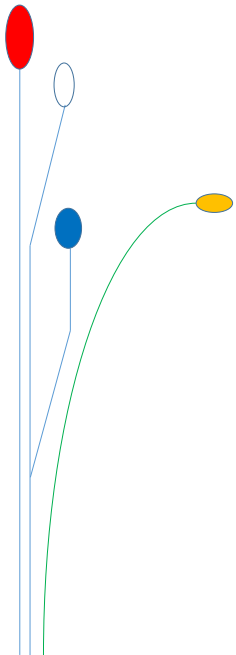
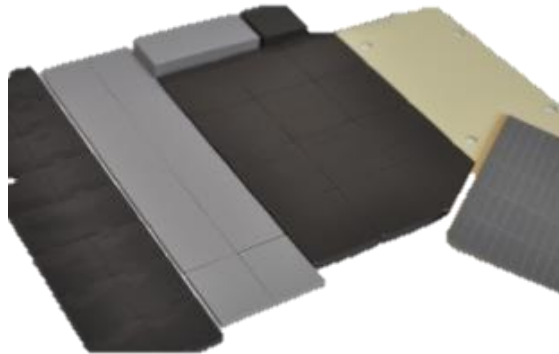


Thermal Interface Materials For Thermal Management

- Silicone TIM PAD Type
- Silicone TIM Sheet Type
- PCM (Phase Change Material)
- Thermal Grease
- Thermal Conductive Potting Gel
- Thermal conductive RTV Type
- Heat Spreader (Insulation Type)
- Heat Spreader (Non-Insulation Type)



Product Data Sheet

Product Model No.

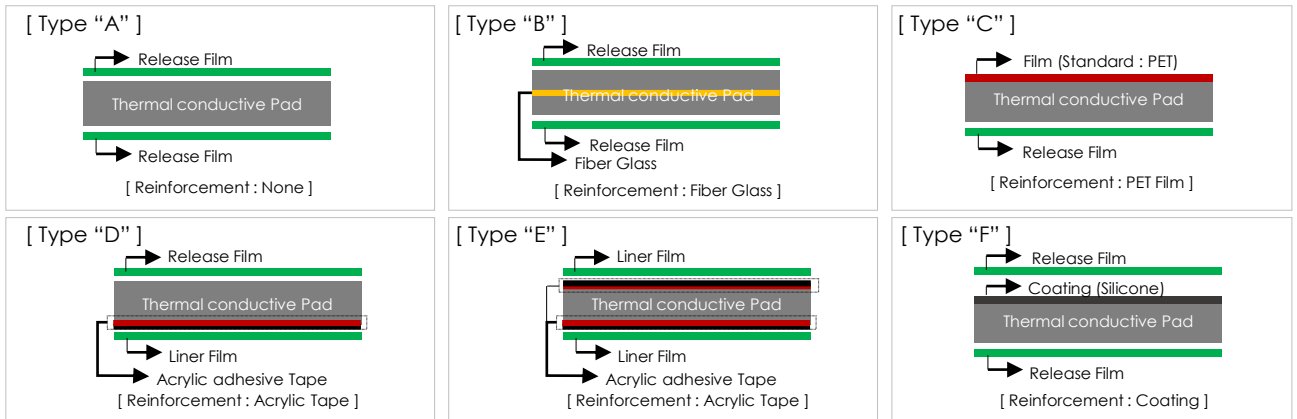
STG-Series

Thermal Interface Material Silicone Pad

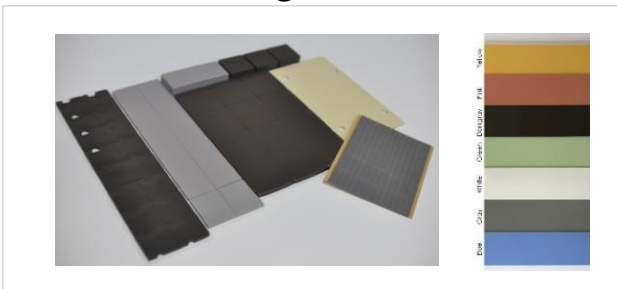
❖ Product Properties

Properties	Unit	STG-4015(1)	STG-3040	STG-5070	STG-9011	STG-1317
Thermal Conductivity	W/mk	1.5~2.5	3.0~4.0	5.0~7.0	9.0~11.0	13.0~17.0
Color	-	All color				
Thickness	mm	0.2~	0.25~	0.5~	0.5~	
Hardness (Shore 00)	Shore 00	Customer needs			Putty & Pad Type	
Specific Gravity	-	2.5	2.95	3.2	3.3	
Breakdown Voltage	KVac/mm	Min.10	Min.6	Min.5	Min.5	
Volume Resistivity	Ω -cm	10^{13}	10^{12}	10^{11}	10^{11}	
UL Grade	UL94	V-0 (E306107)				
Use Temp	°C	-50 ~ 200				
Low Molecular weight Siloxane Model						
Content of Siloxane (ppm)		50 > (ΣD4 ~ D10)				

