

# KOSTUSA DefendAL®

## Heavy Duty Nitrite-Free Extended Life Coolant/Antifreeze

Approved for use in heavy duty and light duty engines

No addition of SCAs required  
1,000,000 mile | 20,000 hour protection

Meets CAT EC-1 requirements

DefendAL® Heavy Duty Nitrite-Free Extended Life Coolant/Antifreeze is a premium quality Organic Acid Technology (OAT), ethylene glycol-based fluid. Specially formulated with advanced additive technology, this product provides extended service maintenance protection in heavy duty applications without the addition of SCAs, and meets nitrite-free coolant requirements of many industry-leading OEMs.

### DefendAL® Heavy Duty Nitrite-Free Coolant/Antifreeze is your cooling system's best defense.

- Extended service life of 1,000,000 miles | 8 years or 20,000 hours of off-road use.\*
- Free of phosphates, silicate, nitrites, amines, and borates.
- Offers excellent wet sleeve liner cavitation protection.
- Contains better heat transfer properties than conventional coolants requiring SCAs.
- Eliminates maintenance with no SCAs required.
- Provides maximum freeze and boil-over protection.
- Extended life corrosion protection for steel, solder, copper, iron, brass and aluminum.
- High-quality defoamer system, non-harmful to hoses, plastics or gaskets.
- Compatible with all major American brands of coolant technologies including conventional and Organic Acid Technology (OAT).

\*HD Extender may be needed based on test results.

**Available in:**  
**Concentrate**  
 Bulk #10204  
 Totes #10203  
 Drums #10205  
 Cases #10206

**50/50 Premix**  
 Bulk #10208  
 Totes #10207  
 Drums #10210  
 Cases #10211



Think of our products as  
**Liquid Assets.™**

KOST® USA, Inc. recommends to always properly dispose of spent coolant. Contact your state or local municipality for instructions on proper disposal to protect our environment. If a coolant spill occurs, call local authorities and ask for proper instruction on how to clean up the spill.



# Heavy Duty Nitrite-Free Extended Life Coolant/Antifreeze

## Performance Specifications\*

AGCO (Massey Ferguson) M1130A	Jenbacher 1000-201
ASTM D3306	John Deere JDM H24A
ASTM D6210	John Deere JDM H24B, C
Bombardier	John Deere JDS-G135
BS 6580:2010	Kia MS 591-08
Buhler Versatile 86050054	Komatsu KES 07 892
CAT DEAC/ NGEC	Liebherr
CAT EC-1	Mack GS17004
CID-A-52624A	MAN 324 Type N
Chrysler MS-7170	MAN 324 Type NF
CNH MAT 3620 (87692740)	MAN 324 Type SNF
Cummins CES 14603	MTU 5048
Daimler DBL 7700.00	MWM Deutz TR0199-99-1115
Daimler DBL 7700.10	MWM Deutz TR0199-99-2091
Daimler DBL 7700.20	Navistar CEMS B-1 Type I
Daimler DBL 7700.30	Navistar CEMS B-1 Type II
DDC 93K217	Navistar CEMS B-1 Type III
EMD MI 1748F	Navistar CEMS B-1 Type IIIA
Ford ESE-M97B18-C	Nissan
Ford ESE-M97B44-A	Perkins (CAT)
Ford WSS-M97B44-D	SAE J1034
Ford WSS-M97B51-A1	SAE J1941
Ford WSS-M97B55-A	TMC RP 302A
GM B 040 1065 - GM 6277M	TMC RP 302B
GM 6277M (DEX-COOL®)**	TMC RP 303C
GM 1825M	TMC RP 329
GM 6038M	TMC RP 338A
GM 1899M	Toyota TSK 26016
GET-2594F (MI-09500)	Volvo Coolant VCS
Hino Trucks	VW TL774-C
IVECO Standard 18-1830	VW TL774-D/F
JCB STD00088	VW TL774-G
	Waukesha 4-2429H
	Wisconsin Motors (Continental)

Always consult your vehicle's owner's manual for proper fluid removal and flushing procedures.

\*Meets performance requirements but may or may not meet certain chemical requirements.

\*\*DEX-COOL® is a registered trademark of the General Motors Corporation®.

	ASTM Method	Concentrate	50/50
Glycols Content, mass %	GC	93	47
Bittering Agent (yes/no)		Yes	Yes
Water Content, mass %	D1123	2	50.5
Corrosion Inhibitor System, mass %		5	2.5
Specific Gravity @ 60°F	D1122	1.131	1.08
Flash Point	D97	240°F (116°C)	N/A
pH	D1287	8.6	8.4
RA	D92	6.4	3.2
Storage Stability		5 years	5 years
Effect on Non-Metals	D1882	No Effect	No Effect
Cavitation Erosion Rating	D2809	8 min	8 min
Foam Test, ml/sec	D1881	<50/3	<50/3
Fluid Color	Visual	Yellow	Yellow
Coolant/Antifreeze % 40/60 Freeze Point	D1177	-24°F (-12°C)	N/A
Coolant/Antifreeze % 50/50 Freeze Point	D1177	-34°F (-36°C)	-34°F (-36°C)
Coolant/Antifreeze % 60/40 Freeze Point	D1177	-62°F (-52°C)	N/A
Coolant/Antifreeze % 40/60 Boil Point	D1120	221°F (105°C)	N/A
Coolant/Antifreeze % 50/50 Boil Point	D1120	226°F (108°C)	226°F (108°C)
Coolant/Antifreeze % 60/40 Boil Point	D1120	234°F (112°C)	N/A
Ash Content	D1119	<5.0	<2.5
Chloride (mg/L)	D3634	<25	<25
Silicon Content (mg/L)	D6130	<10	<10
Nitrate Content (mg/L)	D5827	1300	650
Molybdate Content (ppm)	D6130	2300	1150

All reasonable care has been taken to ensure that the information herein is accurate as of the date of printing. Freedom to use any patent owned by KOST® USA, Inc. or others is not to be inferred from any statement contained herein. The test results listed are typical properties only. Formula and blending changes may result in slight color and appearance changes.



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**Our products are cool.**

**Our people are warm.** KOST® USA, Inc. is the largest family-owned manufacturer, supplier and marketer of antifreeze and functional fluids in the United States. Founded in 1985, our headquarters and manufacturing facility is strategically located in Cincinnati, Ohio. We build our customers' brands and our own brands through high performance products and superior service, focusing primarily in the Automotive & Heavy Duty retail aftermarket, as well as in the Oil & Gas sector.

*It's more than business... it's personal.*