MacDermid Alpha
ELECTRONICS SOLUTIONS

Electrolube® Thermal Interface Materials

Portfolio Overview

THERMAL INTERFACE MATERIALS

macdermidalpha.com
Rev 22072026

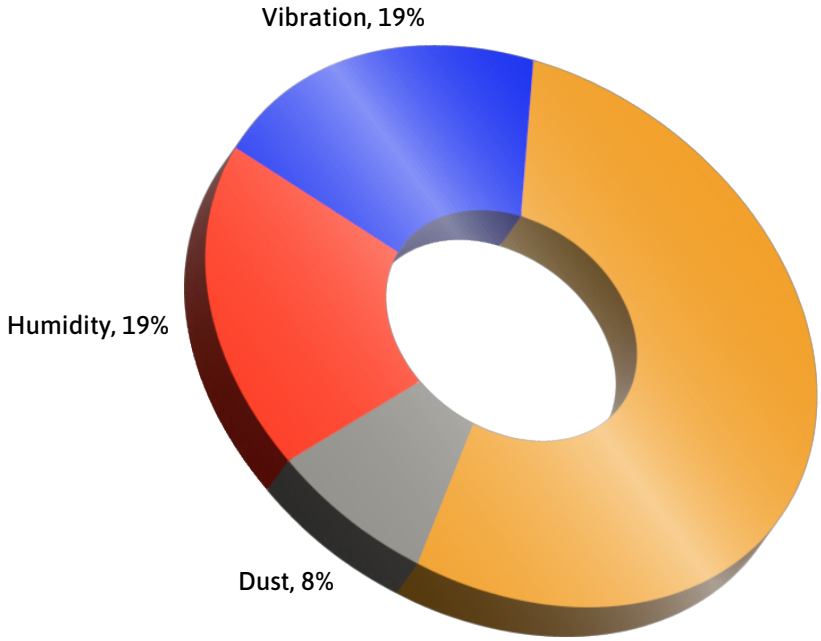
Electrolube® Thermal Interface Materials

Why Thermal Management Matters

During use, some electronic components can generate significant amounts of heat. Failure to effectively dissipate this heat away from the component and the device can lead to reliability concerns and reduced operational lifetimes.

Importance of Thermal Management

Causes of Electronic Failures



Product Range

Thermal Interface Materials

Sheet Applied

Liquid Applied

Thin Dielectric Sheets	Gap Filling Pads	Thermal Pastes	Pre-Cured Gels	Liquid Gap Fillers
• 0.15 ~ 0.3 mm thickness • Provides high dielectric strength • Available as dual-sided adhesive tape	• 0.5 ~ 5 mm thickness • Compensates for height differences • Easily reworkable	• 0.04 ~ 0.1 mm thickness • One-component, uncured • No curing, no mixing required	• 0.1 ~ 1.5 mm thickness • One-component, pre-cured • Creates very low stress	• 0.1 ~ 3 mm thickness • Two-component, cures in place • Designed for high volume dispensing
Available in custom-cut sizes	**Offered in silicone and non-silicone**	**For very low thermal impedance**	**High vertical gap stability**	**Very reliable, no pump-out**

Electrolube® Thermal Interface Materials

Liquid Applied Materials

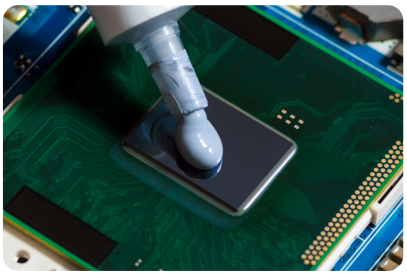
Thermal Pastes

- One-part, uncured paste
- Silicone and silicone-free solutions
- No post-cure, no mixing required
- Available in various pack size for automated application

Product	Thermal Conductivity (W/m-K)	Chemistry	Density	Viscosity (Pa-s)	Minimum bondline thickness (µm)	Operating Temperature	Dielectric Strength (kV/mm)
HTS	0.9	Silicone	2.1	215	35	-50 to +200°C	18
HTSP	3.0	Silicone	3.0	45	100	-50 to +200°C	18
HTC	0.9	Non –Silicone	2.0	205	35	-50 to +130°C	42
HTCP	2.5	Non-Silicone	3.0	108	100	-50 to +130°C	42

Pre-Cured Gel

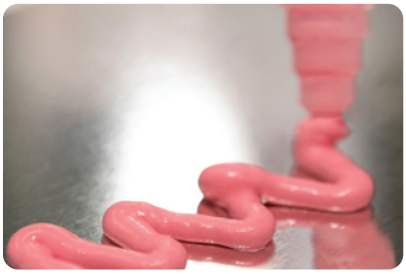
- One-part, pre-cured paste
- No post-cure, no mixing required
- Enhanced vertical gap stability
- Suitable for automated dispensing



