

Comparison data

SARCON® GR14A vs GR14B

Gap Filler Type

1. Initial data

Properties		unit	GR14A-00	GR14B-00	Test method	Specimen	
Physical Properties	Color	-	Gray	Pink	Visual	-	
	Specific Gravity	-	2.0	1.8	ASTM D792	A	
	Hardness Highest Value	Shore OO (ASKER-C)	25 (10)	30 (10)	ASTM D2240 JIS K7312	B	
Electrical Properties	Volume Resistivity	Ohm-m	1.0x10 ¹¹	2.4x10 ¹¹	ASTM D257	C	
	Breakdown Voltage	kV/mm (volts/mil)	14 (356)	17 (432)	ASTM D149	C	
	Dielectric Strength	kV/mm (volts/mil)	11 (279)	10 (254)	ASTM D149	C	
	Dielectric Constant	-	50Hz	4.82	5.0	ASTM D150	A
			1kHz	4.31	4.4		
			1MHz	4.04	4.2		
	Dissipation Factor	-	50Hz	0.0916	0.095	ASTM D150	A
1kHz			0.0421	0.042			
1MHz			0.0060	0.004			
Thermal Properties	Thermal Conductivity	W/m-K	1.4	1.4	ISO 22007-2	-	
	Useful Temperature	°C (°F)	-40 to +150 (-40 to +302)		-	-	
	Low molecular Siloxane	wt%	D ₃ to D ₁₀ Total	-	0.0034	Gas Chromatography	-
			D ₁₁ to D ₂₀ Total	-	0.0757		
			D ₄ to D ₂₀ Total	0.0034	-		
Flame Retardant	-	V-0	V-0	UL 94	-		

2. Thermal resistance

00 Type

GR14A-00

Unit : K-cm²/W (K-in²/W)

Compression Force	0.5mmT	1.0mmT	1.5mmT	2.0mmT	2.5mmT	3.0mmT	4.0mmT	5.0mmT
100kPa /14.5psi	3.9 (0.61)	6.3 (0.97)	8.4 (1.31)	9.9 (1.53)	11.1 (1.72)	12.5 (1.94)	15.9 (2.46)	18.4 (2.84)
300kPa /43.5psi	3.3 (0.51)	5.2 (0.81)	6.7 (1.04)	8.0 (1.24)	9.3 (1.44)	10.1 (1.56)	12.2 (1.89)	14.3 (2.21)
500kPa /72.5psi	3.0 (0.46)	4.7 (0.72)	5.9 (0.92)	7.1 (1.10)	8.1 (1.25)	8.7 (1.35)	10.4 (1.62)	12.2 (1.89)

GR14B-00

Unit : K-cm²/W (K-in²/W)

Compression Force	0.5mmT	1.0mmT	1.5mmT	2.0mmT	2.5mmT	3.0mmT	4.0mmT	5.0mmT
100kPa /14.5psi	3.9 (0.60)	5.8 (0.90)	7.3 (1.13)	10.0 (1.55)	11.9 (1.84)	12.4 (1.92)	17.1 (2.65)	18.1 (2.81)
300kPa /43.5psi	3.2 (0.50)	4.8 (0.74)	6.1 (0.95)	7.8 (1.21)	9.2 (1.43)	10.1 (1.57)	12.3 (1.91)	13.6 (2.11)
500kPa /72.5psi	2.8 (0.43)	4.2 (0.65)	5.3 (0.82)	6.7 (1.04)	7.8 (1.21)	8.4 (1.30)	10.3 (1.60)	11.5 (1.78)

0H Type

GR14A-0H

Compression Force	0.5mmT	1.0mmT	1.5mmT	2.0mmT	2.5mmT	3.0mmT	4.0mmT	5.0mmT
100kPa /14.5psi	4.2 (0.65)	6.3 (0.97)	8.7 (1.34)	11.1 (1.71)	13.1 (2.03)	14.8 (2.29)	18.1 (2.81)	20.8 (3.23)
300kPa /43.5psi	3.6 (0.56)	5.3 (0.81)	7.3 (1.13)	9.3 (1.44)	10.7 (1.66)	11.9 (1.85)	14.5 (2.25)	16.8 (2.60)
500kPa /72.5psi	3.4 (0.52)	4.8 (0.74)	6.5 (1.00)	8.2 (1.27)	9.4 (1.46)	10.5 (1.63)	12.5 (1.93)	14.3 (2.21)

