



DATA SHEET

# HEAVY-DUTY, EXTENDED-LIFE NMOAT ANTIFREEZE

Ethylene Glycol OAT  
Antifreeze with Nitrite  
and Molybdate

This antifreeze/coolant is formulated with nitrite and molybdate for extra protection in heavy-duty diesel applications.

## YEAR-ROUND PROTECTION OF ALL SYSTEM METALS

It contains a well-balanced organic acid technology (OAT) inhibitor system that protects all metal cooling system components. It provides year-round protection against freeze-ups, boil-overs, and engine cooling system corrosion.

Free of phosphate, silicate, and borate, HDELC-NMOAT eliminates the need for chemical filters and supplemental coolant additives. In addition, it is compatible with other heavy-duty OAT coolants, such as Cat<sup>®</sup> ELC<sup>™</sup> and Cat<sup>®</sup> EC-1.

## EXTENDED SERVICE LIFE

In HD applications HDELC-NMOAT provides up to 600,000 miles on-highway or up to 12,000 hours off-road service where a well-established monitoring program is in place for testing coolant at least twice a year. Coolant extender is generally needed at half-life (300,000

miles or 6,000 hours) and may be added based on results from coolant sample analysis..

## BENEFITS

- Available in concentrate and premix 50/50
- Protects against erosion corrosion by wet sleeve cylinder liner cavitation (liner pitting)
- Low silicate formulation meets ASTM D4985
- Meets the performance requirements of:
  - TMC ATA RP 329
  - TMC ATA RP 338A
  - ASTM D6210
  - ASTM D3306
  - ASTM D1384
  - ASTM D4340
  - ASTM D2570
  - ASTM D2809

## APPLICATIONS

- JCat<sup>®</sup> Caterpillar ELC & EC-1
- Cummins CES14439
- Freightliner 48-25961
- Navistar MPAPS, B-1, Type II
- Volvo Mack

## Heavy-Duty, Extended-Life NMOAT Antifreeze Characteristics

Characteristic	Specification	Company Typical	ASTM Method
<b>Chloride (ppm)</b>	25 Maximum	<5	D3634
<b>Specific gravity, 60°F</b>	1.065 min	1.070	D1122
<b>Effect on engine/vehicle finish</b>	No effect	Pass	D1882
<b>Boiling Point, 50% V/V</b>	226°F/107°C min	230°F	D1120
<b>Freezing Point, 50% V/V</b>	-34°F/-36°C min	-34°F	D1177
<b>Ash content, mass %</b>	2.5 Maximum	<2.5	D1119
<b>pH, 50% V/V</b>	8.0-9.0	8.0	D1287
<b>Reserve alkalinity, 50% V/V</b>	None specified	3.0 min	D1121
<b>Color</b>		Red	Visual
<b>Foaming</b>	150 mL max 5 seconds max	Pass	D1881

\*Boiling point shown above and below is at atmospheric pressure. Add 40°F for 15 psi radiator cap. Reserve alkalinity (RA) is a value agreed between the customer and supplier.

% Antifreeze	Freezing Point		Boiling Point*	
	°F	°C	°F	°C
40%	-9 max	-22 max	220 min	104 min
50%	-34 max	-36 max	226 min	107 min
60%	-54 max	-65 max	230 min	110 min

\*Boiling point shown at atmospheric pressure. Add 40°F for 15 psi radiator cap.

Check the vehicle manufacturer's recommendations or the owner's manual when servicing the cooling system, including coolant selection, top off, and maintenance.

