



MAXXIMUM PERFORMANCE HD UNIVERSAL ANTIFREEZE / COOLANT

MAXXIMUM PERFORMANCE Heavy Duty antifreeze coolant is a complete ethylene glycol-based formulation specifically designed for heavy duty diesel engines. The formulation is fully-formulated with specific chemical inhibitors to protect diesel engines from liner pitting and hard water scale deposits. The patented inhibitor chemistry protects all cooling system metals from corrosion including aluminum. MAXXIMUM PERFORMANCE Pre-Charged Heavy Duty can be used in gasoline engines and passenger cars as well. The ASTM test data shown on this sheet reflects the high performance corrosion inhibitor package.

When diluted 50% with water, MAXXIMUM PERFORMANCE Heavy Duty protects modern engines from winter freezing and summer boil over. The chart at the top right provides mixing information. Clean tap water or demineralized water is recommended for dilution. A 40% to 70% concentration range is suggested for optimum corrosion protection. MAXXIMUM PERFORMANCE Heavy Duty is compatible with major brands of ethylene glycol-based coolant. It contains a high quality defoamer and will not harm gaskets, hoses, plastics or original vehicle finishes.

MAXXIMUM PERFORMANCE Heavy Duty is a universal engine coolant that meets the performance requirements of ASTM specification D3306 for automobiles and light trucks and D6210 for heavy duty engines. It meets the low silicate formulation requirements of GM6038 and contains less than 250 parts per million of silicate as required by the heavy duty trucking industry.

Call Innovative Fluids 1-800-889-2110 with questions

MAXXIMUM PERFORMANCE HD antifreeze/coolant meets or exceeds the performance requirements of the following antifreeze specifications and/or is recommended:

| | |
|------------------|--------------------------------|
| ASTM D6210 | SAE J814 |
| ASTM D3306 | Detroit Diesel |
| SAE J1034, J1941 | Paccar R026-170-97 |
| GM 1899M, 1825M | Cat |
| Cummins | Federal Specification A-A-870A |
| Case New Holland | TMC of ATA RP-329B |
| Freightliner | TMC of ATA RP-302A |
| Mack | Navistar CEMS B-1 Type II |
| Waukesha | Peterbilt 07-06773 |

Innovative Fluids recommends that spent coolant never be disposed of by dumping into a septic system, storm sewer or onto the ground. Instead, contact your state or local municipality for instructions on where to and how to properly dispose of this coolant and protect our environment.

If any coolant is spilled onto the ground, contain the spill and call the state authorities and ask for proper instruction on how to clean up the spill.

| MAXXIMUM PRFORMANCE Heavy Duty Antifreeze/Coolant Boil/Freeze Protection | | |
|--|-----------------------|------------------------|
| % Antifreeze | Freezing Point, °F/°C | Boiling Point**, °F/°C |
| 40 | -12/-24 | 260/126 |
| 50 | -34/-36 | 265/128 |
| 60 | -54/-48 | 271/133 |
| 70* | -90/-67 | 277/135 |

* Maximum freeze protection is at 70%.

** Boiling point shown using conventional 15 psig radiator cap.

| MAXXIMUM PERFORMANCE Heavy Duty Typical Physical Properties | | |
|--|----------|---------------|
| Antifreeze Glycols | mass % | 94.3 |
| Corrosion Inhibitors | mass % | 2.7 |
| Water | mass % | 3.0 |
| Flash Point | °F/°C | 250/121 |
| Weight per gallon @ 60°F/16°C | lbs / KG | 9.415 / 4.271 |
| Silicates | PPM | 250 max. |

| MAXXIMUM PERFORMANCE Aluminum Water Pump Tests | | |
|---|---------|---------------|
| ASTM D2809 Pump Cavitation (Extended Test) | | |
| Test Period | Results | Specification |
| 100 hours | 9 | 8 |

| Characteristics | Specifications | Typicals | ASTM Method |
|------------------------------------|--------------------|-------------------|-------------|
| Chloride | 25 PPM, max. | <<25 | D3634 |
| Silicon | 250 PPM, max. | <250 | - |
| Specific gravity, 60/60° F | 1.110 – 1.145 | 1.1305 | D1122 |
| Freezing point, 50% V/V | -34°F/-36°C | -34°F/-36°C | D1177 |
| Boiling point, undiluted | 325°F/162°C | 330°F/164°C | D1120 |
| Boiling point, 50% V/V | 226°F/107°C | 226°F/107°C | D1120 |
| Effect on engine or vehicle finish | No Effect | No Effect | - |
| Ash content, mass % | 5 max | <3 | D1119 |
| pH, 50% V/V | 7.5 – 11.0 | 10.7 | D1287 |
| Reserve alkalinity* | Report | 14.3 | D1121 |
| Water mass % | 5 max. | 3.5 | D1123 |
| Color | Distinctive | Yellow | - |
| Effect on nonmetals | No Adverse Effect | No Adverse Effect | - |
| Storage stability | - | >1 year | - |
| Foaming | 150 ml Vol., max. | 45 ml | D1881 |
| | 5 sec. Break, max. | 1 sec. | D1881 |
| Cavitation-erosion rating | 8 min. | 9 | D2809 |

*Reserve alkalinity (RA) is a term used to indicate the amount of alkaline inhibitors present in an antifreeze formulation. It is incorrect to relate a high RA with a high-quality antifreeze. Present state-of-the-art antifreeze formulations contain many new inhibitors which give added protection to certain metals but do not raise the RA number.

| Typical ASTM Corrosion Test Results | | | |
|-------------------------------------|----------------------------|--------|-------------|
| | Weight Loss Mg/Specimen | | |
| Glassware Corrosion Test | Spec. | Actual | ASTM Method |
| Copper | 10 | 3 | D1384 |
| Solder | 30 | 5 | |
| Brass | 10 | 3 | |
| Steel | 10 | 3 | |
| Cast iron | 10 | 0 | |
| Aluminum | 30 | 0 | |
| Simulated Service Test | | | |
| Copper | 20 | 7 | D2570 |
| Solder | 60 | 2 | |
| Brass | 20 | 4 | |
| Steel | 20 | 1 | |
| Cast iron | 20 | 0 | |
| Aluminum | 60 | 0 | |
| Hot Surface Corrosion | mg/cm ² /wk | | |
| | | | |
| Specimen weight loss | 1.0 | 0.1 | D4340 |

This information only applies to products manufactured in the U.S.A.

Product

MAXXIMUM PERFORMANCE
HD UNIVERSAL GOLD ANTIFREEZE/COOLANT

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TBM

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