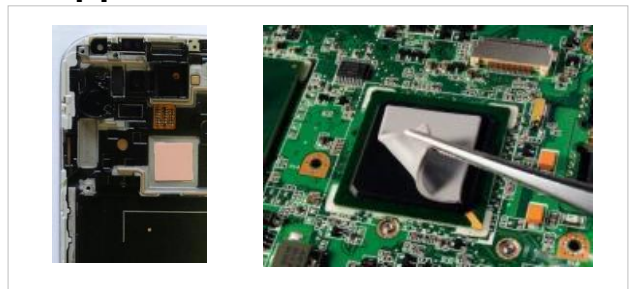
❖ Product Structure



❖ Product Image



❖ Applications

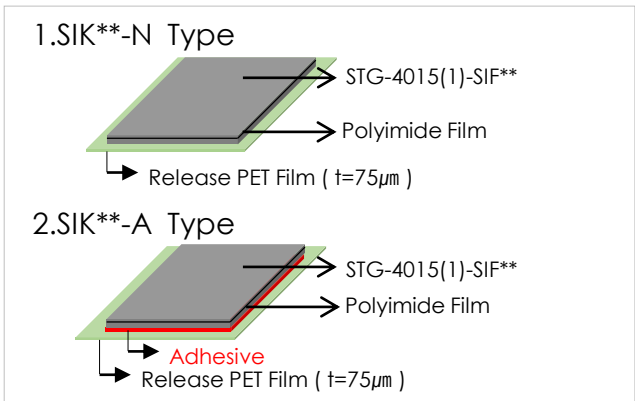
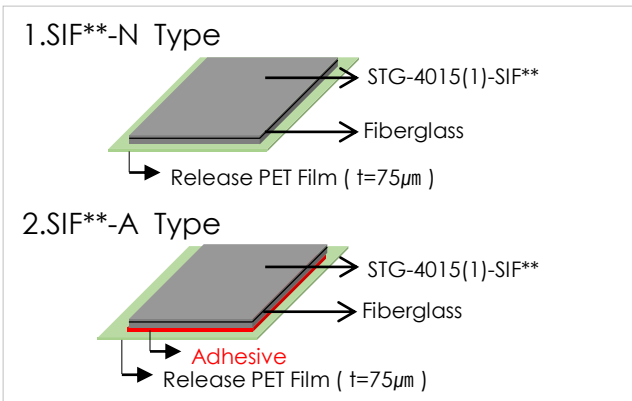


Product Data Sheet	Product Model No.
	STG-4015(1)-SIF * / SIK *

Thermal Interface Material **Silicone Sheet**

❖ Product Properties

Properties	Unit	STG-4015(1)					
		SIF90	SIF120	SIF160	SIF180	SIK90	SIK130
Reinforcement	-	Fiberglass				Polyimide Film	
Color	-	Gray	Mauve	Yellow	Blue	Gray	Beige
Thermal Conductivity	W/mk	0.9	1.2	1.6	1.8	0.9	1.3
Thickness	mm	0.18/0.23	0.23	0.13	0.2	0.15	0.15
Specific Gravity	-	2.1	2.3	2.5	2.55	2.2	2.3
Hardness	Shore A	85	95	91	75(00)	90	90
Volume Resistivity	$\Omega\cdot\text{cm}$	10^{13}	10^{13}	10^{13}	10^{13}	10^{13}	10^{13}
Breakdown Voltage	Kvac	3.5/4.5	4.0	1.7	3.0	6.0	6.0
Use Temp	°C	-50~200	-50~200	-50~200	-50~200	-50~200	-50~200
UL Grade (E306107)	UL94	V-0	V-0	V-0	V-0	V-0	V-0



❖ Product Image



❖ Applications



Product Data Sheet

Product Model No.

