

**RADCOLUBE® 680 Type 4****Technical Data Sheet****MIL-PRF-680C TYPE II Degreasing Solvent, High Flash Point with Citrus Odor (Military Symbol SD-4)**

Characteristics	Requirement	Results	Test Method
Appearance	MIL-PRF-680C Section 3.3	Pass	Visual
Toxicity	MIL-PRF-680C Section 3.4	Pass	MIL-PRF-680C Section 3.4
Carcinogenicity	MIL-PRF-680C Section 3.5	Pass	MIL-PRF-680C Section 6.7
Hazardous Air Pollutants	MIL-PRF-680C Section 3.6	HAP Free Solvent	MIL-PRF-680C Section 6.7.2
Flash Point, °C	61 – 92°C	73.9°C	ASTM D56
Distillation, °C			ASTM D86
Initial boiling point, °C	149°C minimum	185.9°C	
Dry point, °C	208°C maximum	218.8°C	
Kauri-Butanol Value	27 to 45	28.5	ASTM D1133
Aromatic content, vol%	1% max	< 1%	ASTM D3257
Total phenol content, ppm	0.5 max	0.4	EPA 420.1
Dichlorobenzene, mg/L			EPA 3585 and 8260B
1,2-Dichlorobenzene	0.5 max	< 0.100	
1,3-Dichlorobenzene	0.5 max	< 0.100	
1,4-Dichlorobenzene	0.5 max	< 0.100	
Benzene, mg/L	0.5 max	< 0.100	EPA 3585 and 8260B
Tetrachloroethylene, mg/L	0.7 max	< 0.250	EPA 3585 and 8260B
Trichloroethylene, mg/L	0.5 max	< 0.100	EPA 3585 and 8260B
Apparent specific gravity, 60°F/60°F	0.754 to 0.820	0.780	ASTM D1298
Total chlorine content, ppm	100 max	0.61	MIL-PRF-680C Section 4.4.4
Non-volatile residue, mg/100mL	8 max	5.9	ASTM D1353
Color, Saybolt	25 min	30	ASTM D156
Odor	Low & non-residual	Pass	ASTM D1296
Corrosion, copper	1b max	1b	ASTM D130
Sandwich corrosion			ASTM F1110
SAE-AMS-QQ-A-250/4, 2024-T3-Nonclad			
Panel Set 1	1 max	1	
Panel Set 2	1 max	1	
Panel Set 3	1 max	1	
SAE-AMS-QQ-A-250/5, 2024-T3-Alclad			
Panel Set 1	1 max	1	
Panel Set 2	1 max	0	
Panel Set 3	1 max	0	
SAE-AMS-QQ-A-250/12, 7075-T6-Nonclad			
Panel Set 1	1 max	1	
Panel Set 2	1 max	1	
Panel Set 3	1 max	1	
SAE-AMS-QQ-A-250/13, 7075-T6-Alclad			
Panel Set 1	1 max	0	
Panel Set 2	1 max	0	
Panel Set 3	1 max	0	
Total immersion corrosion, mg/cm ² after 168 hours			ASTM F483
Magnesium AMS 4377 surface, Type III	0.50	0.00	
Aluminum, AMS-QQ-A-250, T3 surface	0.15	0.00	
Titanium, AMS 4911, 6AL-4V	0.10	0.00	
Steel, AMS 5046, Grade 1020	0.25	0.00	
Titanium stress corrosion			ASTM F945
AMS4911			
20x magnification	No cracking	Pass	
500x magnification	No cracking	Pass	
AMS4916			
20x magnification	No cracking	Pass	
500x magnification	No cracking	Pass	
Acidity	Neutral	Pass	ASTM D847
Doctor test	Negative	Negative	ASTM D235
Vapor pressure, mmHg at 20°C	2.0 max	0.7	ASTM D2879
Soil cleaning test, %	85% min	91%	FED-STD-791 Method 7502
VOC, %weight	Report	4.6%	SCAQMD 313

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