COMPLETE CARE FOR DIESELENGINES Protecting your heavy duty engine with TURBO POWER



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Recochem Inc. Your Partner in Formulating Solutions Montréal H4T 1P4

Toronto L9T 5G7 Edmonton T9E 7<u>X6</u> Vancouver V3C 4P2 www.recochem.com www.coolantexperts.com When it comes to improving fuel economy and getting better mileage, engine maintenance is vital. TURBO POWER coolants and engine care products help provide premium engine protection while simplifying the maintenance program for modern diesel engines.

DIESEL ENGINE COOLANT SYSTEM CLEANER

Diesel Engine Coolant System Cleaner is formulated with special chelating and sequestering agents to effectively remove scale and corrosion deposits found in light and heavy duty cooling systems without harming metal surfaces, hoses, seals or other components.

Performance Features & Benefits:

- Removes corrosion and scale deposits
- Restores efficient heat transfer

• ONE STEP – Neutralizing rinse is not required

APPLICATION: Use HD Engine Coolant System Cleaner during recommended coolant change intervals to promote engine operation efficiency and eliminate overheating that may result from loss of heat transfer. DOSE STATEMENT: One bottle (946 mL) to be used for every 15 litres (4 gallons) coolant capacity.

Item #	Container Size	Case Pack	UPC	SCC
15-001	946 mL bottle	6	NA	NA



HD DIESEL EXL – DIESEL COOLANT EXTENDER

Diesel Coolant Extender is designed to maximize coolant life between drain intervals by replenishing coolant inhibitors that guard against rust and corrosion. The advantage of using an extender is that it boosts nitrite levels for protection against liner pitting caused by cavitation.

Performance Features & Benefits:

- Extends coolant in-field service life up to 960,000 km, 12,000 hours or 6 years
- Provides nitrite boost for protection against liner pitting
- Replenishes corrosion inhibitors
- Specifically for use in HD Diesel Extended Life Antifreeze/Coolant
- Phosphate Free



APPLICATION: Use only with extended life coolants meeting the performance requirements of ASTM D6210. The coolant extender should be added at 480,000 km or 6,000 hours of operation, whichever occurs first. **Note:** Do not use for initial fill or as a coolant top-off. Not for treatment of traditional type coolants.

Treat rate for Diesel Coolant Extender

COOLING SYSTEM CAPACITY		EXTENDER VOLUME TO ADD
Litres	Gallons	Bottle quantity
20 - 30	5 - 8	1
30 - 45	8 - 12	1 ½
45 - 60	12 - 16	2
60 - 75	16 - 20	2 1/2
75 - 90	20 - 24	3
90 - 120	24 - 32	4

ltem #	Container Size	Case Pack	UPC	SCC
16-571	946 mL bottle	6	0-56438-16571-2	600-56438-16571-4

Diesel Coolant Extender

Every 480,000 km

960,000 km or 6 years

ANTIFREEZE/COOLANTS – HEAVY DUTY

HD DIESEL – HEAVY DUTY

Heavy Duty Antifreeze/Coolant is a superior fully formulated traditional engine coolant based on a proprietary formulation of corrosion inhibitors to protect against cavitation and corrosion of all common coolant system metals.

Performance Features & Benefits:

- Low Silicate; Phosphate Free
- Aluminum compatible (safe for use in aluminum engines)
- Does not require an initial charge of supplemental coolant additives (SCA) upon initial fill
- Advanced liner pitting and corrosion protection
- Recommended for use where a heavy duty diesel coolant is required; including, but not limited to Caterpillar, Cummins, Detroit Diesel, Ford, GM and Volvo Mack
- Provides exceptional boil-over and freeze protection
- Available in Concentrate and 50/50 Premix formulations

COMPATIBILITY: Specially formulated to protect heavy duty diesel wet sleeve liners, it is compatible with coolant filters, heavy duty diesel SCAs, hard water and other traditional fully formulated corrosion inhibited engine coolants.

APPLICATIONS: Recommended for multi-vehicle fleets including automotive, light duty and heavy duty diesel applications such as on-road trucks, off-road and farm applications.

