

PowerCool Plus

Extended Life Premix Coolant



PowerCool Plus Extended Life Coolant is based on a proprietary Hybrid Organic Acid Technology (HOAT). It has been specifically designed for complete mixed fleet use and can be used in all makes and models of foreign and domestic passenger vehicles, light duty and heavy duty diesel engine applications. This low silicate, organic additive, Ethylene Glycol based, extended life product is free of phosphates, borates, nitrites and amines. It will provide extended protection against rust, corrosion and pitting caused by cavitation for all coolant system metals, including aluminium. It also provides protection against wet sleeve liner cavitation and is compatible with the flux found in Controlled Atmosphere Brazed (CAB) radiators. In addition to normal product development testing, this product has been evaluated for chemical and performance compatibility with a wide range of different engine coolant technologies (including Asian, European and North American) using ASTM D1384, D2809 and D4340.

PowerCool Plus offers excellent protection against temperature extremes, preventing freeze-up and boil over when used in accordance with OEM and product manufacturer's guidelines. This product does not impart any significant colour change if mixed with another engine coolant. The superior performance, stability and premium extended life corrosion inhibitors allow PowerCool Plus to perform well beyond the lifetime of traditional coolants. When PowerCool Plus is added as an initial fill and properly maintained in accordance with engine manufacturer's maintenance recommendation, it will provide up to 250,000 km or 5 years of service life protection in automotive applications and up to 1,000,000 km or 6 years of service life protection in heavy duty diesel engine applications.

FEATURES:

- Hybrid chemistry coolant; containing Ethylene Glycol
- Borate, nitrite, amine, and phosphate free
- When PowerCool Plus is added as an initial fill and properly maintained in accordance with engine manufacturer's maintenance recommendation, it will provide up to 250,000 km or 5 years of service life protection in automotive applications and up to 1,000,000 km or 6 years of service life protection in heavy duty diesel engine use

BENEFITS:

- Suitable for mixed fleet use: automotive, light and heavy duty diesel applications
- Universal compatibility: can be added as top-up to any colour antifreeze
- Protects coolant system metals such as brass, copper, solder, steel, cast iron and aluminium
- Protects against wet sleeve liner cavitation
- Enhanced water pump performance
- Fully compatible with IAT, HOAT and OAT coolant technologies
- Compatible with CAB radiators
- Extended service life

LONG-LIFE HEAVY-DUTY COOLANTS



PENSKE
Power Systems

PowerCool Plus

Extended Life Premix Coolant



PowerCool Plus is recommended for use with the following OEM and industry performance requirements:

ASTM D3306, D4985, D6210-10, D7583	Ford ESE-M97B44A, WSS-M97B44D, WSS-M97B51-A1
2108.1:2004 Type A	Detroit Approved
BS 6580	GM 1825M, 1899M, 6277M, Heavy Truck
Caterpillar EC-1	Kenworth
Chrysler MS7170, MS9769	MACK
Cummins 14603	PACCAR
Volvo	VW TL774G
Freightliner 44822880	

PowerCool Plus is a complete fill ready-to-use coolant and therefore should not be diluted. Penske Power Systems offers a continuous commitment to deliver:

- Reliable supply
- Consistent high-quality coolant
- Unsurpassed technology
- Valuable technical service
- Education on safe use and handling

PowerCool Plus - Typical Product Properties

Characteristic	Performance	Test Method
pH	7.5 – 9.5	ASTM D1287
Specific gravity ^b	1.065 -1.075	ASTM D1122
Freeze point (°C/°F)	-37/ -34	ASTM D1177
Foam volume (ml)	150 max.	ASTM D1881
Foam break time (second)	5 max.	ASTM D1881
Reserve Alkalinity (ml)	1.5 min.	ASTM D1121
Chloride (ppm)	25 max.	ASTM D3634
Colour	Green	
Glycol Content (wtg. %).	50 min.	
Silicon, from silicate (ppm)	125 max.	ASTM D6130
Boron (ppm)	< 10	
Phosphorous (ppm)	< 10	

^aMeasured at 15.6°C/60°F

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Typical Coolant Performance Testing Results

ASTM D-1384 Glassware Corrosion			ASTM D-2570 Simulated Service	
Metal Type	Test Results ¹	Max. Spec.	Test Results ¹	Max. Spec.
Copper	1	10	2	20
Solder	1	30	2	60
Brass	1	10	1	20
Steel	0	10	1	20
Cast Iron	-1	10	2	20
Aluminium	2	30	0	60

¹ Weight loss, except plus signs which indicate weight gain, per coupon in milligrams. Values are for coolant made from virgin ethylene glycol.

Typical Coolant Performance Testing Results (continued)

	Test Results ¹	Specification
ASTM D4340 Heat Rejecting Aluminium Corrosion (mg/cm ² /week)	0.1	1.0 maximum
ASTM D2809 Aluminium Water Pump Cavitation- Erosion Corrosion Rating		
100 hours	9	8 maximum
300 hours	9	
500 hours	9	
ASTM D7583 Deere Liner Cavitation Test	101	200

¹ Weight loss per coupon in milligrams (average for 2 tests). Values are for coolant made from virgin ethylene glycol.

For more information on PowerCool for your application please contact Penske Power Systems on 1300 688 338

Notice: This product is shipped in compliance with applicable laws and regulations regarding classification, packaging, shipping and handling. The performance and physical property data described for this product is typical results not sale specifications, except where maximum or minimum is indicated. Refer to Material Safety Data Sheets for further information.

Because use conditions and applicable laws may differ from one location to another and may change with time, the customer is responsible for determining whether product and the information in this document are appropriate for their use and for ensuring that their workplace and disposal practices are in compliance with applicable laws and other governmental enactments. PowerCool Plus Extended Life Coolant's warranty is limited to the claims of product meeting stated performance specifications. It is the responsibility of the end-user to determine product suitability as recommended in the owner's manual and to follow engine manufacturer's instructions.

LONG-LIFE HEAVY-DUTY COOLANTS

