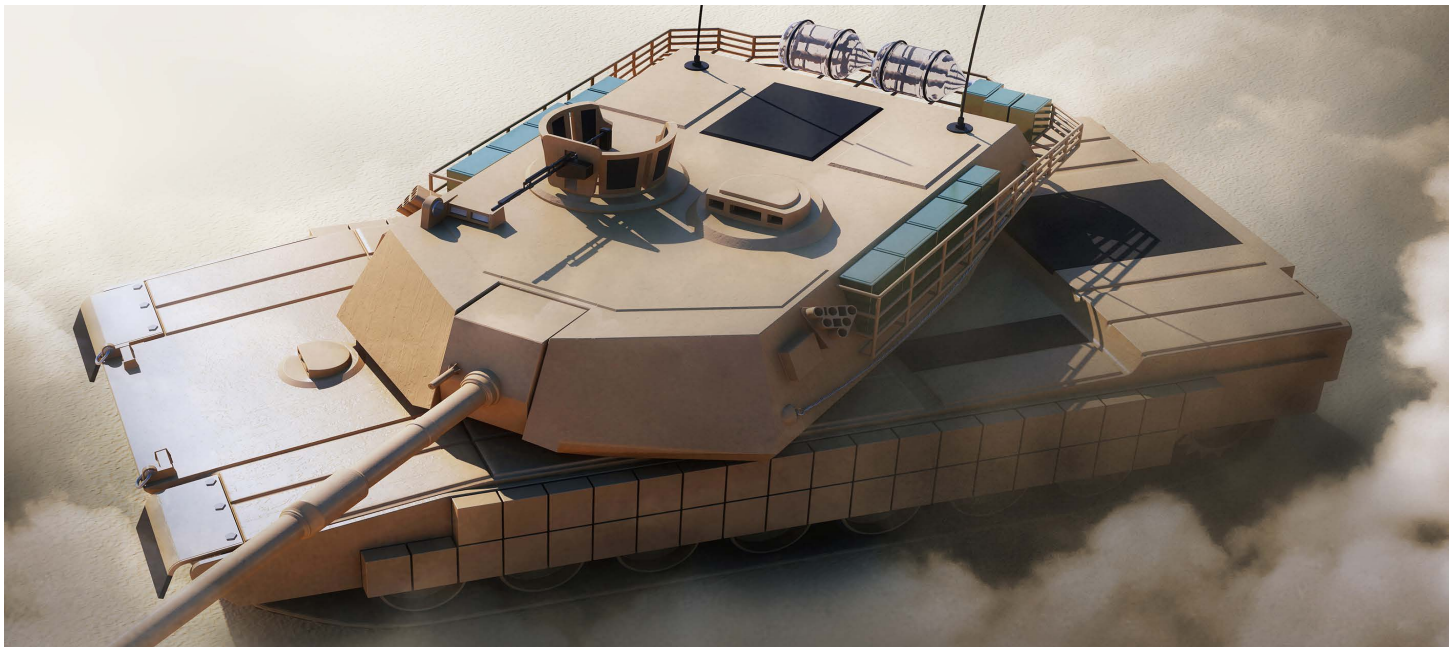
MIL-PRF-46170E
RADCOLUBE® FR170



RADCOLUBE® FR170

HYDRAULIC FLUID, RUST INHIBITED, FIRE RESISTANT, SYNTHETIC HYDROCARBON

This product is a synthetic hydrocarbon base hydraulic fluid for use in the -40°C to 200°C (-40°F to 392°F) temperature range in recoil mechanisms and ground vehicle and equipment hydraulic systems.

NATO Code: H-544

Qualification Number: HF-79, HF-80, HF-82, HF-83, HF-88

Qualification Date: 3/11/2021, 3/16/2021, 7/20/2021 7/20/2021, 9/9/2024

ISO 9001:2015 Certification No: C2024-00254

Shelf Life: 24 Months from DOM

Manufactured: LaFox, IL 60147 | Cage: 1RVC4

NATIONAL STOCK NUMBERS (NSN)	
9150-01-332-7819	Pint
9150-00-111-6256	Quart
9150-00-111-6254	Gallon
9150-00-111-6255	5 Gallon Pail
9150-01-158-0462	55 Gallon Drum