Chemical Name: Ethylene Glycol-based Engine Coolant

Typical Product Properties:

Characteristic	Performance	Test Method
pH (50% by vol.)	10 - 11	ASTM D1287
Specific gravity (15.6°C/60°F)	1.110 - 1.140	ASTM D1122
Freeze point (50% by vol.)	-37°C/-34°F	ASTM D1177
Foam volume (mL)	150 max.	ASTM D1881
Foam break time (second)	5 max.	ASTM D1881
Reserve Alkalinity (mL)	10.0 min.	ASTM D1121
Chloride (ppm)	25 max.	ASTM D3634
Silicon (ppm)	250 max.	ASTM D6130
Colour	Purple	
Glycol Content (wgt.%)	95 min.	
Inhibitors and Water Content (wgt.%)	5 max.	



Meets the following specifications:

ASTM D3306, D4985, D6210 Detroit Diesel 7SE298, 93K217 GM 1825M, 1899M TMC RP 329B

Item #	Formulation	Container Size	Case Pack	UPC	SCC
16-284	Concentrate	3.78 L	4	0-56438-16284-1	400-56438-16284-9
16-474	50-50 Premix	3.78 L	4	0-56438-16474-6	400-56438-16474-4
16-285	Concentrate	9.46 L	2	0-56438-16285-8	500-56438-16285-3
16-475	50-50 Premix	9.46 L	2	0-56438-16475-3	500-56438-16475-8
26-289	Concentrate	205 L drum	NA	0-56438-26289-3	NA
26-479	50-50 Premix	205 L drum	NA	0-56438-26479-8	NA
26-289-1000	Concentrate	1000 L tote	NA	NA	NA
26-479-1000	50-50 Premix	1000 L tote	NA	NA	NA

HD DIESEL EXL – EXTENDED LIFE

Diesel Extended Life Antifreeze/Coolant is a hybrid technology product that is OEM approved and specially formulated to protect all coolant system metals and provide excellent wet sleeve liner cavitation protection.

Performance Features & Benefits:

- Low Silicate; Phosphate and Amine Free
- Provides an in-service life of up to 960,000 km, 12,000 hours or 6 years, or whichever comes first, when used in combination with HD Diesel EXL Coolant Extender
- Does not require an initial charge of supplemental coolant additives (SCA) upon initial fill
- Designed for use in light and heavy duty diesel applications where an extended service interval is required
- Provides exceptional boil-over and freeze protection
- Available in Concentrate and 50/50 Premix formulations

APPLICATIONS: Recommended for use in on-road truck, off-road, farm, marine and stationary applications including, but not limited to, Caterpillar, Cummins, Detroit Diesel/MTU, GM Heavy Truck, Freightliner, PACCAR and Volvo Mack.

Chemical Name: Ethylene Glycol-based Engine Coolant

Typical Product Properties:

Characteristic	Performance	Test Method
pH (50% by vol.)	7.5 - 8.6	ASTM D1287
Specific gravity (15.6°C/60°F)	1.125 - 1.140	ASTM D1122
Freeze point (50% by vol.)	-37°C/-34°F	ASTM D1177
Foam volume (mL)	150 max.	ASTM D1881
Foam break time (second)	5 max.	ASTM D1881
Reserve Alkalinity (mL)	6.0 min.	ASTM D1121
Chloride (ppm)	25 max.	ASTM D3634
Silicon (ppm)	250 max.	ASTM D6130
Colour	Red	
Glycol Content (wgt.%)	94 min.	
Inhibitors and Water Content (wgt.%)	6.0 max.	



Meets the following specifications:

ASTM D3306, D4656, D5345, D6210 CAT EC-1 CID-A-A-52624 Detroit Diesel 7SE298, 93K217 Japanese Standard JIS K2234 MTU MTL 5048 TMC RP 329 Cummins

ltem #	Formulation	Container Size	Case Pack	UPC	SCC
16-734	Concentrate	3.78 L	4	0-56438-16734-1	400-56438-16734-9
16-834	50-50 Premix	3.78 L	4	0-56438-16834-8	400-56438-16834-6
26-739	Concentrate	205 L drum	NA	0-56438-26739-3	NA
26-839	50-50 Premix	205 L drum	NA	0-56438-26839-0	NA
26-738-1000	Concentrate	1000 L tote	NA	NA	NA
26-838-1000	50-50 Premix	1000 L tote	NA	NA	NA

YEARS or 250.0

6 YEARS or 950.00

ANTIFREEZE/CO

FOR ALL VEHICL

HD MIXED

3.781

5 YEARS or 250,000 km

6 YEARS or 960,000 kt

VEHICLES

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DANGER

HD MIXED FLEET ELC – FOR ALL VEHICLES

HEAVY DUTY MIXED FLEET ELC Antifreeze/Coolant is based on a proprietary Hybrid Organic Acid Technology (HOAT) that provides protection against wet sleeve liner cavitation and is compatible with the flux found in controlled atmosphere brazed (CAB) radiators.

