



**Product Name:** KÜHL HD Coolant & Anti-Freeze (Clear Red / Orange / Pink )

**Application:** Designed for diesel trucks, buses, and heavy-duty equipment requiring long-life nitrated or hybrid OAT coolant.

## Product Overview

**KÜHL HD** is a premium long-life radiator coolant and anti-freeze designed for **diesel engines in heavy-duty vehicles** and off-highway applications. It uses **Nitrated OAT (NOAT)** or **Hybrid OAT** inhibitors to offer extended protection against cavitation, corrosion, scaling, and overheating. It meets the coolant needs of modern emission-controlled engines including those with **EGR, DPF, and SCR** systems.

## Application

- Suitable for all types of **on-road trucks, buses, mining equipment, construction machinery, and agricultural engines** operating under severe conditions.
- For trucks, buses, and heavy-duty diesel engines requiring NOAT/HOAT extended-life coolant

## Performance Benefits

- Up to **600,000 km / 6 years** of coolant life
- **Nitrite, molybdate, and organic acid** system protects cylinder liners
- Superior **cavitation resistance** and deposit control
- Prevents rust, scale, and electrochemical corrosion
- **Phosphate- and silicate-free** for broader compatibility
- Available as **pre-mix or concentrate**

## Meets and Approvals

- ASTM D6210 / D3306 / D4985
- SAE J1034 / J1941
- Cummins CES 14603
- Volvo VCS / Mack / Freightliner
- Caterpillar EC-1
- Detroit Diesel 93K217
- John Deere JDM H24
- Navistar / PACCAR / MAN 324 NF

## Typical Properties

Property	Method	Typical Value
Appearance	Visual	Clear Red / Orange / Pink
Base Fluid	—	Ethylene Glycol + OAT/NOAT
Density @ 20°C	ASTM D1122	1.120 – 1.130 g/cm <sup>3</sup>
pH (33% solution)	ASTM D1287	8.0 – 8.7
Boiling Point (undiluted)	ASTM D1120	≥ 170°C
Freezing Point (50:50 dilution)	ASTM D1177	-36°C





Reserve Alkalinity	ASTM D1121	≥ 6.0 mL
Nitrite Level (if NOAT)	—	800 – 1200 ppm
Molybdate Level	—	~250 ppm
Ash Content	ASTM D1119	≤ 5.0%
Cavitation Test (ASTM D2809)	ASTM D2809	9+ rating
Corrosion Test (Glassware)	ASTM D1384	Pass

## Dilution Chart

Coolant : Water	Freeze Protection	Boiling Point
33:67	-18°C	~104°C
50:50	-36°C	~107°C
60:40	-52°C	~110°C

**Note:** Use only deionized or distilled water. Do not exceed 70% concentration.

## Storage and Handling

- Store in closed containers at temperatures between 5°C – 35°C
- Protect from frost, heat, and direct sunlight
- Shelf Life: **5 Years** in sealed original container
- Avoid contact with skin and eyes
- Keep out of reach of children.

