



# DELO<sup>®</sup> EXTENDED LIFE COOLANT/ANTIFREEZE - NITRITE FREE

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## PRODUCT DESCRIPTION

Delo<sup>®</sup> Extended Life Coolant/Antifreeze - Nitrite Free products are single phase, ethylene glycol antifreeze/coolants based on patented aliphatic carboxylate corrosion inhibitor systems specifically formulated for heavy duty cooling system applications and available as concentrates or 50/50 pre-dilutes.

## CUSTOMER BENEFITS

Delo Extended Life Coolant/Antifreeze - Nitrite Free (also known as "Delo ELC NF") products deliver value through:

- **Optimal Service life** — Service life of 600,000 miles/12,000 hours/6 years with no Extender needed.
- **Excellent Protection** — Excellent protection against pitting, corrosion and erosion even on hard to protect metals like aluminum.
- **Minimized maintenance and related costs** — Requires no regular testing with proper top-up practices and helps eliminate the need for supplemental coolant additives.
- **Heat Transfer** — Excellent heat transfer compared to silicate containing coolants.
- **Hardware Life** — Maximum water pump life due to no silicate formula.
- **Variable Applications** — Excellent protection for heavy duty engines where the OEM specifies a nitrite free coolant. Can be used in all heavy duty engines using reduced emission protocols including or combining EGR, DPF or ACERT technologies. This product is recommended for mixed fleet applications.<sup>1</sup>
- **Wide Temperature Applications** — Protection against winter freeze-up and summer boil-over.

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<sup>1</sup> Some OEM's require the use of nitrite in heavy duty engine applications.

Product(s) manufactured in the USA.

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

A **Chevron** company product

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- **Biodegradability** — Biodegradable in its unused form.
- **Compatibility** — Compatible with conventional antifreeze. Dilution with conventional antifreeze will reduce extended life benefits. Chevron recommends that this product not be diluted by more than 25% with other coolant formulations.
- **Stability** — Storage stability for at least 8 years.

## FEATURES

Delo Extended Life Coolant/Antifreeze - Nitrite Free coolants are heavy-duty, ethylene glycol based engine coolants which incorporate patented organic corrosion inhibitor technology called aliphatic carboxylates. Delo ELC NF is a nitrite, nitrate, borate, phosphate, silicate, and amine-free formulation that provides maximum protection of the six basic metal alloys found in most heat transfer systems. Delo ELC NF products do not contain phosphates or silicates which are known to contribute to hard water scale issues. Delo ELC NF promotes maximum water pump seal life by eliminating inorganic corrosion inhibitors. Delo ELC NF has a recommended service life of 600,000 miles/12,000 hours/6 years. This product will not require the addition of SCA's to achieve its recommended service life. Routine visual inspections, coolant top-off and annual testing are recommended to ensure maximum service life.

*Note: These products are not to be used to protect the inside of potable water systems against freezing.*

## APPLICATIONS

Recommended applications for Delo® Extended Life Coolant/Antifreeze - Nitrite Free:

- Heavy duty engines regardless of fuel type or environmental controls being used where the OEM recommends a nitrite free, silicate free coolant.
- Mixed fleets where automobiles, light duty trucks and heavy duty trucks are being serviced and the OEM recommends a nitrite free, silicate free product.<sup>2</sup>
- Recreational vehicles where a nitrite free, silicate free product is recommended.
- On-road, Off-road and Marine cooling system applications.

Approvals for Delo Extended Life Coolant/Antifreeze - Nitrite Free:

- Meets or Exceeds: **ASTM** D3306, D6210
- **Detroit Diesel** 93K217 and **Mercedes Benz** under DBL7700.30 MB Class 325.3

Recommended for:

- **Komatsu** Construction Equipment Diesel Engines
- **Navistar™** MAXXFORCE Engines
- **Volvo Truck** and **Volvo** Construction Equipment (VCE) Diesel Engines

Meets Performance requirements of:

- TMC RP 364 - Fleet Purchasing Specifications for OAT Extended Life Coolant
- Phosphate-free requirement of European OEMs
- Silicate-free requirement of Japanese OEMs
- Nitrite-free requirements of European Heavy Duty Truck Manufacturers such as **Daimler**.

It is recommended that this product not be diluted with other coolant formulations by more than 25% in order to maintain performance claims.

<sup>2</sup> Some OEM's require the use of nitrite in heavy duty engine applications.

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

## PRODUCT DILUTION AND BOIL OVER PROTECTION RECOMMENDATIONS FOR DELO EXTENDED LIFE COOLANT/ANTIFREEZE - NITRITE FREE CONCENTRATE

Boiling Protection, °C/°F (using a 15 lb pressure cap) 50% 1:1 (1 part antifreeze/1 part water)	129.4/265
Freezing Protection, °C/°F 40% 2:3 (2 parts antifreeze/3 parts water) 50% 1:1 (1 part antifreeze/1 part water) 60% 3:2 (3 parts antifreeze/2 parts water)	-24/-12 -36.7/-34 -52.2/-62

### Notes

- Product concentrates should be agitated before use or dilution.
- Delo Extended Life Prediluted 50/50 Coolant/Antifreeze - Nitrite Free should be used as purchased. No dilution is recommended.
- For maximum protection against freezing in extremely cold areas, a 60 percent solution of Delo Extended Life Coolant/Antifreeze - Nitrite Free Concentrate (3 parts antifreeze/2 parts water) can be used. Concentrations greater than 67 percent are not recommended.
- Always dispose of used coolant in accordance with local, state and federal guidelines.

## PRODUCT REFERENCE

**Note:** Bitterant is a flavor aversive that may help reduce the accidental ingestion of this product. These products contain bitterant.

Product Number 227070

MSDS Number 20488

Delo Extended Life Coolant/Antifreeze - Nitrite Free Concentrate

Product number 227071

MSDS Number 20491

Delo Extended Life Prediluted 50/50 Coolant/Antifreeze - Nitrite Free

## TYPICAL TEST DATA

### DELO® EXTENDED LIFE COOLANT/ANTIFREEZE - NITRITE FREE CONCENTRATE

Appearance	Yellow
Specific gravity 15/15°C	1.130
Freezing point, °C <sup>a</sup> , ASTM D1177	-37
pH <sup>b</sup> , ASTM D1287	8.3
Reserve alkalinity <sup>c</sup> , ASTM D1121	6.0
Silicate, % <sup>d</sup>	None

- a 50 vol % aqueous solution.
- b 1:2 dilution with water.
- c As received.
- d As anhydrous alkali metasilicate.

Minor variations in product typical test data are to be expected in normal manufacturing.

## HANDLING PRACTICES

The primary limiting factor in the shelf life of a coolant is silicate instability. Since silicate will eventually polymerize to silicate gel, silicate containing coolants have a shelf life of about 18 months. Delo Extended Life Coolant/Antifreeze - Nitrite Free is silicate-free and therefore can be stored for at least 8 years, provided the integrity of the container is maintained. Product should be agitated before use.

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.