



# PROFESSIONAL HEAVY DUTY ANTIFREEZE/ COOLANT

NITRITE & MOLYBDATE RICH • CAT EC-1 COMPATIBLE •  
2-EHA, SILICATE, BORATE, AMINE & PHOSPHATE FREE



## EXTREME

EXTENDED LIFE DIESEL  
ENGINEERED FOR NEW COOLING SYSTEMS

UP TO  
**6** YEARS / **1,200,000 KM**  
**750,000 MILES**

## EXTREME NEVER QUILTS

A fortified, nitrite & molybdate based formula with a long service life, Industry professionals trust Extreme to perform in the harshest environments.

### FORMULATION FEATURES & BENEFITS:

**Extended Service Life:** Provides up to 1,200,000 km, 750,000 miles, 15,000 hours or 8 years under normal operating conditions provided the coolant is kept in good condition with nitrite levels in line with the engine's OEM's requirements. Silicate-free provides for no possibility of silicate drop-out or gel formation.

**Wide Application:** Ideally suited for heavy duty diesel applications where extended service interval & aluminum compatibility is required of a nitrite based, silicate free coolant, including on-road truck, off-road, farm and marine engine applications. CAT EC-1 compatible, it provides excellent heat transfer capabilities.

**Proven Protection:** Protects all coolant system metals against rust & corrosion, offering excellent aluminum & wet sleeve liner cavitation protection even at high temperatures. Being 2-EHA free, it is compatible with all system elastomeric materials ensuring optimal system performance.

**Field Compatibility:** Compatible with, but does not necessarily need or require the addition of SCA or Coolant Extenders, its compatibility extends to use with other similarly formulated engine antifreeze/ coolants and generally can tolerate hard water.

**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. HD Expert Extreme is Nitrite & Molybdate rich as well as being 2-EHA, Silicate, Borate, Amine & Phosphate 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). Available in Concentrate and 50-50 Pre-diluted formats.



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**EXTREME Extended Life Diesel** guards coolant system metal against rust and corrosion and provides excellent aluminum and wet sleeve liner cavitation protection. Formulated for use in heavy duty diesel applications where OEM recommends NOAT technology coolant, extended service interval and aluminum compatibility is required and recommended for use in on-road truck, off-road, farm and marine engine applications including, but not limited to, Caterpillar, Cummins, MTU, International, PACCAR and Volvo/Mack.

## Approvals & Specifications

Meets or exceeds performance requirements of:	Recommended and suitable for use where OEM Recommends NOAT:		
<ul style="list-style-type: none"> <li>• ASTM D3306, D6210, D7583</li> <li>• CAT EC-1 Specification*</li> <li>• GB 29743-2013</li> <li>• TMC RP364</li> </ul>	<ul style="list-style-type: none"> <li>• Caterpillar Stationary Gas Engines</li> <li>• Cummins 14603 / 14439 / 3666132</li> <li>• Deutz DQC CB-14</li> <li>• Ford WSS-M97B51-A1</li> <li>• Freightliner</li> <li>• Hino Diesel Truck</li> <li>• Isuzu Diesel Truck</li> </ul>	<ul style="list-style-type: none"> <li>• International Truck</li> <li>• JCB STD00088</li> <li>• Mack STD 418-0003</li> <li>• MAN 324 N</li> <li>• MTU MTL 5048</li> <li>• Navistar MPAPS B1 Type III</li> <li>• Kobelco</li> <li>• Kenworth</li> </ul>	<ul style="list-style-type: none"> <li>• PACCAR</li> <li>• Peterbilt</li> <li>• Scania</li> <li>• Volvo STD 418-0003</li> <li>• Wärtsilä Stationary Diesel Engines</li> <li>• Waukesha Stationary Natural Gas Engines</li> <li>• Western Star</li> </ul>

\*Meets CAT EC-1 Physical & Chemical Properties and Compatibility characteristics

## Typical Physical and Chemical Characteristics

CHARACTERISTIC	PERFORMANCE		TEST METHOD
	CONCENTRATE	50-50 PREMIX	
Appearance	Clear and transparent fluid	Clear and transparent fluid	Visual
Colour	Red	Red	Visual
pH	7.8 – 8.8 (50%)	7.8 – 8.8	ASTM D1287
Reserve Alkalinity, ml	4.0 min.	2.0 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
Shelf Life, (Unopened, original container)	5 years	5 years	

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



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## 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 <sup>1</sup>	Max. Spec.	Test Results <sup>1</sup>	Max. Spec.
Copper	-2	10	4	20
Solder	-3	30	4	60
Brass	0	10	3	20
Steel	0	10	1	20
Cast Iron	-2	10	3	20
Aluminum	0	30	1	60

<sup>1</sup> 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 <sup>2</sup> /week) <sup>2</sup>	0.1	1.0 max.
ASTM D2809 Aluminum Water Pump Cavitation- Erosion Corrosion Rating	8	8 min.

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



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## Product Packaging Specifications

### CANADA

Item No.	Formulation	Container Size	Case Pack	UPC	SCC
16-524	Concentrate	3.78 L	4	0-59934-90593-6	400-59934-90593-4
16-534	50-50 premixed	3.78 L	4	0-59934-90597-4	400-59934-90597-2

### USA

Item No.	Formulation	Container Size	Case Pack	UPC	SCC
86-524	Concentrate	1 gal	4	0-56438-86524-7	400-56438-86524-5
86-534	50-50 pre-diluted	1 gal	4	0-56438-86534-6	400-56438-86534-4

### DRUM/TOTE

Item No.	Formulation	Container Size	Case Pack	UPC	SCC
26-529	Concentrate	208 L / 55 gal	NA	0-59934-90595-0	NA
26-539	50-50 premixed	208 L / 55 gal	NA	0-59934-90599-8	NA
26-529-1000	Concentrate	1000 L / 264 gal	NA	0-59934-90596-7	NA
26-539-1000	50-50 premixed	1000 L / 264 gal	NA	0-59934-90600-1	NA

### 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 750,000 miles/1,200,000 km, 15,000 hours or 8 years, 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 5 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.



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Because conditions and product uses may differ from conditions under which the product was tested, the user is responsible for determining whether product and the information in this document are appropriate for their use and for determining whether the product meets 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.



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