

# KOST USA DefendAL®

## Universal Coolant/Antifreeze

Approved for use  
in gasoline and  
diesel engines

Low silicate, all-purpose  
coolant/antifreeze

Phosphate-free formulation  
Aluminum corrosion  
protection

DefendAL® Universal Coolant/  
Antifreeze is a premium ethylene  
glycol-based fluid specially formulated  
with industry-leading additives to  
provide optimum performance in all  
gasoline, and light and heavy duty  
diesel engines\*.

### DefendAL® Universal Coolant/ Antifreeze is your cooling system's best defense.

- Protects against corrosion of all cooling system metals, including aluminum.
- Provides maximum freeze and boil-over protection.
- Designed for use in passenger cars, and light duty and heavy duty vehicles\*.
- Ideal for conventional antifreeze applications.
- Phosphate-free with low silicates.
- High-quality defoamer system, non-harmful to hoses, plastics or gaskets.
- Compatible with all major American brands of conventional coolants.

\*Conventional formulation can be used with the addition of SCA (Supplemental Coolant Additives) in heavy duty vehicles. Consult your vehicle's owner's manual for recommendations.

#### Available in:

##### Concentrate

Bulk #10213

Totes #10212

Drums #10214

Cases #10123

##### 50/50 Premix

Bulk #10218

Totes #10217

Drums #10220

Cases #10124



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.



# DefendAL<sup>®</sup> Universal Coolant/Antifreeze

## Performance Specifications\*

ASTM D3306  
 ASTM D4985  
 Bombardier  
 BS 6580:2010  
 Chrysler MS-7170  
 CNH MAT 3620 (87692740)  
 Daimler DBL 7700.00  
 EMD MI 1748F  
 Ford ESE-M97B18-C  
 Ford ESE-M97B44-A  
 GM 1825M  
 GM 6038M  
 GM 1899M  
 GET-2594F (MI-09500)  
 John Deere JDM H24A  
 John Deere JDM H24B, C  
 Mack GS17004  
 Navistar CEMS B-1 Type I  
 Navistar CEMS B-1 Type II  
 Perkins (CAT)  
 SAE J1034  
 SAE J1941  
 TMC RP 302A  
 TMC RP 302B  
 TMC RP 303C  
 TMC RP 329  
 Wisconsin Motors (Continental)

|   | ASTM Method | Concentrate   | 50/50         |
|---|-------------|---------------|---------------|
| Glycols Content, mass %                 | GC          | 96            | 48            |
| Bittering Agent (yes/no)                |             | Yes           | Yes           |
| Water Content, mass %                   | D1123       | 2.5           | 51            |
| Corrosion Inhibitor System, mass %      |             | 1.5           | 0.8           |
| Specific Gravity @ 60°F                 | D1122       | 1.119         | 1.072         |
| Flash Point                             | D97         | 240°F (116°C) | N/A           |
| pH                                      | D1287       | 10.8          | 10.5          |
| RA                                      | D92         | 5             | 2.5           |
| Storage Stability                       |             | 1 year        | 1 year        |
| Effect on Non-Metals                    | D1882       | No Effect     | No Effect     |
| Cavitation Erosion Rating               | D2809       | 8 min         | 8 min         |
| Foam Test, ml/sec                       | D1881       | <75/3         | <75/3         |
| Fluid Color                             | Visual      | Flor Green    | Flor Green    |
| 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       | <250          | <125          |

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<sup>®</sup> 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.

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.



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**Our products are cool.**

**Our people are warm.** KOST<sup>®</sup> 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.*