



Brayco 300

Lubricating Oil, General Purpose, Preservative

Description

Castrol Brayco™ 300 is a blend of highly refined petroleum oil with suitable additives which provide corrosion prevention, oxidation resistance, and freedom from galvanic corrosion in brass-steel bimetallic systems. The viscosity is similar to a light machine oil. Brayco 300 is a water displacing oil for general purpose applications at low and medium temperatures (-70°F to 300°F).

Application

Brayco 300 is designed for the lubrication and preservation of small arms, automatic weapons, and fuse mechanism applications, especially where a low temperature, water displacing oil is desired. It may be used to protect unpainted metal surfaces from the effects of indoor storage for periods of three to six months, after which it remains readily removable. Brayco 300 will also protect magnesium and aluminum against corrosion at low and medium temperatures (-70°F to 300°F). Brayco 300 may be applied by brush, dip, swab, spray, or squirt can. Depending on the method of application and surface geometries, Brayco 300 will cover 1,000 to 3,000 square feet per gallon. For water displacement, it may be applied by these same methods. Displaced water should be removed from dip tanks at suitable intervals.

Characteristics

Test	Method	Units	Specification Requirements	Result
API Gravity	ASTM D287	Degrees	Report	28.75
Specific Gravity @16°C/60°F	Table 3		Report	0.883
Density @16°C/60°F	Table 8	Lbs/gal	Report	7.35
Color	ASTM D1500		7.0 Maximum	4
Pour Point	ASTM D97	°C/°F	-57/-70 Maximum	-57/-70
Viscosity, cSt @40°C/104°F @-40°C/-40°F @-54°C/-65°F	ASTM D445	cSt	11 Minimum 7,000 Maximum 60,000 Maximum	11.2 3,382 35,697
Flash Point, COC	ASTM D92	°C/°F	135 Minimum	142/285
Precipitation Number	ASTM D91	ml	0.05 Maximum	0
Evaporation Loss, 22 hours @100°C/212°F	ASTM D972	% wt	25 Maximum	19.09
Corrosion-Oxidation Stability, 168 hours @121°C/250°F				
Corrosion, Pitting, or Etching		-	None	None
Copper, weight change		mg/cm ²	0.2 Maximum	-0.006
Steel, weight change		mg/cm ²	0.2 Maximum	+0.008
Aluminum, weight change	FTM 5308	mg/cm ²	0.2 Maximum	+0.011
Magnesium, weight change		mg/cm ²	0.2 Maximum	+0.019
Cadmium, weight change		mg/cm ²	0.2 Maximum	+0.002
Change in Viscosity @40°C/104°F		% change	-5 to +20	+4.6
Change in Neutralization No.		-	0.20 Maximum	0.06
Insoluble Materials and Gum		-	None	None

Subject to usual manufacturing tolerances.

Typical Physical Characteristics

Test	Method	Units	Specification Requirements	Result
Copper Strip Corrosion, 3 hours @100°C/212°F	ASTM D130		2a Maximum	1
Humidity Cabinet-S8 Panels, 192 hours	FTM 5329	Pass/Fail	Pass	Pass
Water Displacement	FTM 3007	Pass/Fail	Pass	Pass
Water Stability		Pass/Fail	Pass	Pass
Low Temp. Stability, 72 hours @-54°C/-65°F	FTM 202	Pass/Fail	Pass	Pass
Corrosiveness, 10 days (240 Grit)	FTM 5322	Pass/Fail	Pass	Pass
Film Characteristics	Spec	Pass/Fail	Pass	Pass
Removability	Spec	Pass/Fail	Pass	Pass
Four-Ball Wear-Test, AWSD	ASTM D4172	mm	1 Maximum	0.55
Workmanship	Spec	Pass/Fail	Pass	Pass

Additional Information

Specifications Brayco 300 meets the requirements of and is qualified to MIL-PRF-32033. This product is identified by NATO Code Number O-190. Shelf Life Brayco 300 has a maximum recommended shelf life of 6 years from date of manufacture. This shelf life assumes that the product is stored in it's original unopened packaging in ambient temperature conditions.

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01 Sep 2016
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