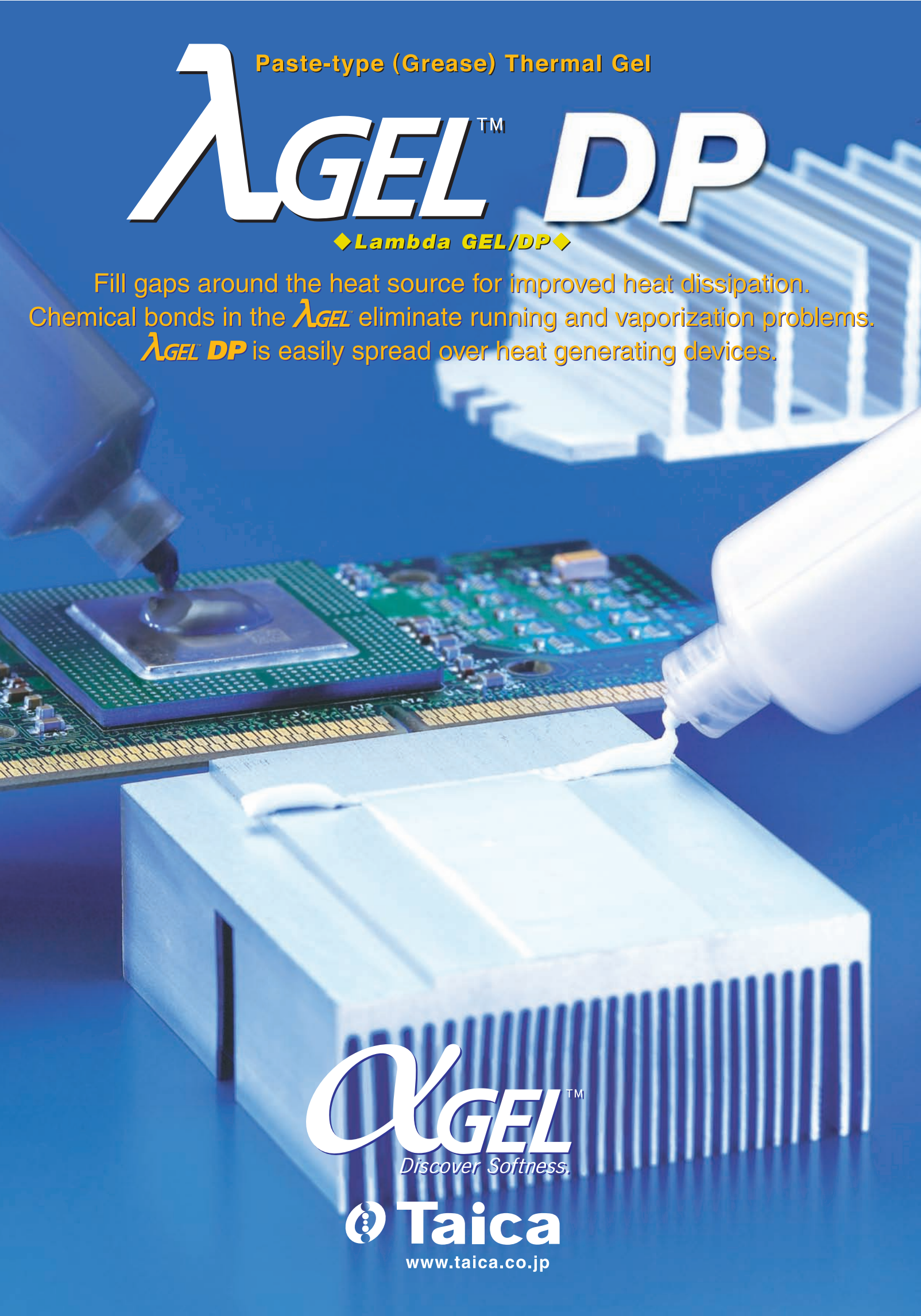
Paste-type (Grease) Thermal Gel

λGEL™ DP

◆Lambda GEL/DP◆

Fill gaps around the heat source for improved heat dissipation.
Chemical bonds in the λGEL™ eliminate running and vaporization problems.
λGEL™ DP is easily spread over heat generating devices.



αGEL™
Discover Softness.

