

## Castrol Brayco 300

Lubricating Oil, General Purpose, Preservative  
Water Displacing – Low Temperature

### 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.

### Typical 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	FTM 5308	-	None	None
Copper, weight change		mg/cm <sup>2</sup>	0.2 Maximum	-0.006
Steel, weight change		mg/cm <sup>2</sup>	0.2 Maximum	+0.008
Aluminum, weight change		mg/cm <sup>2</sup>	0.2 Maximum	+0.011
Magnesium, weight change		mg/cm <sup>2</sup>	0.2 Maximum	+0.019
Cadmium, weight change		mg/cm <sup>2</sup>	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	

Test	Method	Units	Specification Requirements	Result
Copper Strip Corrosion, 3 hours @100°C/212°F	ASTM D130		2a Maximum	1
Humidity Cabinet-SB 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

Subject to usual manufacturing tolerances.

## 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.

Castrol, Brayco, and the Castrol logo are trademarks of Castrol Limited, used under licence

This data sheet and the information it contains is believed to be accurate as of the date of printing. However, no warranty or representation, express or implied, is made as to its accuracy or completeness. Data provided is based on standard tests under laboratory conditions and is given as a guide only. Users are advised to ensure that they refer to the latest version of this data sheet.

It is the responsibility of the user to evaluate and use products safely, to assess suitability for the intended application and to comply with all applicable laws and regulations. Material Safety Data Sheets are available for all our products and should be consulted for appropriate information regarding storage, safe handling, and disposal of the product. No responsibility is taken by either BP plc or its subsidiaries for any damage or injury resulting from abnormal use of the material, from any failure to adhere to recommendations, or from hazards inherent in the nature of the material. All products, services and information supplied are provided under our standard conditions of sale. You should consult our local representative if you require any further information.

Castrol Limited, Pipers Way, Swindon, Wiltshire SN3 1RE, UK  
[www.castrol.com/industrial](http://www.castrol.com/industrial)  
[www.castrol.com/industrial](http://www.castrol.com/industrial)