TECHNICAL DATA SHEET FOR RADCOLUBE® SBR-1
MIL-PRF-46176B SILICONE BRAKE FLUID

Characteristics	Requirement	Typical	Test Method
Equilibrium reflux boiling point, °C	260 min.	>360	¶ 4.3.3.1
Wet boiling point, °C	207 min.	>360	¶ 4.3.3.2
Flash point, °C	204 min.	271	ASTM D92; ¶4.3.3.3
Viscosity, mm2/s (cSt)			ASTM D445
at -55°C	900 max.	626	¶4.3.3.4.1
at 100°C	1.3 min.	13.7	¶4.3.3.4.2
Corrosiveness			¶ 4.3.4.1
Condition of cups	No sloughing, tackiness, blisters or disintegration	None	
Cup base diameter change, mm	0.03 mm to 1.40 mm	1.18	¶ 4.3.4.1.2
Cup hardness change, points	Decrease 15 points max.	-8 points	¶ 4.3.4.1.3
Condition of metal strips	No etching or pitting	None	¶ 4.3.4.1.4
Metal strip weight change, mg/cm2			¶ 4.3.4.1.4
Tinned steel	0.1 max.	0.00	¶ 4.3.4.1.5
Carbon steel	0.1 max.	0.01	
Aluminum alloy	0.1 max.	0.01	
Cast iron	0.1 max.	0.02	
Brass	0.2 max.	0.01	
Copper	0.2 max.	0.01	
Condition of brake fluid at 25 ± 5°C	No gelling or crystallization	None	¶ 4.3.4.1.6
Fluid sediment, percent volume	0.10% max.	0.00%	¶ 4.3.4.1.7
Effect on rubber			
SBR, RM-3; SAE wheel cylinder test cup			
Volume swell, percent			
at 70 ± 2°C	+5% to +20%	13.6%	¶4.3.4.2.1
at 120 ± 2°C	+5% to +20%	11.2%	¶4.3.4.2.1
Base diameter change at 70 ± 2°C, mm			
at 70 ± 2°C	0.15 to 1.40	1.13	¶4.3.4.2.2
at 120 ± 2°C	0.15 to 1.40	0.97	¶4.3.4.2.2
Hardness change at 70 ± 2°C, IRHD			
at 70 ± 2°C	0 to -10	-3	¶4.3.4.2.3
at 120 ± 2°C	0 to -15	-4	¶4.3.4.2.3
Condition of specimen	No form of disintegration	None	¶4.3.4.2.4
EPR, RM-69; EPDM slab stock			
Volume swell, percent			
at 70 ± 2°C	0% to +10%	5.3%	¶4.3.4.2.1
at 120 ± 2°C	0% to +10%	3.8%	¶4.3.4.2.1
Hardness change at 70 ± 2°C, IRHD			
at 70 ± 2°C	0 to -10	-8	¶4.3.4.2.3
at 120 ± 2°C	0 to -10	-8	¶4.3.4.2.3
Condition of specimen	No form of disintegration	None	¶4.3.4.2.4
Natural rubber, NR-X cup at 70 ± 2°C			
Volume swell, percent	+5% to +20%	15.4%	¶4.3.4.2.1
Base diameter change, mm	0.15 to 1.40	1.25	¶4.3.4.2.2
Hardness change, IRHD	0 to -10	-5	¶4.3.4.2.3
Condition of specimen	No form of disintegration	None	¶4.3.4.2.4
High temperature stability, change °C	5°C max.	No change	¶ 4.3.6.1
Low Temperature stability at -55°C			¶ 4.3.6.2
Appearance at -55°C	No stratification, crystallization, separation, or precipitation	None	¶ 4.3.6.2.1
Fluidity at -55°C, seconds	10 max	1	¶ 4.3.6.2.2
Appearance at 25°C	Original clarity	Original clarity	¶ 4.3.6.2.3
High humidity			¶ 4.3.6.3
Water pick-up, percent weight	0.35% max.	0.18%	¶ 4.3.6.3.1
Appearance at -40°C	No stratification, crystallization, separation, or precipitation	None	¶ 4.3.6.3.2
Fluidity at -40°C, seconds maximum	10	2.09	¶ 4.3.6.3.3
Appearance at 25°C	Original clarity	Original clarity	¶ 4.3.6.3.4
Appearance at 60°C	No stratification, crystallization, separation or precipitation	None	¶ 4.3.6.3.5
Fluid sediment at 60°C, percent volume	< 0.05%	0.00%	¶4.3.6.3.6
Viscosity of high humidity fluid, mm2/s			¶4.3.6.3.7
at -55°C, maximum	900	618	ASTM D445
at 100°C, minimum	1.3	13.3	ASTM D445

* Data represents typical laboratory samples and are not guaranteed for all samples

Radco Industries, LLC
700 Kingsland Drive, Batavia, IL 60510 CAGE Code 6ZS16
Phone: (630) 232-7966
www.radcoind.com

PRODUCT CODE: SBR-1 (21162-B)
REVISION DATE: 2025-04-28