GR14B-0H

Compression Force	0.5mmT	1.0mmT	1.5mmT	2.0mmT	2.5mmT	3.0mmT	4.0mmT	5.0mmT
100kPa /14.5psi	4.1 (0.64)	6.4 (0.99)	8.7 (1.35)	10.9 (1.69)	13.1 (2.03)	13.5 (2.09)	17.7 (2.74)	21.3 (3.30)
300kPa /43.5psi	4.0 (0.62)	5.7 (0.88)	7.1 (1.10)	8.7 (1.35)	10.1 (1.57)	10.8 (1.67)	13.7 (2.12)	15.7 (2.43)
500kPa /72.5psi	3.6 (0.56)	5.0 (0.78)	6.2 (1.96)	7.4 (1.15)	8.6 (1.33)	9.0 (1.40)	11.2 (1.74)	12.9 (2.00)

Test method: Fujipoly Test method, FTM-P3050 by TIM Tester 1300 which is ASTM D5470 equivalent

- Specimen Area; DIA.33.0mm (1.30in)

3. Compression Force

00 Type

GR14A-00

Unit : N/6.4cm² (psi)

Compression Ratio	0.5mmT	1.0mmT	1.5mmT	2.0mmT	2.5mmT	3.0mmT	4.0mmT	5.0mmT
10%	74 (16.8)	61 (13.8)	55 (12.5)	44 (10.0)	37 (8.4)	29 (6.6)	22 (5.0)	13 (3.0)
20%	195 (44.2)	135 (30.6)	117 (26.5)	98 (22.2)	75 (17.1)	63 (14.3)	45 (10.2)	29 (6.6)
30%	337 (76.4)	244 (55.3)	201 (45.5)	166 (37.6)	135 (30.6)	121 (27.4)	88 (19.9)	62 (14.0)
40%	512 (116.0)	405 (91.8)	339 (76.8)	286 (64.8)	241 (54.5)	198 (44.9)	162 (36.8)	121 (27.5)
50%	673 (152.5)	568 (128.7)	516 (116.9)	467 (105.8)	399 (90.4)	332 (75.2)	281 (63.7)	220 (49.8)
Sustain 50%	301 (68.1)	296 (67.1)	275 (62.3)	247 (56.0)	209 (47.4)	173 (39.2)	147 (33.3)	114 (25.9)

GR14B-00

Unit : N/6.4cm² (psi)

Compression Ratio	0.5mmT	1.0mmT	1.5mmT	2.0mmT	2.5mmT	3.0mmT	4.0mmT	5.0mmT
10%	109 (24.7)	130 (29.5)	116 (26.3)	79 (17.9)	57 (12.9)	43 (9.7)	32 (7.3)	24 (5.4)
20%	284 (64.3)	277 (62.8)	192 (43.5)	117 (26.5)	83 (18.8)	70 (15.9)	54 (12.2)	42 (9.5)
30%	392 (88.8)	351 (79.5)	240 (54.4)	180 (40.8)	128 (29.0)	109 (24.7)	87 (19.7)	71 (16.1)
40%	634 (143.6)	509 (115.3)	355 (80.4)	281 (63.7)	201 (45.5)	179 (40.6)	142 (32.2)	117 (26.5)
50%	752 (170.4)	660 (149.5)	523 (118.5)	442 (100.1)	317 (71.8)	297 (67.3)	216 (48.9)	182 (41.2)
Sustain 50%	335 (75.9)	317 (71.8)	232 (52.6)	202 (45.8)	135 (30.6)	126 (28.5)	91 (20.6)	81 (18.4)

0H Type

GR14A-0H

Compression Rate	0.5mmT	1.0mmT	1.5mmT	2.0mmT	2.5mmT	3.0mmT	4.0mmT	5.0mmT
10%	313 (70.9)	227 (51.4)	141 (31.9)	92 (20.8)	54 (12.2)	46 (10.4)	34 (7.7)	22 (5.0)
20%	531 (120.3)	397 (90.0)	262 (59.4)	177 (40.1)	115 (26.1)	98 (22.2)	72 (16.3)	49 (11.1)
30%	758 (171.7)	602 (136.4)	446 (101.0)	328 (74.3)	221 (50.1)	194 (44.0)	147 (33.3)	104 (23.6)
40%	969 (219.5)	830 (188.0)	690 (156.3)	539 (122.1)	383 (86.8)	344 (77.9)	265 (60.0)	196 (44.4)
50%	1227 (278.0)	1121 (254.0)	1014 (229.7)	823 (186.5)	618 (140.0)	567 (128.5)	445 (100.8)	341 (77.3)
Sustain 50%	1025 (232.2)	857 (194.2)	689 (156.1)	522 (118.3)	355 (80.4)	322 (73.0)	240 (54.4)	182 (41.2)

