



PROFESSIONAL
HEAVY DUTY
**ANTIFREEZE/
COOLANT**

COMPATIBLE WITH OTHER OAT COOLANTS • NO SCA CHARGE REQUIRED
AMINE, BORATE, NITRITE, PHOSPHATE & SILICATE FREE



EXTEND
LONG SERVICE
LIFE DIESEL

FOR INTENSE SERVICE HEAVY-DUTY
DIESEL & ELECTRICALLY POWERED VEHICLES

UP TO
6 YEARS / 960,000 KM / 12,000 HOURS
600,000 MILES

ENGINEERED FOR THE
LONG HAUL

Offering a long service life, Extend is based exclusively on organic additive technology (OAT) making it suitable for all heavy duty engines.

FORMULATION FEATURES & BENEFITS:

Extended Service Life: Provides up to 960,000 km (600,000 miles), 12,000 hours or 6 years' service life protection in heavy duty applications under normal operating conditions provided the coolant is kept in good condition and in line with the engine's OEM's requirements.

Wide Application: Designed and recommended for intense service heavy duty diesel and electrically powered (EVs) vehicles including on-road, off-road, construction, marine, mining, stationary engines and agricultural equipment. It is free of silicates, phosphates, borates, nitrites and amines and equally suitable for light duty automotive applications. It eliminates the need to carry multiple coolants to service different engines, providing for added value.

Proven Protection: It protects the latest coolant system metals including brass, copper, solder, steel and cast iron against rust, corrosion and deterioration. Extend provides superior aluminum protection, excellent CAB flux compatibility and wet sleeve liner cavitation protection as determined through fleet testing and the Deere Liner Cavitation Test, ASTM D7583. Being 2-EHA free, it is compatible with all system elastomeric materials ensuring optimal system performance. As a full OAT product, it provides extended water pump performance with no possibility of deposit / gel formation when used as directed.

Field Compatibility: When used in the long haul or heavy-duty applications, there is no need to initially charge the fresh coolant with SCAs. It is fully compatible with other similarly formulated organic additive technology long life engine coolants. The product is also widely compatible with other silicate-free engine coolants.

Powered by ProShield OAT Corrosion Defense: Our proprietary OAT corrosion inhibitor system, ProShield is engineered for new cooling systems, offering protection against corrosion and deterioration, providing excellent high temperature aluminum and liner cavitation protection. This level of protection affords a lower overall operating costs compared to other coolants and is 2-EHA, Borate, Nitrite, Amine, Phosphate and Silicate (BNAPS) free.

All Climate Performance: Provides protection against low temperature freeze-up or high temperature boil-over and suitable for all season use throughout winter and summer. When used as 50% diluted with high quality water, provides freeze protection down to -37°C/-34°F and boil-over protection up to +132°C/+269°F (with the use of a 100 kPa pressure cap).



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EXTEND Heavy duty and light duty engine coolant is a long service life product based on a synergistic combination of organic acids that has been found to provide excellent overall corrosion protection including wet sleeve liners in heavy duty applications. It protects coolant system metals against rust, corrosion and cavitation and provides excellent high temperature aluminum protection. This borate, nitrite, amine, phosphate and silicate free (BNAPS-free) product is the recommended choice to meet some coolant chemistry composition restrictions of major Heavy Duty OEMs around the globe. It is fully compatible with other similarly formulated OAT coolants.

Approvals & Specifications

Meets or Exceeds performance requirements of:	Recommended and suitable for use with:	
<ul style="list-style-type: none"> • ASTM D3306, D6210, D7583 • JIS K2234 • CNHi MAT 3724 • New Flyer eBus • TMC RP364 	<ul style="list-style-type: none"> • Caterpillar • Chrysler MS-12106 • CNHi MAT 3624 • Cummins CES 14603 / 14439 / 14636 • DAF 74002 • Daimler Truck DTFR 29C110 / 29D110 • Detroit Diesel Fluid Spec. DFS93K217 • Deutz DQC CB-14 • Deutz Stationary Diesel Engines • Ford WSS-M97B44-D • GMW3420 / GM6277M • Jenbacher Stationary Natural Gas Engines • Kobelco 	<ul style="list-style-type: none"> • Komatsu KES 07.892 • MTU MTL 5048 • Navistar MPAPS B1-Type IIIA • Mack • MAN 324 Typ SNF • MB Approval 325.3 (conc.)/ 326.3 (50/50) • MWM • Scania • Vestas Wind Turbine Power Electronics — External Coolant System • Volvo • VW TL774-F • Wärtsilä Stationary Diesel Engines