RADCO INDUSTRIES, INC.
TECHNICAL DATA SHEET FOR RADCOLUBE® FR170 FIRE RESISTANT HYDRAULIC FLUID
MIL-PRF-46170E HYDRAULIC FLUID, RUST INHIBITED, FIRE RESISTANT, SYNTHETIC HYDROCARBON BASE, NATO CODE NO. H-544

PROPERTY	TEST LIMITS	TYPICAL RESULTS	TEST METHOD
Acid Number	0.20 mgKOH/g maxiumum (max)	0.08	ASTM D664
Autoignition Temperature	343°C, mininimum (min)	363	ASTM E659
Compatibility	Paragraph 3.4.1	Conforms	Paragraph 4.5.2
Corrosion Protection, (Humidity Cabinet) sand blasted and polished panels, 100 ±1 hours at 48.9 ±1.1°C	Paragraph 3.4.2	Conforms	ASTM D1748
Corrosiveness (Bimetallic Couple)	Paragraph 3.4.3	Conforms	ASTM D6547
Corrsiveness and Oxidation Stability (168 hrs at 121 ±1°C)			ASTM D4636 Procedure 2
Metal Specimen weight change			
Cadmium Anod	±0.2 mg/cm^2, max	-0.031	
Steel Grade 1010	±0.2 mg/cm^2, max	0.016	
Aluminum Alloy	±0.2 mg/cm^2, max	0.023	
Magnesium	±0.2 mg/cm^2, max	-0.008	
Copper (Color)	±0.6 mg/cm^2, max (No. 3 max)	-0.372 (1b)	ASTM D130
Percent change in viscosity at 40°C	± 10%, max	0.38%	
Change in acid number	0.30 mgKOH/g, max	0.11	
Separation of insoluble material or gumming of the fluid	None	None	
Evaporation Loss, 22 Hours at 149 ±0.5°C	5%, max.	4.32%	ASTM D972
Fire Point	246°C, min	246	ASTM D92
Flash Point	218°C, min	222	ASTM D92
Foaming Characteristics			ASTM D892
Foaming Tendency			
Foam volume at end of 5 minute blowing period			
at 24°C	65mL, max	5	
at 94°C	65mL, max	20	
at 24°C after test at 94°C	65mL, max	5	
Foam Stability			
Foam volume at end of 10 minute setting period			
at 24°C	0 mL, max	0	
at 94°C	0 mL, max	0	
at 24°C after test at 94°C	0 mL, max	0	
High Temperature-High Pressure Spray Ignition	Paragraph 3.4.4	Conforms	FTM 6052
Isothermal secant bulk modulus at 40°C and 27.6 MPa	1,379 MPa, min	1,834	ASTM D6793
Linear Flame Propagation Rate	0.30 cm/s, max	0.17	ASTM D5306
Low Temperature Stability (-40°C6°C for 72 hrs)	Paragraph 3.4.5	Conforms	FTM 3458
Particulate Contamination			FTM 3012
Particle Count			
5-25µm	10,000	1,827	
26-50µm	250	30	
51-100µm	50	0	
over 100µm	10	0	
Gravimetric method	0.5 mg/100mL, max	0	ASTM D4898
Pour Point	-54°C, max	< -69	ASTM D97
Relative Density at 15.6°C/15.6°C	Report	0.849	ASTM D1298
Rubber Swell, Standard Synthetic Rubber, NBR-L (168±0.5 hours at 70 ± 2.5 °C)	15.0 - 25.0%	15.1%	ASTM D4289
Steel on Steel wear			ASTM D4172
Test Load 147N	0.30 mm, max	0.27	
Test Load 392N	0.65 mm, max	0.50	
Storage Stability (24 ± 3°C for 12 months)	Paragraph 3.4.8	Conforms	FTM 3465
Trace Sediment	0.005 mL, max	0.000	ASTM D2273
Viscosity			ASTM D445
at -40°C	2600 cSt, max	2191	
at 40°C	19.5 cSt, max	15.8	
at 100°C	3.4 cSt, min	3.8	
Water	0.05%, max	0.003%	ASTM D6304
Water Sensitivity, Light Transmittance	90%, min	97.6%	Paragraph 4.5.1
Workmanship	Paragraph 3.4.9	Conforms	Paragraph 3.4.9

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

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