Product	Thermal Conductivity (W/m-K)	Color	Density	Low-Shear Viscosity (Pa-s)	High-Shear Viscosity (Pa-s)	Dielectric Strength (kV/mm)	Operating Temperature	Bondline Thickness (mm)	Thermal Impedance at 0.1mm thickness (°C-inch²/W)
PCG300	3.0	Blue	3	600	170	12	-60°C to +180°C	0.1 to 1.5	0.08
PCG400	4.0	Blue	3.4	1000	100	12	-60°C to +180°C	0.1 to 1.5	0.07

Liquid Gap Fillers

- Two-part, Cure-in-Place formulation
- 1-to-1 mixing ratio
- No risk of pump-out or shake-out
- Suitable for high-volume automated dispensing



Product	Thermal Conductivity (W/m-K)	Colour	Mix Ratio	Density	Mixed Viscosity (Pa-s)	Cured Hardness (Shore 00)	Dielectric Strength (kV/mm)	Operating Temperature	Cure Time at RT	Cure Time at 100C
LGF200	2.0	Gray	1:1	2.6	60	40	>10	-50°C to +200°C	24 hours	30 min
LGF400	4.0	Blue	1:1	3	60	65	>10	-50°C to +200°C	24 hours	30 min
LGF600	6.0	Pink	1:1	3.2	100	65	>10.	-50°C to +200°C	24 hour	20 min

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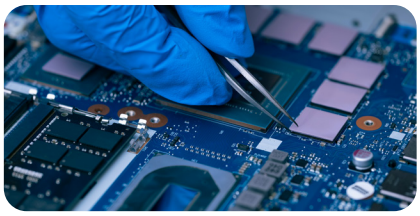
Sheet Applied Materials

Gap Filling Pads

- Very soft, easily compressible, available in custom-cut sizes/shapes
- Silicone and silicone-free formulations
- Additional material thicknesses available upon request

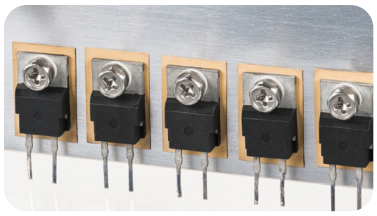


Product	Thermal Conductivity (W/m-K)	Color	Density	Hardness (Shore 00)	Dielectric Strength (kV/mm)	Operating Temperature	Thickness Range (mm)	Thermal Impedance at 10 psi (°C-inch²/W)
GFP150FG	1.5	Pink	2.6	18	12	-60 to +180°C	0.5 to 5.0	1.09
GFP200	2.0	White	2.1	30	11	-60 to +180°C	0.5 to 5.0	0.71
GFP300	3.0	Blue	2.8	30	12	-60 to +180°C	0.5 to 5.0	0.50
GFP300EC	3.0	Dark Grey	2.6	18	12	-60 to +180°C	0.5 to 5.0	0.56
GFP300LD	3.0	Grey	2.8	10	12	-60 to +180°C	0.5 to 5.0	0.50
GFP400	4.0	Grey	3.0	25	12	-60 to +180°C	0.5 to 5.0	0.32
GFP500	5.0	Red	3.2	60	12	-60 to +180°C	0.5 to 5.0	0.37
GFP500HV	5.0	Grey	3.0	50	12	-60 to +180°C	0.5 to 5.0	0.42
GFP500FG	5.0	Grey	3.1	25	10	-60 to +180°C	0.5 to 5.0	0.40
GFP600	6.0	Grey	3.3	55	12	-60 to +180°C	0.5 to 5.0	0.32
GFP800	8.0	Purple	3.4	50	8	-60 to +150°C	0.5 to 5.0	0.26
GFP850	8.5	Grey Green	3.4	65	8	-60 to +150°C	1.0 to 5.0	0.22
GFP1300	13	Grey Green	3.4	65	8	-60 to +150°C	0.5 to 3.0	0.20
GFP1500	15	Purple	3.3	65	8	-60 to +150°C	0.5 to 3.0	0.19
GFP1800	18	Purple	3.3	65	8	-60 to +150°C	0.5 to 3.0	0.15
GFP2000	20	Brown	3.3	70	8	-60 to +150°C	0.5 to 3.0	0.11
GFP500NS*	5.0	Grey	3.3	60	8	-60 to +125°C	0.5 to 5.0	0.37

**Silicone-Free*

Thin Dielectric Sheets

- Featuring Fiberglass or Polyimide reinforcement
- Double-sided adhesive tape with high bonding strength
- Polyimide reinforcement for high dielectric strength (12kV)
- Available in custom-cut shapes and dimensions



Product	Description	Thermal Conductivity (W/m-K)	Reinforcement Layer	Dielectric Strength (kV/mm)	Material Thickness (mm)	Thermal Impedance at 20 psi (°C-inch²/W)	Operating Temperature
TDS100P	Dielectric Sheet	1	Polyimide	12	0.15	0.31	-60 to +180°C
TDS120FG	Dielectric Sheet	1.2	Fiberglass	4	0.23	0.36	-60 to +180°C
ACT090FG	Adhesive Tape	0.9	Fiberglass	2 / 3	0.15 / 0.25	0.47 / 0.781	-60 to +120°C

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techinfo@macdermidalpha.com
macdermidalpha.com

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