

Fujipoly Data Sheet

SARCON® GBR series

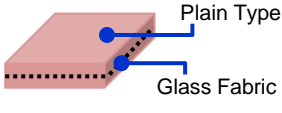
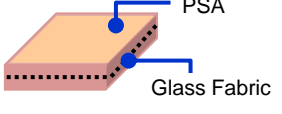
Higher Performance Rubber Type

FEATURES

Thin Film with Higher Thermal Conductivity , Electric Isolation and Non-Flammable.

- Heat conductive silicone rubber within glass fiber cloth has excellent mechanical and physical characteristics.
- SARCON GBR is available in tape, die-cut Gaskets and more with desired designs.

CONSTRUCTIONS

Series	Characteristics	Constructions
SARCON® GBR	Fine heat conductive particles are mixed with insulative silicone rubber to produce this excellent insulative, high heat conductive silicone material within Glass Fiber Cloth : 3.3W/mK (by Hot Disk, Bulk)	 Plain Type Glass Fabric
SARCON® GBR-AD	SARCON GBR is available with a PSA (Pressure Sensitive Adhesive) mounting option, simply remove the protective liner and press into position to attach.	 PSA Glass Fabric

THERMAL RESISTANCE

Unit : K-cm²/W (K-in²/W)

Compression force	20GBR (0.2mmT)	30GBR (0.3mmT)
3,600kPa	0.9 (0.13)	1.4 (0.21)

[Measurement condition]

- Equipment : Mentor Graphics T3Ster Dyn TIM Tester
- Measurement mode : ASTM Type II
- Heating time : 600sec
- Sample size : φ12.8mm
- Compression force : 3,600kPa

TYPICAL PROPERTIES

Properties	unit	GBR		Test method		
		20GBR	30GBR			
Physical Properties	Color	-	Light Brown		Visual	
	Thickness	mm	0.2 ±0.05	0.3 +0.1/-0	Dial gauge	
	Specific Gravity	-	2.7		ASTM D792	
	Hardness Highest Value	IRHD	80	94	ISO 7619	
	Tensile Strength	kgf/10mm	5.5	5.7	ISO 3342	
	Elongation	%	3 or less	3 or less	ISO 3342	
Electrical Properties	Volume Resistivity	Ohm-m	1.6×10^{12}	1.8×10^{12}	ASTM D257	
	Breakdown Voltage	kV(AC)	7	10	ASTM D149	
	Dielectric Strength	kV(AC)	6	9	ASTM D149	
	Dielectric Constant	-	50Hz	2.9	3.6	ASTM D150
			1kHz	2.8	3.6	
			1MHz	2.8	3.6	
	Dissipation Factor	-	50Hz	0.010	0.009	ASTM D150
1kHz			0.005	0.005		
1MHz			0.003	0.002		
Thermal Properties	Thermal Conductivity (Bulk)	W/m-K	3.3		ISO 2007-2 (Hotdisk)	
	Recommended Operating Temp.	°C	-40 to +150		-	
		°F	-40 to +302		-	
Flame Retardant	UL94	V-0 Equivalent		UL 94		

DURABILITY**Heat Aging Test : 150°C (300°F)**

Properties	unit	20GBR			30GBR		
		Initial	500hrs	1.000hrs	Initial	500hrs	1.000hrs
Hardness	IRHD	80	94	96	94	99	99
Tensile Strength	kgf/10mm	5.5	5.4	5.5	5.7	6.4	6.1
Elongation	%	3 or less	3 or less	3 or less	3 or less	3 or less	3 or less
Volume Resistivity	$\Omega \cdot m$	1.6×10^{12}	3.2×10^{13}	5.2×10^{13}	1.8×10^{12}	4.4×10^{13}	4.5×10^{12}
Breakdown Voltage	kV	7	7	8	10	11	10
Dielectric Strength	kV	6	7	6	9	9	9

Humidity Test : 60°C (140°F) / 95%RH

Properties	unit	20GBR			30GBR		
		Initial	500hrs	1.000hrs	Initial	500hrs	1.000hrs
Hardness	IRHD	80	82	84	94	93	93
Tensile Strength	kgf/10mm	5.5	5.0	5.4	5.7	5.9	6.0
Elongation	%	3 or less	3 or less	3 or less	3 or less	3 or less	3 or less
Volume Resistivity	$\Omega \cdot m$	1.6×10^{12}	1.4×10^{12}	1.4×10^{12}	1.8×10^{12}	2.6×10^{12}	2.6×10^{12}
Breakdown Voltage	kV	7	6	8	10	10	10
Dielectric Strength	kV	6	6	6	9	9	9

Cold Test : -40°C (-40°F)

Properties	unit	20GBR			30GBR		
		Initial	500hrs	1.000hrs	Initial	500hrs	1.000hrs
Hardness	IRHD	80	84	84	94	93	92
Tensile Strength	kgf/10mm	5.5	5.5	5.6	5.7	6.1	6.1
Elongation	%	3 or less	3 or less	3 or less	3 or less	3 or less	3 or less
Volume Resistivity	$\Omega \cdot m$	1.6×10^{12}	1.6×10^{12}	1.8×10^{12}	1.8×10^{12}	3.4×10^{12}	2.4×10^{12}
Breakdown Voltage	kV	7	7	7	10	11	11
Dielectric Strength	kV	6	6	6	9	9	10

Heat Shock Test : -40°C (-40°F)/30min \leftrightarrow 125°C (257°F)/30min

Properties	unit	20GBR			30GBR		
		Initial	500hrs	1.000hrs	Initial	500hrs	1.000hrs
Hardness	IRHD	80	89	89	94	96	96
Tensile Strength	kgf/10mm	5.5	5.6	4.5	5.7	6.0	5.5
Elongation	%	3 or less	3 or less	3 or less	3 or less	3 or less	3 or less
Volume Resistivity	$\Omega \cdot m$	1.6×10^{12}	1.7×10^{13}	1.8×10^{13}	1.8×10^{12}	2.6×10^{13}	2.0×10^{13}
Breakdown Voltage	kV	7	8	8	10	10	12
Dielectric Strength	kV	6	6	7	9	10	9

HANDLING NOTES

- 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

- Properties of the products may be revised due to some changes for improving performance.
- Properties values in this document are not specification or guaranteed.
- This product is made of silicone, and silicone oil may exude from the product.
- This product is made of silicone, and low molecular siloxane may vaporize depending on operating conditions.
- The product is designed, developed, and manufactured for general industrial use only. Never use for medical, surgical, and/or relating purposes. Never use for the purpose of implantation and/or other purposes by which a part of or whole product remains in human body.
- Before using, a safety must be evaluated and verified by the purchaser.
- Contents described in the document do not guarantee the performances and qualities required for the purchaser's specific purposes. The purchaser is responsible for pre-testing the product under the purchaser's specific conditions and for verifying the expected performances.
- Statements concerning possible or suggested uses made herein may not be relied upon, or be constructed, as a guaranty of no patent infringement.
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