BRB

A Subsidiary of PETRONAS Chemicals Group

PRODUCT DATA SHEET

Petrolad® 3550

Coolant Corrosion-Inhibitor Additive Package

BRB Lube oil Additives & Chemicals
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Product Description

Petrolad® 3550 is an economical aqueous concentrate, which can be used to formulate coolants that provide frost and corrosion protection. The coolant is free of potentially harmful substances, such as nitrites, amines and phosphates, as well as silicates and borates.

Benefits

For the perfect operation of water-cooled internal combustion engines, the engine and cooling system must be adequately protected from corrosion and frost damage. For this purpose, antifreeze coolant is added to the cooling water. Coolants formulated with **Petrolad® 3550** offer the following benefits to the user:

- Corrosion protection
- Frost protection
- Boiling protection
- Miscibility
- Seal compatibility
- Hard water stability
- Low foaming tendency
- Free of nitrite, phosphate, borate, silicate & amine, thus suitable for organic acid technology (OAT) based coolants
- No alcohol or methanol
- Non-flammable

Typical Properties

Characteristics of Petrolad® 3550

Property	Typical value
Appearance	Colorless liquid
Nitrate, amine & phosphate (% w/w)	nil
Borate & silicate (% w/w)	nil
Density (g/cm^3)	1,1
pH	10,5
Miscibility	Fully miscible in water and ethylene glycol

Characteristics of antifreeze[1] based on Petrolad® 3550:

Property	Method	BS 6580	Petrolad® 3550
Flash point (°C)	BS EN ISO 2592	>100	131,5
Boiling point (°C)	ASTM D1120	>150	159
Hard water stability (cm^3 of precipitate)	ASTM D7437	<0,5	nil
Reserve alkalinity	ASTM D1121	-	3,9

[1] 5 % w/w **Petrolad® 3550** in MEG.

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Characteristics & performance of a coolant based on Petrolad® 3550:

Property	Method	BS 6580	Petrolad® 3550
pH[2]	ASTM D1287	-	ca. 8,4
pH[3]		-	ca. 8,5
Freezing point (°C)[3]	ASTM D1177	<-33	-34,7
Foaming characteristics[2]			
Volume of foam (mL)	ASTM D1881	<50	37
Break time (s)		<5	1
Aluminium heat transfer test2 (weight loss in mg/cm^2/week)	ASTM D1177	<1	0,1
Hot immersion glassware test[2] (weight loss in mg/coupon)			
Copper	ASTM D1384	<10	0,8
Solder		<30	0,6
Brass		<10	1,5
Steel		<10	<0,1
Cast Iron		<10	1
Aluminium alloy		<30	13

[2] 33 % v/v of antifreeze in water.
[3] 50 % v/v of antifreeze in water.

Characteristics & Performance of coolant based on Petrolad® 3550:

Property	Method	ASTM D3306	Petrolad® 3550
Cavitation corrosion and erosion-corrosion characteristics (rating)	ASTM D2809	Min. 8	10
Simulated service corrosion testing of engine coolants, weight loss (mg/specimen)			
Copper	ASTM D2570	Max. 20	8
Solder		Max. 60	2
Brass		Max. 20	11
Steel		Max. 20	0,7
Cast Iron		Max. 20	0
Aluminium alloy		Max. 60	9

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Performance

Petrolad® 3550 offers excellent frost protection.

Ratio of antifreeze[1] to water	Frost protection[4]
1:1	-40
1:2	-22
1:3	-17

[1] 5 % w/w Petrolad® 3550 in MEG.
[4] Frost protection is defined as the average between freezing point and pour point.

How to Use

It is recommended to change the coolant every year. For Toxicity and Safety Data please refer to the Material Safety Data Sheet. ATTENTION: Before handling, read product information, Product Safety Data Sheets, container labels for safe use and any physical and/or health hazard information.

FOR MORE INFORMATION
Please contact
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