Performance Features & Benefits:

- Complete Mixed Fleet use; heavy duty diesel, light truck and automotive
- Low silicate formula
- Nitrite, Amine and Phosphate free (NAP-free)
- Provides up to 250,000 km or 5 years of service life protection in automotive applications; up to 960,000 km or 6 years of protection in heavy duty diesel use
- Add as top-up to any colour antifreeze
- Protects against rust, corrosion and pitting for all coolant system metals, including aluminum
- · Protects from wet sleeve liner cavitation
- Enhanced water pump performance
- Fully compatible with IAT, HOAT and OAT coolant technologies
- · Compatible with CAB radiators
- Provides exceptional boil-over and freeze protection when used in accordance with OEM and product manufacturer's guidelines regarding product dilution
- Available in Concentrate and 50/50 Premix formulations

APPLICATIONS: Specifically designed for complete MIXED FLEET use, it is also recommended for use in all makes and models of foreign and domestic passenger vehicles, light duty and heavy duty diesel applications.

3.78 L

Chemical Name: Ethylene Glycol-based Engine Coolant

Typical Product Properties:

Characteristic	Performance	Test Method
pH (50% by vol.)	8.0 - 9.0	ASTM D1287
Specific gravity (15.6°C/60°F)	1.120 - 1.140	ASTM D1122
Freeze point (50% by vol.)	-37°C/-34°F	ASTM D1177
Foam volume (mL)	150 max.	ASTM D1881
Foam break time (second)	5 max.	ASTM D1881
Chloride (ppm)	25 max.	ASTM D3634
Silicon, from silicate (ppm)	250 max.	ASTM D6130
Colour	Pale Yellow	
Glycol Content (wgt. %)	93 min.	
Inhibitors and Water Content (wgt. %)	7 max.	
Boron (ppm)	< 10	
Phosphorous (ppm)	< 10	

Meets the following specifications:

ASTM D3306, D4985, D6210-10, D7583 AS.NZ 2108.1:1997 Type A • BS 6580 GM 1825M, 1899M • DDC 93K217 • JIS K2234

Recommended for use in:

Cummins 14603 • Caterpillar • GM 6277M Ford ESE-M97B44A, WSS-M97B44D, WSS-M97B51-A1 • GM Heavy Truck Chrysler MS7170, MS9769 • Kenworth Freightliner 48-22880 • PACCAR/DAF International Truck & Engine CEMS B-1 VW TL774G • MACK

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.

Item #	Formulation	Container Size	Case Pack	UPC	SCC
16-314	Concentrate	3.78 L	4	0-56438-16314-5	400-56438-16314-3
16-324	50-50 Premix	3.78 L	4	0-56438-16324-4	400-56438-16324-2
16-325	50-50 Premix	9.46 L	2	0-56438-16325-1	500-56438-16325-6
26-319	Concentrate	205 L drum	NA	NA	NA
26-329	50-50 Premix	205 L drum	NA	NA	NA
26-329-1000	50-50 Premix	1000 L tote	NA	NA	NA

AIR1[®] DEF

Diesel Exhaust Fluid (DEF) is a pure, aqueous solution of urea and water, used in new diesel engine Selective Catalytic Reduction (SCR) technology. This operating fluid is contained in a separate DEF tank and is sprayed into the exhaust to chemically reduce the engine's nitrogen oxide (NOx) emission levels, which helps to lower the impact of vehicle emissions on the environment. AIR1® DEF is API certified to guarantee product quality and protection from impurities.

