



Royal Lubricants, Inc.

Product Bulletin
MIL-PRF-46170C

ROYCO 770 SYNTHETIC FIRE RESISTANT RUST INHIBITED HYDRAULIC FLUID

DESCRIPTION:

ROYCO 770 is a synthetic hydraulic fluid developed to meet the severe duty demands of today's military and industrial equipment. Rust inhibitors are utilized to provide protection to ferrous components and modern additive technology is employed for oxidative stability, corrosion inhibition, and antiwear protection. **ROYCO 770** is designated as a P-15 protectant according to the **Mil-STD-2073-1C** standard.

APPLICATIONS:

ROYCO 770 is intended for use in severe duty applications requiring extremes in environment and/or extended time periods between operation such as tank and howitzer recoil mechanisms and hydraulic systems, snow removal, earth moving and heavy duty construction equipment, and industrial robotic hydraulic systems. **ROYCO 770** is especially recommended in applications where rust protection together with a high flash point can afford an extra margin of safety and fire protection.

LIMITATIONS:

ROYCO 770 should not be used in aviation hydraulic systems without prior evaluation and should not be used in systems in contact with natural rubbers. Intermixing **ROYCO 770** with petroleum base stocks will reduce fire resistant properties.

PACKAGING:

ROYCO 770 is available in 1 gallon containers, 5 gallon pails, and 55 gallon drums.

SPECIFICATIONS:

ROYCO 770 meets all requirements and is qualified against MIL-SPEC: MIL-PRF-46170C Type 1 and Type 2 (special order) .

ROYCO 770

For more information please refer to the relevant Material Safety Data Sheet accompanying each product.

Warranty: All products purchased from Royal are subject to terms and conditions set out in the contract, order acknowledgement and/or bill of lading. Royal warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by Royal is considered accurate but is furnished on the expressed condition that the customer shall make its own assessment to determine the product's suitability for a particular purpose. No warranty is expressed or implied regarding such other information, the data upon which the same is based, or the results to be obtained from the use thereof; that any product shall be merchantable or fit for any particular purpose; or that the use of such other information or product will not infringe any patent.

TYPICAL PROPERTIES

PROPERTY	SPECIFICATION	TYPICAL
Kin. Viscosity, cSt		
@ 100°C	3.4 min.	3.71
@ 40°C	19.5 max.	15.7
@ -40°C	2600 max.	2435
@ -54°C	Report	14,765
Flash Point, °C	218 min.	228
Fire Point, °C	246 min.	253
Autoignition, °C	343 min.	387
Pour Point, °C	-54 max.	-60
Total Acid No., mQ KOH/g	0.2 max.	0.10
Specific Gravity, (15.6°C)	0.8630+/- .008	0.8590
Gravimetric Filtration, mg	0.5 max.	0.2
Trace Sediment, ml	0.005 max.	0.001
Water Content, % wt	0.05 max.	0.02
Water Sensitivity, % trans.	90 min.	98
Evaporation, % loss 300°F/22 hrs.	5.0 max.	2.5
Synthetic Rubber Swell, "L", 158°F/168 hrs.	15-25	20
4-Ball Wear, mm ² scar		
10 Kg/1200 RPM/1 hr/75°C	0.3 max.	0.25
40 Kg/1200 RPM/1 hr/75°C	0.65 max.	0.45
Solid Particle Contamination, auto counter, particles/litre		
5-25 mu	10,000 max.	2200
26-50 mu	250 max.	80
51-100 mu	50 max.	10
100+ mu	10 max.	0
Foam Characteristics, ml @ 5 min blow/ ml @ 10 min		
Seq I	65/0	15/0
Seq II	65/0	10/0
Seq III	65/0	15/0

R770: 11/30/01



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