SPC-P* / SPC-PQ*

PCM (Phase Change Thermal Material)

❖ Product Properties

▶ SPC-P*

Properties	Unit	SPC-P*****		
		5510A	5530A	5540B
Thermal Conductivity	W/mk	1.0	3.0	4.0
Color	-	Gray	Gray	Gray
Phase Change Temperature(°C)		55		
Thickness	mm	0.1 ~ 1.0	0.2 ~ 1.0	
Gravity	-	2.3	2.9	2.9
Weight Decrease	125°C/48hr	< 0.5%	< 0.5%	< 0.5%
Volume Resistivity	Ω-cm	10 ¹²	10 ¹²	10 ¹²
Life time	25°C	1 year	1 year	1 year

▶ SPC-PQ*

Properties	Unit	SPC-PQ****		Remark
		160A	160B	
Thermal Conductivity	W/mk	1.6	1.6	
Color	-	Yellow	Yellow	
Phase Change Temperature(°C)		55		
Thickness	μm	100	100	
Reinforcement	-	PI Film(25μm)	PI Film(25μm)	
Volume Resistivity	Ω-cm	10 ¹²	10 ¹²	
Structure	-	PCM / PI Film / PCM	PCM / PI Film / Si-PSA	

❖ Characteristics

- Optimized to fit in various needs of thermal solution in mobile devices
- Stable thermal performance even under high temperature of electric parts
- Easy to handle and flexible workability
- No slip down during phase change process even if it shows very liquid
- Low density compared to the weight, but applicable to various fields
- High performance filler and polymer technologies

Product Data Sheet	Product Model No.
	STG-TG*

Thermal Interface Material **Silicone Grease**

❖ Product Properties

Properties	Unit	TG0800	TG3500	TG5000
Thermal Conductivity	W/mk	0.8	3.5	5.0
Product Form	-	One-Part		
Color	Visual	White	White	White
Appearance	Visual	Paste	Paste	Paste
Specific Gravity	-	2.1	3.1	3.2
Dielectric Strength	KV/mm	10.0	6.0	6.0
Dielectric Constant (100Hz)	100Hz	5	7	7.5
Volume Resistivity	Ω -cm	10^{13}	10^{12}	10^{12}
Viscosity / Flowability	-	Non flowing		

[Thermal PAD]

Heat sink

Thermal Pad

Heat Source

Higher hardness of thermal Interface Material cause uneven contact between heat sink and heat source. It causes less thermal transfer

[Thermal Grease]

Heat sink

Thermal Grease

Heat Source

Liquid type of thermal Grease enable to eliminate the gap between heat source and heat sink and it maximizes the thermal transfer

❖ Oil Bleeding Test (120°C/24hr Storage)

12hr Storage	24hr Storage	12hr Storage	24hr Storage
Siliconevalley's		Competitor's	

Thermally Conductive Encapsulant

❖ Product Properties

Uncured	unit	STG-M608		STG-M250		STG-M300	
		A	B	A	B	A	B
Color	Visual	White	Darkgray	White	Darkgray	White	Darkgray
Viscosity(At 25°C)	Cps	3,200	3200	10,000	10,000	80,000	80,000
Mixed ratio	wt%	1 : 1		1 : 1		1 : 1	
Pot Life(at 25°C)	Min.	100		60		60	
Curing time(at 60°C)	Min.	60		30		30	
Cured	unit	STG-M608		STG-M250		STG-M300	
Thermal conductivity	W/mk	0.7		2.5		3.0	
Appearance	-	Potting Gel					
Hardness(Shore)	00	70±10		80±10		80±10	
Specific gravity	g/cm ³	1.7		3.0		3.0	
Volume resistivity	Ω-cm	1.0E+13		1.0E+12		1.0E+12	
Breakdown voltage	KV/mm	10		10		10	
Use Temperature	°C	-50~200					
Flame rating	UL94	V-0					

❖ Features(STG-M608)

- Flame Resisting : UL94 V-0 recognized (File No. : E306107)
UL746A (HWI : 0 / HAI : 0 / CTI : 0)
- Easy 1 : 1 mix ratio by weight.
- Excellent thermal conductivity.
- Potting of electronics parts requiring flammability and use under high Temperature
- Potting Gel for high voltage parts.
- To protect curing faulty, Do not contact phosphorus, sulfur, paraffin element, compound and BHT(Butylated Hydroxy Toluene) when curing silicone.

❖ Packing Specification

❖ Applications



[STG-M608A]



[STG-M608B]



Product Data Sheet

Product Model No.