Taica
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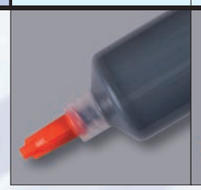
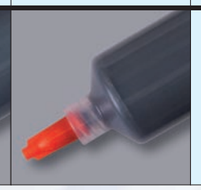
Paste-type (Grease) Thermal Gel λGEL DP Series

About λGEL DP series

- ◆ **λGEL DP series** are very soft paste-type (grease) gel with heat conducting properties.
- ◆ Cross-linked particles of the λGEL eliminate running and vaporization seen with other traditional grease and phase change materials.
- ◆ **DP-100,-200,** and **-300** products have better conductive properties than standard grease.
- ◆ **λGEL DP series** have very high specific volume resistance ratio up to 7.2×10^{14} Ω·cm.
- ◆ **λGEL DP series** have high breakdown voltage characteristics up to 9.6 kV/mm
- ◆ **λGEL DP series** have a very low dissipation factor down to 0.0004 at 1MHz.
- ◆ **REP-100** is very soft paste-type gel with electromagnetic noise absorption property.

Specifications

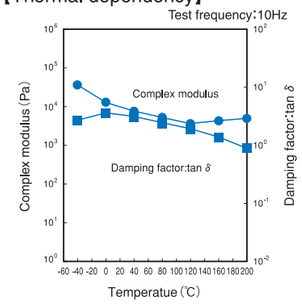
Item		Paste-type Thermal Gel **DP Series**			EMI absorbent + Thermal Conductive Gel	Remark
		DP-100	**DP-200**	**DP-300**	**REP-100**	
Thermal conductivity (W/m·K)	Our tests	6.5	4.8	4.8	1.0	Geltec std.
	Hot Wire Method ※1	2.1	1.6	1.6	0.6	JIS R 2616
Appearance		Gray paste	Gray paste	White paste	Black	—
Specific gravity		2.8	2.6	2.7	2.9	JIS K 6249
Hardness (Cone penetration・1/10mm not mixed)		51	55	60	60	JIS K 6249 (1/4cone)
Specific volume resistance ratio (Ω·cm)		5.9×10^{13}	7.2×10^{14}	1.4×10^{14}	2.0×10^{11}	JIS K 6249
Dielectric constant	〈50Hz〉	8.9	7.6	4.4	—	JIS K 6249
	〈1kHz〉	7.8	6.7	4.2	—	JIS K 6249
	〈1MHz〉	7.0	6.6	4.0	—	JIS K 6249
Dielectric dissipation factor	〈50Hz〉	0.234	0.017	0.005	—	JIS K 6249
	〈1kHz〉	0.061	0.007	0.004	—	JIS K 6249
	〈1MHz〉	0.015	0.005	0.0004	—	JIS K 6249
Dielectric breakdown voltage (kV/mm)		5.0	5.6	9.6	4.0	JIS K 6249
Low molecular weight siloxane level ΣD4-10 (ppm)	Solvent extraction method	less than 700	less than 900	less than 300	less than 300	—
	Head space Method ※2	less than 1	less than 3	less than 1	less than 1	—
RoHS controlled substances ※3		Not detected	Not detected	Not detected	Not detected	—
Temperature range (℃) ※4		-40～+200	-40～+150	-40～+120	-40～+150	—
				Bottle	Bottle	

※1 Hot Wire Method : Using the QTM -500 Quick Thermal Conductivity Meter, from Kyoto Electronics Manufacturing Co., LTD.
※2 Head Space Method : at 70℃
※3 RoHS controlled substances : Assayed by SGS Far East Ltd.
※4 Temperature range : These temperature ranges are not the guaranteed values by Taica Corporation
The applicability should be determined respectively through the tests under actual conditions of each usage.

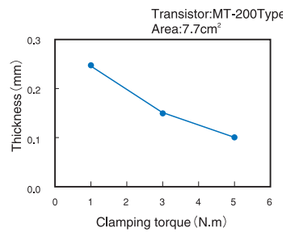
λGEL DP

DP-100

【Thermal dependency】



【Clamping torque dependency】



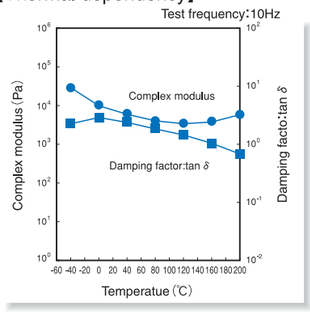
【Thermal resistance】

Transister:MT-200Type
Heat input:20W

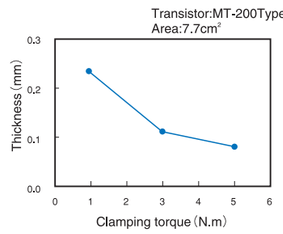
Thickness (mm)	0.15	0.2	0.3
Themal resistance (℃/W)	0.13	0.15	0.18

