



March'2014

Product Data Sheet

RECOCHEM HEAVY DUTY DIESEL ENGINE COOLANT

CONCENTRATE (19600)

Recochem Heavy Duty Diesel Engine Coolant is luminescent yellow coloured, superior, fully formulated Hybrid technology engine coolant. This Hybrid technology coolant has the advantage of being more robust than both conventional and organic acid technology (OAT) engine coolants. This low silicate, phosphate and amine free product is recommended for use in automotive (aluminium compatible), light duty and heavy-duty diesel applications namely on-road truck, off-road, farm and marine. It provides excellent high temperature aluminium protection.

It **does not** require an initial charge of supplemental coolant additives (SCAs) upon initial fill in heavy duty diesel applications as the product is specially formulated to protect heavy duty diesel wet sleeve liners. SCA addition is application dependant and should only be added as and when required by the vehicle's OEM. This coolant is compatible with coolant filters and heavy duty diesel SCAs and coolant extenders. When used as a 50% coolant with softened or de-ionized water, this engine coolant offers the following advantages:

- Low silicate
- Phosphate and amine free
- OEM approved
- Hard water compatible
- No initial SCA requirement at initial fill
- Universal use, fully meets or exceeds standard industry requirements for automotive, light duty, and heavy duty diesel applications
- product is compatible with both conventional and OAT coolants (although to get best performance [regarding issues such as extended life and time between SCA additions] it is best to flush the old coolant and replace with Recochem Heavy Duty Diesel Heavy Duty Diesel Engine Coolant)
- Product is compatible with standard SCAs and coolant extenders
- extended life 6 years, 12,000 hours or 1000,000 km whichever comes first

Recochem Heavy Duty Diesel Engine Coolant is suitable for use in for the following engine coolant specifications:

- | | |
|--|--------------------------------|
| • ASTM D-3306, D-4985, D-6210 | • MAN 324 |
| • Caterpillar EC1 | • Mercedes Benz DBL 325 |
| • Cummins 14603 | • MTU MTL 5048 |
| • Detroit Diesel 7SE 298 | • New Holland WSN-M97B18-D |
| • DaimlerChrysler MS 7170, MS 9769 | • PACCAR |
| • Ford ESE-M97B44A, ESE-M97B18-C, Ford WSS-M97B51-A1 | • Peterbilt 8502.002 |
| • Freightliner 48-2288D | • Perkins |
| • GM 1825M, 1899M, GM Heavy Truck | • Saab-Scania 6901 |
| • Hyundai | • SAE J1034, J1941 |
| • JIS K2234 | • TMC RP 329 |
| • Kenworth RO26-170-97 | • Volvo Heavy Truck (Approved) |
| • Landrover | • Suitable for Toyota |
| • MACK Trucks | • US Federal A-A-870-A |

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Recochem Heavy Duty Diesel Engine Coolant is also approved by the following OEMs:

MTU	Detroit Diesel
Daimler Chrysler	

Recochem Heavy Duty Diesel Engine Coolant provides exceptional summer cooling and excellent freezing protection during winter. It should not be used in concentrated form. A 50% dilution (i.e. when mixed with an equal volume of high quality soft, de-ionized or distilled water) is generally recommended for the best balance of protection against freezing, corrosion and summer boil-over. For increased freezing protection in extremely cold areas a 60% volume concentration can be used. Concentrations of greater than 70% by volume are not recommended.

Recochem Heavy Duty Diesel Engine Coolant provides excellent value as an aluminium compatible, universal, long life engine coolant. Along with this value, Recochem offers you and your customers continuing commitment to:

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

For more information on Recochem Engine Coolants for your application contact your Recochem representative.

Recochem Heavy Duty Diesel Engine Coolant Performance Testing

Coupon	ASTM D-1384 Glassware Corrosion		ASTM D-2570 Simulated Service	
	Test Results ¹	Max. Spec. ¹	Test Results ^{1,2}	Max. Spec. ¹
Type ¹				
Copper	1.7	10	1.1	20
Solder ³	4.3	30	21.6	60
Brass	0.6	10	1.6	20
Steel	0.1	10	+0.8	20
Cast Iron	+0.8	10	+1.2	20
Aluminum	+0.3	30	+2.5	60

1. Wt. /loss coupon in mg. 2. Copper/brass radiator results. 3. Regular 70/30 lead on copper/brass coupons.

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Recochem Heavy Duty Diesel Engine Coolant Performance Testing

ASTM Test Procedure	Test Results	Specification
D4340 Heat Rejecting Aluminium Corrosion	0.16 mg/cm ² /week	1.0 maximum
D2809 Aluminium Water Pump Cavitation-Erosion Corrosion (rating from 1 to 10)	10	8 minimum

Shelf-life stability: minimum 2 years from date of manufacture

Recochem Heavy Duty Diesel Engine Coolant Physical & Chemical Properties

Test	Performance	Test Method
pH 50%	7.6 - 8.5	ASTM D-1287
Reserve Alkalinity (ml)	6 min.	ASTM D-1121
Specific Gravity (15.6°C/60°F)	1.125 - 1.135	ASTM D-1122
Freeze Point (50% vol.)	-37°C/-34°F	ASTM D-1177
Foam Volume (ml)	50 max.	ASTM D-1881
Break Time (sec)	5 max.	ASTM D-1881
Flash Point	116°C/240°F	ASTM D-92
Fire Point	120°C/248°F	
Ash Content (wt. %)	5 max.	ASTM D-1119
Odour	Characteristic	
Colour	Luminescent yellow	
Total Glycols (Weight %)	94.0 min.	
Inhibitors and dye (Weight %)	5.0 max.	
Total Apparent Water (Weight %)	3.5 max.	
Chloride ppm	25 max.	ASTM D-3634
Silicon (ppm)	185 max.	ICP

The performance and physical property data described for this product is typical results not sale specifications except where maximum or minimum is indicated.

Notice: 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 products and the information in this document is 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 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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