SV-RTC *

Thermally Conductive **Silicone RTV**

❖ Product Properties

Property	Unit	RTC 200A	RTC 350A
Cure System	-	One-component	
Thermal conductivity	W/mk	2.0	3.5
Binder	-	Silicone Polymer	Silicone Polymer
Color	-	Gray	Gray
Viscosity	-	Paste	Paste
Tacky free Time	Min.	15	15
Standard Curing condition		25°C/50% RH * 7 Days	
Specific gravity	-	3.0	3.0
Hardness	Shore A	80	80
Volume resistivity	Ω -cm	1.0e+12	1.0e+12
Packing	-	300ml Aluminum tube 300ml Cartridge	

❖ Product Image



Product Data Sheet	Product Model No.
	SV-TAB * / SV-TSB *

Heat Spreader Sheet (Insulation Type)

❖ Product Properties

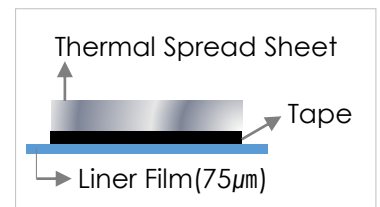
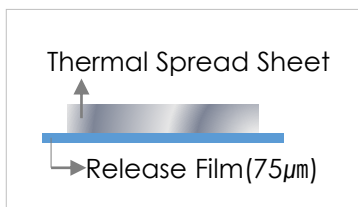
Property	Unit	SV-TAB Series		Test Method
		TAB20	TAB35	
Thermal conductivity	W/mk	20	35	Hot Disk(ISO22007-2)
Color	-	White		Visual
Thickness	μm	200±10%		ASTM D374
Specific Gravity	-	1.5	1.7	ASTM D792
Volume Resistivity	Ω·cm	10 ¹³		ASTM D991
Dielectric constant(100KHz)	-	3.22		at:100kHz
Continuous use Temp.	°C	-20 ~ 120		-
RoHS	-	OK		SGS

Property	Unit	SV-TSB Series		Test Method
		TSB15	TSB20	
Thermal conductivity	W/mk	15	20	Hot Disk(ISO22007-2)
Color	-	White		Visual
Thickness	μm	200±10%		ASTM D374
Specific Gravity	-	1.4	1.6	ASTM D792
Volume Resistivity	Ω·cm	10 ¹³		ASTM D991
Dielectric constant(100KHz)	-	3.05		at:100kHz
Continuous use Temp.	°C	-40 ~ 180		-
RoHS	-	OK		SGS

❖ General Description

This product is a thermally conductive insulation sheet without electromagnetic shielding effect.

- ▶ High thermal Conductivity
- ▶ Without electromagnetic shielding effect
- ▶ RoHS Passed
- ▶ Good flexibility



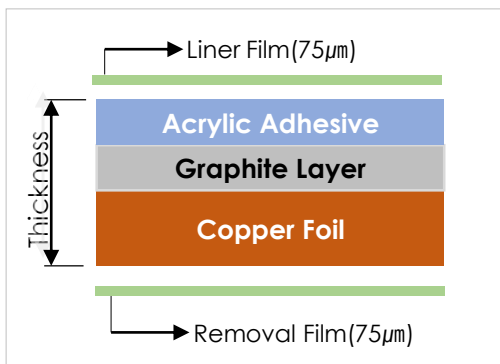
Product Data Sheet	Product Model No.
	SV-ACG *

Heat Spreader Sheet (Non Insulation Type)

❖ Product Properties

Properties		Unit	Value	Test Method
Thickness		μm	65	ASTM D374
Standard Dimension	Width	mm	520	Roll Packing
	Length	m	100	
Thermal Spreader Materials		Cu sheet		-
		Synthetic Graphite		-
Color		-	Black	Visual
Specific Gravity		-	6.6	-
Tensile Strength		Kg/mm ²	40.69	ASTM D412
Adhesive Force	Only Acrylic Adhesive	gf/25mm	1,300	180 peel Test
	Product		700	
Peel Strength			700	
Elongation		%	1.32	ASTM D412
Allowance Use Temp		°C	-20~120	ASTM D746-98
RoHS Compliance		-	YES	SGS

❖ Product Structure



❖ Product Thickness

ITEM	Thickness(μm)	Remark
Acrylic adhesive	15	Black
Graphite layer	15	
Copper Foil	35	
TOTAL	65	

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