DP-200

【Thermal dependency】



【Clamping torque dependency】



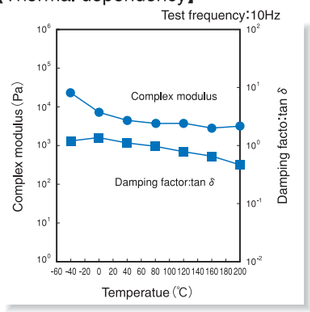
【Thermal resistance】

Transister:MT-200Type
Heat input:20W

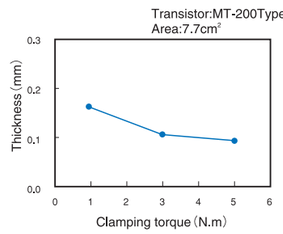
Thickness (mm)	0.1	0.2	0.3
Themal resistance (℃/W)	0.13	0.17	0.22

DP-300

【Thermal dependency】



【Clamping torque dependency】



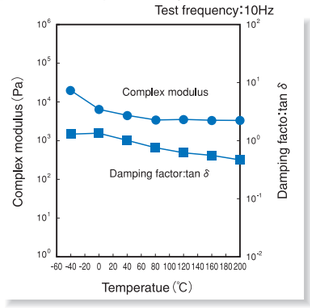
【Thermal resistance】

Transister:MT-200Type
Heat input:20W

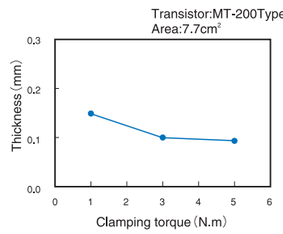
Thickness (mm)	0.1	0.2	0.3
Themal resistance (℃/W)	0.09	0.17	0.25

REP-100

【Thermal dependency】



【Clamping torque dependency】



【Thermal resistance】

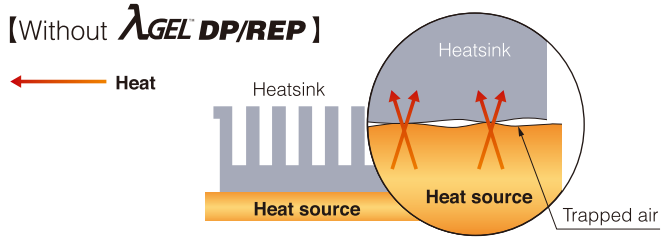
Transister:MT-200Type
Heat input:20W

Thickness (mm)	0.1	0.2	0.3
Themal resistance (℃/W)	0.22	0.36	0.50

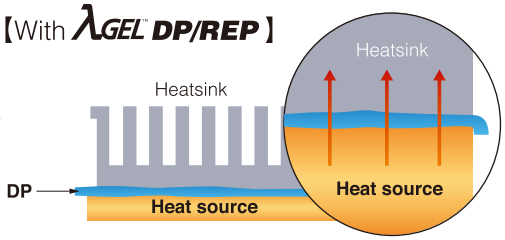
λGEL™ DP

The flow of heat

【Without λGEL DP/REP】



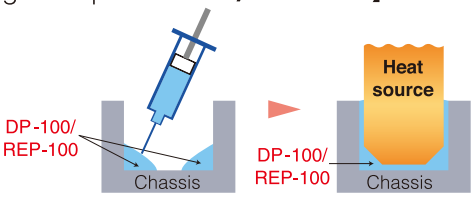
【With λGEL DP/REP】



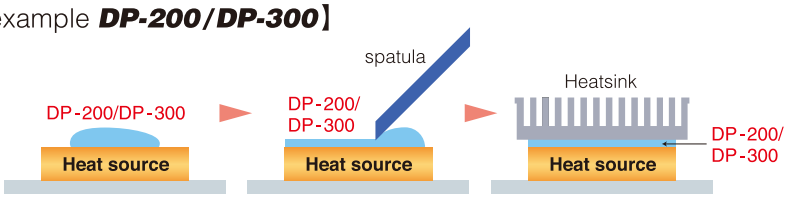
Suggested uses

- Gaps around heat sources such as high performance semiconductors
- The surface, underside, and lead lines of heat sources such as ICs.
- Sources of heat where it is difficult to fix sheet-type thermal gel.
- Where there is insufficient room for thermal conductive material.

【Filling example **DP-100/REP-100**】



【Coating example **DP-200/DP-300**】



Delivery format

【Basic specifications】

DP-100,200	Syringe	30cc
DP-300,REP-100	Bottle	30cc

Other package is also available.

Note

◆Silicone oil may bleed under certain usage condition.
◆Low molecular siloxane is included in this product which basically composed of silicone.
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