Performance Features & Benefits:

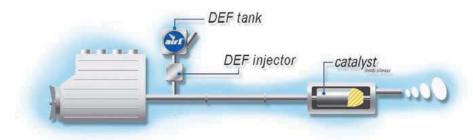
- Highly pure, clear solution of urea in water (32.5%)
- Transforms NOx gases into harmless water vapour and nitrogen
- Safe to use; a non-hazardous, non-toxic, non-flammable fluid
- Meets automotive industry specification defined by ISO 22241
- DEF freezes at -11°C/12°F; Frozen DEF can be thawed & used without concern of product degradation
- Official shelf life is 12 months when specific storage conditions are observed

APPLICATION: DEF is used in trucks and buses powered by diesel engines to reduce emission levels to the required limits imposed by the EPA as of January 1, 2010. To avoid damage in the catalytic converter and prevent loss of the engine warranty coverage, the DEF tank should be filled with the operating fluid. DEF consumption is about 3% of the vehicle's diesel fuel consumption (3 gal DEF / 100 gal diesel fuel). It is not a fuel and should not be mixed with diesel fuel.



SCR Technology: Leading North American manufacturers of diesel vehicles have adopted Selective Catalytic Reduction (SCR) technology for reducing emission levels to the required limits. It is the only technology that reduces exhaust fume emissions while allowing optimum engine operation in terms of performance and fuel consumption.

SCR technology reduces harmful nitrogen oxide (NOx) gas emissions produced inside the engine during combustion. The correct volume of DEF is sprayed into the exhaust, where it is hydrolyzed before the catalytic converter breaks down NOx into nitrogen (N₂) and water to be released into the air.



Air1® is a registered trademark of Yara International ASA. Produced by Yara.



Diesel Exhaust Fluid (DEF) & Selective Catalytic Reduction (SCR) video

Item #	Container Size	Case Pack	UPC	SCC
55-124AIR	3.78 L bottle	4	7-63630-20001-0	107-63630-20001-7
55-125AIR	9.46 L box	1	7-63630-20251-9	NA
55-129AIR	208 L drum	NA	NA	NA
55-129AIR-1000	1040 L tote	NA	NA	NA
55-129AIR-1250	1250 L tote	NA	NA	NA

PREMIUM DIESEL FUEL CONDITIONER — WITH ANTIGEL

Premium Diesel Fuel Conditioner promotes Anti-gel Winter Performance and is especially suited for use in extreme cold temperature operations. As a diesel fuel additive, it prevents fuel filter plugging and reduces fuel's pour point to help avoid inefficient operation or costly engine down time. It cleans and prevents moisture and deposit formation while providing lubrication to the fuel system for overall premium extended corrosion and wear protection.

Performance Features & Benefits:

- Special "anti-gel" additives promote strong cold start and combustion performance at extreme low temperatures
- Cleans & lubricates fuel system

- Sulphur Free
- Improves fuel economy by increasing power and mileage while reducing harmful emissions

• Improves cetane rating

APPLICATION: Premium Diesel Fuel Conditioner is safe for year round use. A sulphur free product, it is suitable for use with all diesel fuel types, including bio-blends and ultra low sulphur (ULSD) grade. It mixes readily in diesel fuel and can be handled and applied down to -40°C. Note: It will not void vehicle manufacturer's warranty.

Treat rate for Premium Diesel Fuel Conditioner

		Add 100 mL Treatment to	Add 1 bottle (1.8	89 L) Treatment to
Winter Conditions ((below 0°C)	63 L fuel	1200) L fuel
Seasonal Condition	s (above 0°C)	190 L fuel	3600) L fuel
ltem #	Container S	Size Case Pack	UPC	scc
15-292	1.89 L bott	tle 6	0-56438-15292-7	600-56438-15292-

DIESEL FUEL CONDITIONER

Diesel Fuel Conditioner prevents and thaws frozen fuel lines in diesel engine systems. Eliminating moisture in fuel tanks, this product impedes internal tank corrosion and helps maintain injector nozzle cleanliness. It also aids in reducing smoke in the system.

Performance Features & Benefits:

- Removes moisture & cleans fuel system
- Prevents & thaws frozen fuel lines

• Sulphur Free

• Helps remove gum and sludge from entire fuel system

APPLICATION: Diesel Fuel Conditioner is designed for use in all types of diesel engines.

