible Copper Laminate
- Epoxy Molding Compounds
- Adhesion Promoters

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