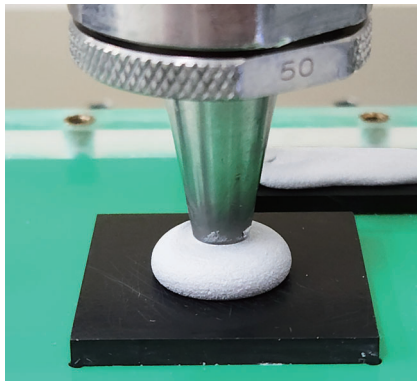


COOLPROVIDE™ / CPVG

Dispense-friendly,
no-drip, single-liquid thermal putty

Features

- Useful to fill gaps between heat spreaders and ICs of various heights.
CPVG-30: GAP 1mm or less
CPVG-50: GAP 2mm or less
- Putty TIM applies very low force after compression. (10% or less as compared to thermal pads)
- Because the pre-crosslinked state provides structural stability, no curing process (such as heating or UV) is required and will not drip immediately after application.
- Applied using a manual caulking gun or an automated dispenser.
- Silicone-free TIM generates no siloxane gas and has less oil bleeding.

(The values are measured values, but not the product specifications or guaranteed.)

Test type	Unit	Standard	CPVG-30	CPVG-50
Thermal Conductivity	W/m · K	ISO22007-2 (Hot Disc method)	3.0	5.0
Thermal resistance*	t1.0mm	°C/W ASTM D5470	0.33	0.19
	t0.3mm		0.08	0.05
	t0.1mm		0.01	—
Color	—	—	White	White
Specific Gravity	—	JIS Z 8807	2.9	3.2
Viscosity	0.5[1/s]	Pa · s ASTM D1824 compliant	3300	—
	1.0[1/s]		2500	—
	10rpm		600	1000
Recommended Thickness	mm	—	0.1 ~ 1.0	0.3 ~ 2.0
Volume Resistivity	Ω · cm	JIS K 6911 compliant	1.0×10 ⁹	1.0×10 ⁹
Breakdown voltage	kV/mm	JIS K 6911 compliant	8	3
Dielectric constant	1MHz	Company standard	9.25	13.2
Loss tangent	1MHz	Company standard	0.06	0.07
Shelf Life (25°C)	—	Company standard	6 months after delivery	6 months after delivery
Flammability	—	UL94	V-0 equivalent	V-0 equivalent
Operating temp	°C	—	-40 ~ 125	-40 ~ 130
Supply format	—	—	①Cartridge Part number : CPVG-30-C (Net content: 約 950g)	①Cartridge Part number : CPVG-50-C (Net content: 約 1000g) ②Pail Part number : CPVG-50-P (Net content : 17kg)

※ 1) Sample size : □25mm

①Cartridge	②Pail
Capacity : 330ml	Capacity : 20L

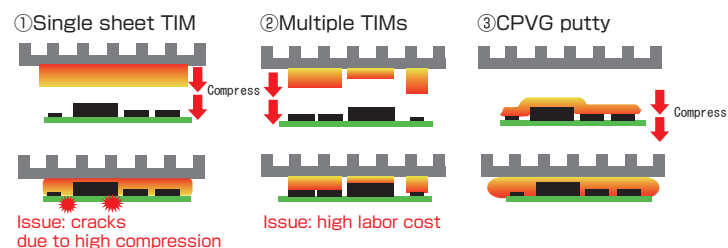
Drip test

Products	Competitor's grease	CPVG-30	CPVG-50
Coating thickness	1.0mm	1.0mm	1.0mm
Results			
	Drip observed	No drip	No drip

【 Heat cycle test conditions / High-temperature test conditions 】

- Temperature : 125°C
- Time: 1000h
- Test Method: Test sample sandwiched between aluminum and glass plates

Benefits of CPVG (Putty TIM)



	①	②	③
Workability: components	○	×	○
IC Load	×	△	○

- Easy positioning of heat dissipation components
- Spreads to fill the gap upon compression, reducing the load on the IC

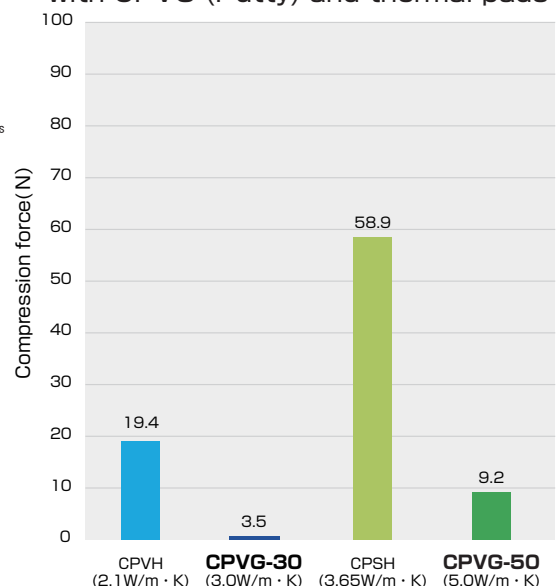
③CPVG thermal putty application



③CPVG thermal putty installation



*We can help verify dispensing and application conditions.

Compression force comparison
with CPVG (Putty) and thermal pads

<Test conditions>
 • Sample dimensions : □10mm×10mm (t2mm)
 • Compression rate : 20% compressed (t2mm→t1.6mm)
 * Maximum compression force at 20% compression is listed.
 * The thermal conductivity of each product is measured by the hot disk method.