Treat rate for Diesel Fuel Conditioner

Add 100 mL	Treatment to A	Add 1 bottle (1 L) Treatment to		
227 L Die	sel fuel oil	2270 L Diesel fuel oil		
Item #	Container Size	Case Pack	UPC	SCC
15-281	1 L bottle	6	0-56438-15281-1	600-56438-15281-

AIR BRAKE ANTIFREEZE

Air Brake Antifreeze helps guard the brake lines on diesel trucks, buses and construction equipment against freeze-up for complete winter protection. For maximum protection, use this product year-round to absorb moisture, provide corrosion protection and reduce brake failure.

Performance Features & Benefits:

- Prevents frozen air lines during winter temperatures
- Contains lubricants to minimize wear of valves and seals
- Readily absorbs condensation within the air brake systems
- Methanol-based for fast results

APPLICATION: Air Brake Antifreeze is recommended for use in the vehicle's evaporation reservoir tank or the air line hose on the supply tank.

ltem #	Container Size	Case Pack	UPC	SCC
15-261	1 L bottle	6	0-56438-15261-3	600-56438-15261-5
15-264	3.78 L bottle	4	0-56438-15264-4	400-56438-15264-2
15-268	18.9 L pail	NA	0-56438-15268-2	NA
26-269	205 L drum	NA	NA	NA



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METHYL HYDRATE

Methyl Hydrate is 99.9% guaranteed pure. During cold weather temperatures, methyl hydrate works well for defrosting air line hoses on tractor trailers and other commercial vehicles.

Performance Features & Benefits:

- 99.9% pure
- Provides fast results during extreme cold temperatures
- Low freeze point, remains fluid and suitable for de-icing applications

APPLICATION: Methyl Hydrate is not an anti-freeze for diesel fuel. Do not add to diesel fuel, or use as a fuel.

ltem #	Container Size	Case Pack	UPC	SCC
13-391HD	946 mL bottle	6	0-56438-53391-7	600-56438-53391-9
13-394HD	3.78 L bottle	4	0-56438-53394-8	400-56438-53394-6
13-398HD	18.9 L pail	NA	0-56438-53398-6	NA
23-399HD	205 L drum	NA	0-56438-53399-3	NA
23-399-1000	1000 L tote	NA	NA	NA



MULTI-PURPOSE DEGREASER

Multi-Purpose Degreaser is a heavy duty cleaner that dissolves grease on contact. It cleans and degreases dirt accumulated on engines, tools and heavy equipment and machinery. This water-based alkaline detergent formula promotes powerful "industrial strength" degreasing and cleaning results.

Performance Features & Benefits:

• Dissolves grease on contact

- Cleans & degreases stubborn dirt on tools and engines
- Biodegradable; Phosphate Free
- Non-abrasive and non-flammable

APPLICATION: Use undiluted on a COLD, DRY engine and rinse thoroughly with clean water. **Note:** Avoid painted surfaces as well as aluminum and aluminum alloy surfaces such as wheel rims.

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	MU DÉGRAIS HEAVY DUTY	MULTI-PUR DÉGRAISSANT UI NEAVY DUTY CLEANER H	MULTI-PURPOSE DE DÉGRAISSANT USAGES M REAVY DUY CLEMES - NETTOYAN	MULTI-PURPOSE DEGREASER DÉGRAISSANT USAGES MULTIPLES HEAVY DUTY CLEAKER - KETTOVANT PUISSANT

Item #	Container Size	Case Pack	UPC	SCC
12-504	3.78 L bottle	4	0-56438-12504-4	400-56438-12504-2

PARTS CLEANER

Parts Cleaner quickly removes dirt, oily residue and grease on engine parts and chassis. Its powerful cleaning action helps dissolve and remove grease and grime on large or finely machined metal parts without the use of special tools for a shiny engine finish.

APPLICATION: Use only on cool surfaces. Avoid prolonged exposure on rubber and polymer surfaces. Product can be

UPC

0-56438-13838-9

Case Pack

NA

Performance Features & Benefits:

• For engine parts and chassis

- Removes tar and oil deposits without leaving any residue
- Ultra low odour, non-aromatic grade of petroleum distillates

used in Parts Washer equipment able to handle combustible fluids.

Container Size

18.9 L pail

 Safe for use on metallic and porcelain surfaces including engines and small parts

SCC

NA

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Item #

13-838