



SURE-CRAFT HEAVY DUTY EXTENDED LIFE Antifreeze/Coolant

SURE-CRAFT Heavy Duty Extended Life Antifreeze/Coolant is based on a proprietary Hybrid organic acid technology (HOAT). This ethylene glycol based product is free of silicates, phosphates, borates and amines. It protects coolant system metals against rust and corrosion and provides excellent high temperature aluminum protection. It has been designed for use in heavy duty diesel and mixed fleet applications where an extended service interval and aluminum compatibility is required. It is recommended for use in on-road truck, off-road, farm and marine engines applications including, but not limited to, Caterpillar, Cummins, Detroit Diesel/MTU, GM Heavy Truck, Freightliner, PACCAR and Volvo Mack.

*When added as an initial fill and properly maintained in accordance with engine manufacturer's maintenance recommendation, this product will provide an in-service life of up to 960,000 km, 12,000 hours or 6 years, whichever comes first. This hybrid OAT antifreeze/coolant is compatible with other organic acid technology (OAT) with no adverse effects. While deleterious effects are not expected to be significant, mixing with conventional coolants will result in a lower than expected lifetime.

SURE-CRAFT Heavy Duty Extended Life Antifreeze/Coolant offers the following advantages:

- Silicate, phosphate, borate, and amine free
- Protects coolant system metals such as brass, copper, solder, steel, cast iron and aluminum
- Excellent liner cavitation performance as per the Deere Liner Cavitation Test
- Mixed fleet application
- In-service life of up to 960,000 km, 12,000 hours or 6 years*
- Coolant extender compatible

SURE-CRAFT Heavy Duty Extended Life Antifreeze/Coolant meets the performance requirements of the following engine coolant specifications:

ASTM D3306, D4985, D6210, D7583	Caterpillar
TMC RP 329B	Cummins 3666132, 14603
CID-A-A-52624	Detroit Diesel 7SE 298, 93K217
Freightliner 48-22880	GM 1825M, 1899M, GM Heavy Truck
ITE CEMS B-1	JIS K2234
Kenworth R026-170-97	MACK
MAN 324	MTU MTL 5048
PACCAR CS0185	Peterbilt 8502.002
Volvo	

Coolant concentrate must be diluted with water prior to use. SURE-CRAFT Heavy Duty Extended Life Antifreeze/Coolant should not be used in concentrated form. A 50% dilution is generally recommended for the best balance of protection against freezing, corrosion and summer boil over. For increased freeze protection in extremely cold areas, a 60% volume concentration can be used. Concentrations of greater than 70% by volume are not recommended. High quality soft, de-ionized or distilled water should always be used to dilute coolant concentrate.



SURE-CRAFT HEAVY DUTY EXTENDED LIFE Antifreeze/Coolant

Typical Product Properties

Characteristic	Performance	Test Method
pH ^a	8.0 – 9.0	ASTM D1287
Specific gravity ^b	1.120- 1.140	ASTM D1122
Freeze point ^a (°C/°F)	-37/ -34	ASTM D1177
Foam volume (ml)	150 max.	ASTM D1881
Foam break time (second)	5 max.	ASTM D1881
Reserve Alkalinity (ml)	4.0 min.	ASTM D1121
Chloride (ppm)	25 max.	ASTM D3634
Colour	Red	
Glycol Content (wtg.%)	94 min.	
Inhibitors and Water Content (wtg.%)	6.0 max.	

^a 50% volume aqueous solution

^b Measured at 15.6°C/60°F

Typical Coolant Performance Testing Results

Metal Type	ASTM D 1384 GLASSWARE CORROSION		ASTM D 2570 SIMULATED SERVICE	
	Test Results ¹	Max. Spec.	Test Results ¹	Max. Spec.
Copper	0	10	2	20
Solder	0	30	3	60
Brass	0	10	- 3	20
Steel	0	10	1	20
Cast Iron	1	10	7	20
Aluminum	- 7	30	3	60

¹ Weight loss, except negative sign which indicate weight gain, per coupon in milligrams. Values are for coolant made from virgin ethylene glycol.

	Test Results ¹	Specification
ASTM D4340 Heat Rejecting Aluminum Corrosion (mg/cm²/week)	0.2	1.0 maximum
ASTM D2809 Aluminum Water Pump Cavitation- Erosion Corrosion Rating	8	8 minimum

¹ Weight loss per coupon in milligrams (average for 2 tests). Values are for coolant made from virgin ethylene glycol.

NOTICE: This product is shipped in compliance with applicable laws and regulations regarding classification, packaging, shipping and handling. The performance and physical property data described for this product are typical results not sale specifications, except where maximum or minimum is indicated. Refer to Material Safety Data Sheets for further information.

Because use conditions and applicable laws may differ from one location to another and may change with time, the customer is responsible for determining whether product and the information in this document are appropriate for their use and for ensuring that their workplace and disposal practices are in compliance with applicable laws and other governmental enactments. The manufacturer's warranty is limited to the claims of product meeting stated performance specifications. It is the responsibility of the end-user to determine product suitability as recommended in the owner's manual and to follow engine manufacturer's instructions.