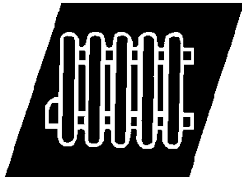


HDLL COOLANT CONCENTRATE



ANTIFREEZE &
HEAT TRANSFER



TOTAL

Red heavy duty long life concentrated coolant

APPLICATIONS

HD Diesel coolant with extremely long life

- **HDLL COOLANT** is a high performance, long-life ethylene glycol coolant suitable for heavy duty diesel and natural gas engines.
- **HDLL (Heavy Duty Long Life) COOLANT** contains organic acid technology and heavy duty corrosion inhibitors (nitrites and molybdates) to provide long life protection of cooling systems parts.
- **HDLL COOLANT CONCENTRATE** is free from nitrate, borate, phosphate, silicate and amine.
- To ensure good corrosion protection, effective heat transfer and year round performance, **HDLL COOLANT CONCENTRATE** should be diluted with good quality of demineralized water at concentration of 50%.

SPECIFICATIONS

International standards

- ASTM D-3306 (Automotive service), D-6210 (HD Diesel)
- ASTM D 5345 (prediluted HD Diesel); SAE J 1034
- Truck Maintenance Council RP-329, RP-338

OEM standards

- Caterpillar EC-1; Chrysler MS 9769; Cummins 90T8-4
- Detroit Diesel 7SE-298;
- General Motors 1899-M and 1825-M
- John Deere H24A1, H24C1
- Mack Truck; Navistar B 1
- Mercedes DBL 7700
- Volvo/GM Heavy Truck

ADVANTAGES

High technical performance

Long service life

- Superior corrosion protection
- High boiling point and low freezing point
- Easy to identify heavy duty red color
- At 300,000 miles addition of extender allows 600,000 mile protection
- Contains a bitter tasting additive as a deterrent for pets and children

TYPICAL CHARACTERISTICS—HDLL COOLANT CONCENTRATE

Color, visual	Red	Freeze Point, °F (°C) at 50% dilution	-34 (-37)
Specific Gravity @ 60/60 °F ASTM D 1298	1.129	Flash point, °F (°C) (ASTM D 92)	250 (121)
Density, lbs/gal. ASTM D 1298	9.43	Reserve alkalinity, ml (ASTM D 1121)	6
Composition, wt %		Foam Resistance (ASTM D-1881)	
Total glycols, wt%, min. (ASTM E 202)	95	Foam Volume, 150 ml max.	50
Total water, wt% max. (ASTM D 1123)	5	Foam Break, 5 seconds max.	5
Chlorides, 25 ppm max	20	Ash, wt%, 5% max	2.0

TOTAL Lubricants USA, Inc.

HDLL Coolant Concentrate
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