

PRODUCT DATA SHEET

HSMF

Thermal Interface Material

Introduction

HSMF thermal interface material is a metal/polymer hybrid technology designed to incorporate some of the benefits of both technologies. The polymer portion exhibits very high compliance and some amount of tackiness. This helps to achieve a low interfacial resistance. The metal portion is high thermal conductivity improving the overall performance of the system. This material resists pump-out and bake-out, performs better over time, and is easy to use. The standard **HSMF** materials are well suited for TIM2 applications while the OS version is specifically designed for use in burn-in and test applications.



About this Product

HSMF is a compressible material for use in a wide range of applications requiring thermal transfer. There are several thicknesses available to accommodate varying levels of planarity. In general, if the surfaces are flat and planar, a thinner TIM will be recommended. Assembly is efficient as this material has an inherent adhesive property, allowing for ease of placement. **HSMF** cleans up with IPA, making rework easy. Improved performance is ideal for long-life reliability as this material does not pump-out or bake-out in use over time. Because this material contains metal, it cannot be considered electrically isolating even though the polymer portion is. The polymer material used in **HSMF** is silicone-free and not prone to outgassing in critical optical applications.

HSMF products come with a release liner to protect the polymer layer. Be sure to remove the release liner before placement.

Standard Configurations

HSMF-04 (100 microns)	25µm	Polymer
	50µm	Aluminum
	25µm	Polymer
HSMF-06 (150 microns)	50µm	Polymer
	50µm	Aluminum
	50µm	Polymer
HSMF-10 (250 microns) (special request only)	50µm	Polymer
	50µm	Aluminum
	50µm	Polymer
	50µm	Aluminum
	50µm	Polymer
HSMF-OS (100 microns)	50µm	Polymer
	50µm	Aluminum

Mechanical and Physical

Color	Dark gray, aluminum backer
Hardness	Grease is compliant @ 10psi
	Aluminum backer 310MPa
Thickness Range	100, 150 microns ± 12.5 microns
Pressure	10psi minimum to 500psi
Maximum Operating Range	-40–175°C

Storage and Packaging

HSMF can be provided in a variety of packaging configurations, depending on volume and size. If automation is required, tape & reel packaging is available.

Shelf life is 5 years in unopened packaging.

Unused material should be stored in original packaging resealed for up to 12 months at room temperature.

Technical Support

Indium Corporation's internationally experienced engineers provide in-depth technical assistance to our customers. Thoroughly knowledgeable in all facets of Materials Science as it applies to the electronics and semiconductor sectors, Technical Support Engineers provide expert advice in solder preforms, wire, ribbon, and paste. Indium Corporation's Technical Support Engineers provide rapid response to all technical inquiries.

Safety Data Sheets

The SDS for this product can be found online at <http://www.indium.com/sds>

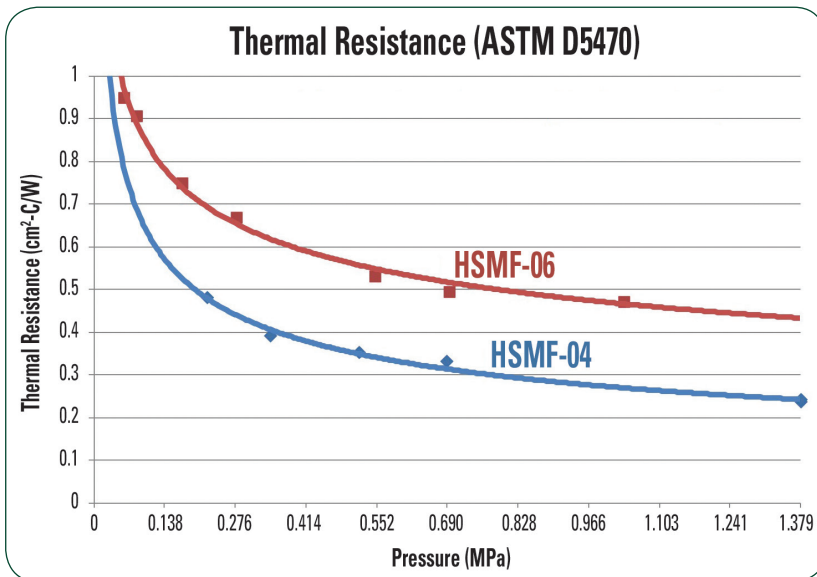
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Testing Data



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All of Indium Corporation's solder paste and preform manufacturing facilities are IATF 16949:2016 certified. Indium Corporation is an ISO 9001:2015 registered company.

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