

## HD COOL ORA

### Ready-to-use cooling liquid

#### DESCRIPTION

**HD COOL ORA** is a ready to use cooling liquid, anti-corrosion and anti-freeze, based on monoethyleneglycol, using organic additives (OAT – Organic Acid Technology).

#### ADVANTAGES

- Optimal protection of cooling systems against freezing and metallic parts against corrosion.
- Excellent thermal exchange thanks to the OAT coolant technology, improving engine cooling efficiency and prevents from boiling.
- Anti-corrosion properties remaining at high temperature and through ageing thanks to the organic technology.
- Extended drain intervals thanks to low corrosion inhibitors consumption.
- Long lasting anti-corrosion properties on all engine components.
- Eliminates the risk of scaling and deposits in the cooling system.
- Avoids cavitation and increases water pump lifetime.
- Seals, hoses, pipes and plastic parts friendly.
- Nitrite free, amine free, phosphate free, borate free and silicate free.

#### TECHNICAL INFORMATION

Characteristics	Method	Units	Norms
Color	Visual		Orange fluo
Density at 20°C / 68°F	ASTM D5931	g/mL	1.069
pH	ASTM D 1287		8.9
Initial crystallization	ASTM D1177	°C / °F	-37 / -35
Freezing protection		°C / °F	-37 / -35
Boiling point	ASTM D1120	°C / °F	109 / 228

Contains a bitterness agent to prevent from drinking: coolants and antifreezes have a sweet taste but are harmful.

## SPECIFICATIONS / APPROVALS / STANDARDS

**HD COOL ORA** meets or exceeds the most common specifications and OEM requirements:

- ADE – ADE
- Bergen Engines – 2.13.01
- Case New Holland – MAT 3624
- Cummins – IS series & N14
- Cummins – CES 14439
- DAF – DAF 74002
- Detroit Diesel – DFS 93K217
- Deutz – DQC CB-14
- Fendt – Fendt
- Jenbacher – TA 1000-0201
- John Deere – JDM H5
- Kobelco – Kobelco
- Komatsu – 07.982 (2009)
- Leyland Trucks – DW03245403
- Liebherr – MD1-36-130
- MAK – A4.05.09.01
- MAN – 324 Type SNF
- Mercedes-Benz – MB 326.3
- Mitsubishi – MHI
- MTU – MTL 5048
- MWM – MWM 0199-99-2091 / 11
- SCAM Diesel - DLP799861
- Tedom
- Thermo King
- Valtra
- Van Hool
- Mack – 014 GS 17009
- Renault Trucks – 41-01-001/--S Type D
- Volvo Construction – 128 6083 / 002
- Volvo Penta – 128 6083 / 002
- Volvo Trucks – 128 6083 / 002
- Waukesha
- SACM Diesel – DLP799861
- Wärtsilä – 32-9010
- Yanmar

**HD COOL ORA** meets the following standards:

- BRB – BR 637
- ASTM Standards – ASTM D3306 / D4656 / D4985 / D6210
- British Standards – BS 6580
- FVV Standards Germany – FVV Heft R443
- FSD Standards – FSD 8704
- JASO Standards – M325
- Japanese Standards – JIS K2234
- Korean Standards – KSM 2142
- MIL Standards Belgium – BT – PS – 606 A
- MIL Standards France – DCSEA 615/C
- MIL Standards Italy – E/L – 1415b
- NATO Standards – NATO S-759
- NFR Standards – NFR 15-601
- ÖNORM Standards – ÖNORM V5123
- UNE Standards – UNE 26-361-88/1
- SAE Standards – SAE J1034

## APPLICATION

**HD COOL ORA** is strongly recommended for all cooling systems of heavy duty, construction, mining, agriculture vehicles and equipment, gardening, ships, stationary engines, ...

## RECOMMENDATIONS

- Ready to use, do not add any water.
- To be used for top-up or complete renewal of the cooling circuit for improved efficiency.
- Drain intervals: Refer to the manufacturers' recommendation.
- Attention, control or drain the coolant only when the engine is cold.
- Can be mixed with ethylene glycol based coolants.
- Avoid mixing with other products for maximum performance output of **HD COOL ORA**.
- This product should not be used to protect drinking water systems against freezing.

## SERVICE AND EQUIPMENT

In addition to its product ranges, Motul can provide tools and services for the maintenance and in-use monitoring of your lubricants. Please contact your technical sales representative.

## IMPORTANT NOTICE

All information and rules about health, safety and the environment are mentioned on the safety data sheet. It provides information about risks, safety procedures and first aid emergency rules. It clarifies all procedures to implement in the case of an accidental spillage, and for the disposal of the product and its effects on the environment.

Our product contains natural additives which are likely to modify the colour of the concentrates without altering its performance. The specifications of our products are definite only at the time of order, and are subject to our general sale and guarantee conditions. To give our customers the latest technical developments, the general characteristics of our products may vary. The safety data sheet of this product is available at [www.motul.com](http://www.motul.com)