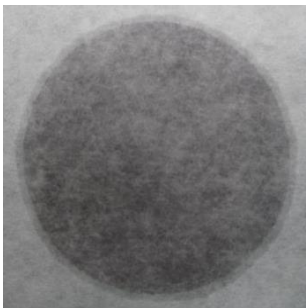
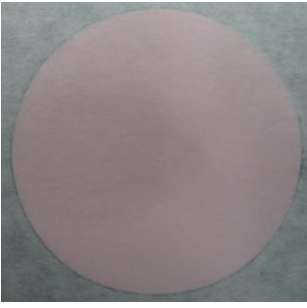
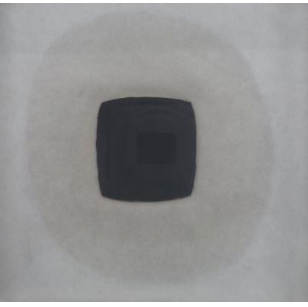
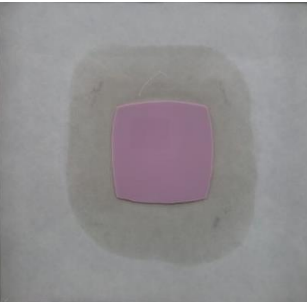
GR14B-0H

Compression Rate	0.5mmT	1.0mmT	1.5mmT	2.0mmT	2.5mmT	3.0mmT	4.0mmT	5.0mmT
10%	106 (24.0)	145 (32.9)	114 (25.8)	98 (22.2)	67 (15.2)	51 (11.6)	38 (8.6)	25 (5.7)
20%	285 (64.6)	320 (72.5)	176 (39.9)	145 (32.9)	103 (23.3)	85 (19.3)	64 (14.5)	47 (10.6)
30%	524 (118.7)	428 (97.0)	258 (58.5)	222 (50.3)	165 (37.4)	135 (30.6)	105 (23.8)	80 (18.1)
40%	711 (161.1)	587 (133.0)	389 (88.1)	347 (78.6)	261 (59.1)	219 (49.6)	167 (37.8)	133 (30.1)
50%	867 (196.4)	805 (182.4)	580 (131.4)	526 (119.2)	406 (92.0)	341 (77.3)	260 (58.9)	209 (47.4)
Sustain 50%	458 (103.8)	461 (104.4)	283 (64.1)	268 (60.7)	193 (43.7)	161 (36.5)	125 (28.3)	99 (22.4)

Test method: Measured by ASTM D575-91 for reference

- Specimen Area; DIA.28.6mm (1.13in) • Platen Area; DIA. 28.6mm (1.13in) • Sustain 50%: Sustain 50% at 1 minute later
- Compression Velocity; 5.0mm/minute

4. Oil bleed

	GR14A	GR14B	Test method
with out Compression			Spcimen size : ϕ 28.6 x 3mmt Compression force : None Temperature : Room temp Time : 42hrs
width bleed	30.5mm	29.5mm	
with Compression			Spcimen size : 25 x 25 x 1mmt Compression Ratio : 50% Temperature : 125°C Time : 72hrs
width bleed	71mm	55mm	

5.Types and Configuration

Series	Tickness	GR14A	GR14B
00 Type	0.5mmt	± 0.15 mm	± 0.05 mm
	1.0mmt	± 0.20 mm	± 0.10 mm
	1.5mmt	± 0.20 mm	± 0.15 mm
	2.0mmt	± 0.30 mm	± 0.20 mm
	2.5mmt	± 0.30 mm	± 0.25 mm
	3.0mmt	± 0.30 mm	± 0.30 mm
	3.5mmt	± 0.35 mm	± 0.35 mm
	4.0mmt	± 0.40 mm	± 0.40 mm
	4.5mmt	± 0.45 mm	± 0.45 mm
0H Type	5.0mmt	± 0.50 mm	± 0.50 mm
	0.5mmt	± 0.15 mm	± 0.05 mm
	1.0mmt	± 0.20 mm	± 0.10 mm
	1.5mmt	± 0.20 mm	± 0.15 mm
	2.0mmt	± 0.30 mm	± 0.20 mm
	2.5mmt	± 0.30 mm	± 0.25 mm
	3.0mmt	± 0.30 mm	± 0.30 mm
	3.5mmt	± 0.35 mm	± 0.35 mm
	4.0mmt	± 0.40 mm	± 0.40 mm
4.5mmt	± 0.45 mm	± 0.45 mm	
5.0mmt	± 0.50 mm	± 0.50 mm	

HANDLING NOTES

- It is recommended to use the material in up to 30% of compression ratio. Using the material beyond the recommended compression rate may result in excessive silicone oil exudation.
- It is recommended to compress the material with the equal ratio on the whole surface. Partial excessive stress may also result in excessive silicone oil exudation.

WARRANTY STATEMENT

- Fujipoly has been utilizing Hot Disk method and TIM Tester method since Fujipoly defined them as Fujipoly standard.
- Properties of the products may be revised due to some changes for improving performance.
- Properties values in this document are not specification or guaranteed.
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- Before using, a safety must be evaluated and verified by the purchaser.
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