Typical Physical and Chemical Characteristics

CHARACTERISTIC	PERFORMANCE		TEST METHOD
	CONCENTRATE	50-50 PREMIX	
Appearance	Clear and transparent fluid	Clear and transparent fluid	Visual
Colour	Pink	Pink	Visual
pH	7.8 – 8.8	7.8 – 8.8	ASTM D1287
Reserve Alkalinity, ml	5.6 min.	2.8 min.	ASTM D1121
Specific gravity	1.120 – 1.135	1.065 - 1.085	ASTM D1122
Freeze point, °C/°F	60/40: -52/-61 70/30: -64/-83	-37/-34	ASTM D1177
Foam volume, ml	50 max.	50 max.	ASTM D1881
Foam break time, second	5 max.	5 max.	ASTM D1881
Chloride, ppm	< 25	< 25	ASTM D3634
Silicon	< 10	< 10	ASTM D6130
Phosphate	< 10	< 10	ASTM D5827
Nitrite	< 10	< 10	ASTM D5827
Shelf Life, (Unopened, original container)	8 years	8 years	



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These characteristics are typical of current production. While future production will conform to Recochem's specification, variations in these characteristics may occur.

Dilution Chart

Protection against Freezing (°C/°F)	-37 / -34	-52 / -61	-64 / -83
Volume % Antifreeze	50	60	70
Volume % Deionized Water	50	40	30
**Protection against Boil-Over (°C/°F)	129 / 264	132 / 269	136 / 276

***with a 100 kilopascals (15 psi) radiator cap in good condition

Coolant concentrate must be diluted with water prior to use. Antifreeze/Coolant should not be used in concentrated form. A 50% dilution is generally recommended for the best balance of protection against freezing, corrosion and summer boil-over. For increased freeze protection in extremely cold areas, a 60% volume concentration can be used. Concentrations of greater than 70% by volume are not recommended. High quality soft, de-ionized or distilled water should always be used to dilute coolant concentrate.

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	0	10	8	20
Solder	1	30	5	60
Brass	0	10	10	20
Steel	1	10	0	20
Cast Iron	0	10	1	20
Aluminum	4	30	8	60

¹ Weight loss, except minus 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	Specification
ASTM D4340 Heat Rejecting Aluminum Corrosion (mg/cm ² /week) ²	0.05	1.0 max.
ASTM D2809 Aluminum Water Pump Cavitation- Erosion Corrosion Rating	8	8 min.
ASTM D7583 Deere Liner Cavitation Test	Pass	200 max.

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



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Warranty:

When added as an initial fill and properly maintained in accordance with engine manufacturer's maintenance recommendation, this product will provide an in-service life of up to 960,000 km/600,000 miles, 12,000 hours or 6 years, (Heavy Duty Diesel), whichever comes first. While deleterious effects are not expected to be significant, mixing with conventional coolants will result in a lower than expected lifetime.

Handling, Storage & Shelf Life

Product should be stored in original container or appropriate dedicated tank or vessel. Although temperature fluctuations will not adversely affect coolant, unused coolant should be stored at ambient conditions. Under typical conditions and when the container integrity is maintained, product can be stored for up to 8 years without any adverse effect on quality. Product should be agitated before use.

Health, Safety & Environment

For detailed information and recommended practices related to Health and Safety, please refer to the appropriate Safety Data Sheet (SDS).

New or spent coolant is never to be disposed of into a septic system, storm sewer or onto the ground. Always dispose coolant in accordance with local, provincial/ state and federal guidelines. Contain any spilled coolant and contact appropriate authorities on appropriate clean-up instructions.

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 are typical results not sale specifications, except where maximum or minimum is indicated. Refer to 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. Recochem'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.