



## Product Data Sheet

# PolarZone™ Extended Service Interval Antifreeze/Coolant Heavy Duty Engine Antifreeze/Coolant

### Description

PolarZone™ Extended Service Interval Antifreeze/Coolant (ESI) is an ethylene glycol-based NOAT antifreeze formulated to meet the requirements of today's technologically advanced mixed fleet diesel and gas engines. The coolant additives' carboxylates and nitrites work together to provide the required cavitation protection of cylinder liners and allows for longer preventative maintenance intervals.

PolarZone™ Extended Service Interval Antifreeze/Coolant eliminates the need for Supplemental Coolant Additives (SCAs) and provides unsurpassed corrosion protection to all standard metals and protection of non-metal cooling system components. The silicate and phosphate-free formulation minimizes the occurrence of deposits and hard water scale.

### Advantages

- Extended life protection; 150,000 miles or 5 years
- Phosphate, amine, and silicate-free formula
- Eliminates need for SCAs and chemically charged filters
- Unsurpassed high temperature aluminum protection
- Long term corrosion protection for aluminum, brass, cast iron, steel, solder, and copper
- Protects against summer boil-over and winter freeze-up
- Improved water pump life

### Applications

- Mixed fleet diesel and gas heavy duty engines
- Phosphate-free requirements of European OEMs
- Silicate-free requirements of Japanese OEM

### Meet or exceed the following specification standards and performance requirements:

ASTM D3306, D4985, and D6210 (includes D1384, D4340, D2570, D2809)		
<ul style="list-style-type: none"> <li>• Audi</li> <li>• BMW</li> <li>• Mercedes Blatt 325.0, 325.2</li> <li>• Chrysler MS7170, MS9769</li> <li>• Ford ESE M97B44-A</li> <li>• Ford WSE M97B44-B</li> <li>• Ford WSS M97B44-D</li> <li>• GM 6277M (DEX-COOL®)</li> <li>• GM 6038M</li> <li>• GM 1825M (performance GM 6043M)</li> <li>• GM 1899M (performance GM 6038M)</li> <li>• GSA A-A-52624</li> <li>• GSA A-A-870A (superseded)</li> <li>• MIL O-A-5480 (superseded)</li> <li>• Isuzu</li> <li>• Mazda MEZ MW 121D</li> <li>• SAE J814</li> <li>• Saab 6901 599</li> <li>• Suzuki 0F02</li> </ul>	<ul style="list-style-type: none"> <li>• Cummins 90T8-4</li> <li>• Freightliner 48-22880</li> <li>• Ford New Holland WSN-M97B18-C</li> <li>• Honda HES D2009-75</li> <li>• Hyundai</li> <li>• J.I. Case JIC-501</li> <li>• J.I. Case MS1710</li> <li>• John Deere JDM H5</li> <li>• Mack Truck 014 GS17004</li> <li>• Mitsubishi</li> <li>• MTU MTL5048</li> <li>• MTU MTL5049</li> <li>• Porsche TL-774D</li> <li>• Porsche TL-774C</li> <li>• SAE J1941, J814</li> <li>• Toyota TSK26016</li> <li>• TMC RP302A</li> </ul>	<ul style="list-style-type: none"> <li>• Caterpillar CAT DEAC</li> <li>• Caterpillar EC-1</li> <li>• Caterpillar ELC*</li> <li>• Cummins CES14603</li> <li>• Detroit Diesel 7SE298; DDC Powercool, DDC Powercool 3000</li> <li>• Detroit Diesel 7SE298; DDC Powercool Plus, Powercool Plus 6000</li> <li>• Ford WSS M97B51-A1</li> <li>• John Deere JDM H24B1</li> <li>• John Deere JDM H24C1</li> <li>• Navistar/International B-1, Type III (CEMS B-1)*</li> <li>• SAE J1941</li> <li>• TMC RP338</li> <li>• TMC RP329</li> </ul>

\* With the addition of molybdate per specification



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### Typical Characteristics – Nemco PolarZone™ Extended Service Interval Antifreeze/Coolant

Properties	Method	Performance	
		ESI Pure	ESI 50:50
Colour	Appearance	Red	Red / Dark Pink
Specific gravity, 20°C (F)	Internal	1.112	1.070
pH	D1287	10.5*	>9.5*
Freeze point, °C(F)	D1177	-15(5)*	-37(-34.6)*
Boiling point, °C(F)	D1120	173(343)	106(223)
Nitrite, ppm	Titration	2000 – 2400*	1000 – 1200*
Carboxylate, %	Test strip	100*	n/a
Reserve Alkalinity	D1121	2 – 3*	n/a
Total Glycol %	Refractive Index	>97.5*	>49

These characteristics are typical of current production, variations in these characteristics may occur. Items with ‘\*’ display our product test results from a CALA accredited lab in Canada conforming to ISO/IEC 17025.

### Availability and product codes

Pack size	4x4L case	20L pail	205L drum	Bulk
ESI concentrate	AEAFZ0011	AEAFZ0049	AEAFZ0073	AEAFZ0105
ESI 50:50 Premix	AEAFZ0010	AEAFZ0048	AEAFZ0072	AEAFZ0104
Availability	Year round	Year round	Year round	Year round

### Use and Storage

Coolant concentrate should be diluted prior to use. For best performance it is recommended coolant concentrate be premixed with distilled, deionized, or demineralized water. Dilution should not fall below a 40:60 (coolant/water) ratio at initial fill. Always check your vehicle manufacturer’s specifications for coolant use. Coolant typically has a shelf life of 5 to 8 years under ideal storage conditions; keep packages closed while not in use, store in a cool and dry area.

### Health, Safety, & Environment

GHS compliant Safety Data Sheets are available at [nemco.ca](http://nemco.ca) under the MSDS Library. For SDS in French, please contact [info@nemco.ca](mailto:info@nemco.ca). This material is WHMIS 2015 classified. The SDS contains valuable information critical to the safe handling and proper use of the product. Always take used glycol to an authorized collection point. Avoid discharge into drains, soil, or water. As with any chemical, keep out of reach of children and animals.

### Quality

Nemco works with respected industry suppliers for coolant additives and our ethylene glycol meets ASTM E1177. Nemco Resources Limited manufacturing facility in Winnipeg, Manitoba is proud to be certified to ISO9001. For questions regarding quality, please contact your local sales representative.