



DELO[®] ELC PG ANTIFREEZE/COOLANT

PRODUCT DESCRIPTION

Delo[®] ELC PG Antifreeze/Coolants are single phase, propylene glycol type products based on Chevron's patented aliphatic carboxylate inhibitor system with nitrite and molybdate added and are available as a concentrate or a 50/50 pre-dilute.

CUSTOMER BENEFITS

Delo ELC PG Antifreeze/Coolants deliver value through:

- **Improved economics** — Eliminates the cost of using SCAs (supplemental coolant additives), regular testing and the manpower required to perform these tasks effectively eliminating those costs when compared to conventional of fully formulated coolants.
 - **Long Service Life** — 750,000 miles/1,200,000 km on-road use (8 years or 12,000 hours off-highway use) or 1,000,000 miles/1,600,000 km/20,000 hours/8 years with a Delo FleetFix[®] CME addition at 500,000 miles/800,000 km/10,000 hours/4 years.
 - **Improved cooling system operation** — The silicate free formula improves heat transfer compared to silicate containing formulations. Silicate deposits can reduce heat transfer and increase downtime due to over-heating.
 - **Improved Hardware Life** — Improved water pump life due to reduced water pump seal wear resulting from silicate free formulation.
 - **Excellent Protection** — Effective, long term corrosion protection, even at elevated temperatures, of commonly found cooling system metals. Effective at protecting aluminum in high temperature applications.
- **Variable Applications** — Recommended for use in on-road, off-road and stationary engine applications that recommend a PG based extended life, silicate and phosphate free coolant containing nitrites. Can be used in engines using variable fuel types and variable emission control protocols.¹ Check with your OEM for specific product application requirements.
 - **Compatibility** — Compatible with other coolant formulations and supplemental coolant additives. Mixing of ethylene glycol and propylene glycol based coolant/antifreeze products is not recommended. Chevron recommends that this product not be diluted by more than 25% with other coolant formulations. Dilution by more than 25% will reduce extended life properties.
 - **Biodegradability** — Readily biodegradable in its unused form.
 - **Less Toxic** — Uses a propylene glycol base that is less acutely toxic than ethylene glycol.
 - **Stability** — Storage stable for a minimum of 8 years as purchased.

FEATURES

Delo ELC PG Antifreeze/Coolants are heavy duty engine coolants that contains a patented organic corrosion inhibitor technology called aliphatic carboxylates. Delo ELC PG Antifreeze/Coolant is free of nitrates, borates, silicates, phosphates and amines. These products contain nitrites and molybdates for additional cylinder liner protection.

Delo ELC PG Antifreeze/Coolants are recommended for use in a wide variety of cooling system applications including on-road, off-road and stationary engine applications.

¹ Some OEMs recommend the use of nitrite free coolants. Some OEMs also do not recommend the use of PG based coolants. Check with your OEM for specific recommendations.

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

15 April 2015
COOL-43

© 2008-2015 Chevron U.S.A. Inc. All rights reserved.

Chevron, the Chevron Hallmark, Delo and FleetFix are trademarks owned by Chevron Intellectual Property LLC. All other trademarks are property of their respective owners.

Delo® ELC PG Antifreeze/Coolants are also recommended for use in mix fleet applications where heavy duty and light duty trucks are present. Please check your OEM's coolant recommendations.

Delo ELC PG Antifreeze/Coolants do not require the addition of supplemental coolant additives to obtain a service life of 750,000 miles/1,200,000 km/8 years/12,000 hours with correct top-up practices.

Delo ELC PG Antifreeze/Coolants meet the CAT EC-1 specification.

APPLICATIONS

Recommended applications for Delo ELC PG Antifreeze/Coolants:

- Heavy duty engines regardless of fuel type or environmental controls being used where the OEM recommends an extended life, PG based, silicate and phosphate free coolant that contains nitrites²
- Mixed fleets where both light duty and heavy duty trucks are present
- Stationary engine applications regardless of fuel type being used
- Marine cooling systems where freeze protection is needed and a nitrite containing coolant is recommended
- Environments where freeze protection and a low acute toxicity base fluid is needed
- Meets or Exceeds: **CAT EC-1**, **ASTM D6210**

PRODUCT DILUTION AND BOIL OVER RECOMMENDATIONS FOR DELO ELC PG ANTIFREEZE/COOLANT - CONCENTRATE

Boiling Protection, °C/°F (using a 15 lb pressure cap) 50% 1:1 (1 part antifreeze/1 part water)	126.7/260
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)	-21.6/-7 -32.7/-27 -56.7/-70

Notes

- Product concentrates should be agitated before use or dilution.
- Prediluted 50/50 products should be used as purchased.
- For maximum protection against freezing in extremely cold areas, a 60 percent solution of Delo ELC PG Antifreeze/Coolant - 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

Product Number 275110
SDS Number 23711
Delo ELC PG Antifreeze/Coolant - Concentrate

Product Number 275109
SDS Number 23715
Delo ELC PG Antifreeze/Coolant - Premixed 50/50

Product Number 227025
SDS Number 38110
Delo FleetFix® CME

² Some OEMs recommend the use of nitrite free coolants. Some OEMs also do not recommend the use of PG based coolants. Check with your OEM for specific recommendations.

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.

TYPICAL TEST DATA

Delo® ELC PG Antifreeze/Coolant - Concentrate

	ASTM 3306 requirements	Method used	
Propylene glycol	Base		91.5% w/w glycol
Other glycols	5% w/w max.		0.5% max.
Inhibitor content			5% w/w
Water content	5% w/w max	ASTM D1123	4% w/w max
Ash content	5% w/w max	ASTM D1119	1.4% w/w
Nitrite content			1100
Color			Pink
Specific gravity, 15°C	1.030 to 1.065	ASTM D1122	
Specific gravity, 20°C		ASTM D1122	1.042
Equilibrium boiling point	> 152°C	ASTM D1120	165°C
Reserve alkalinity	report	ASTM D1121	6.3
Refractive index			1.431

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

Delo ELC PG Antifreeze/Coolant - Premixed 50/50

	ASTM 3306 requirements	Method used	
pH	7.5 to 11.0	ASTM D1287	8.5
Foaming properties at 25°C break time		ASTM D1881	50 ml 5 sec.
Foaming properties at 88°C break time	150 ml max.	ASTM D1881	50 ml 5 sec. typ.
Freezing protection			-33°C

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

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.

DELO® FLEETFIX® CME ADDS VALUE THROUGH:

- **Product Specific Formulation** — Specifically formulated to work with Delo ELC PG. Delo FleetFix CME should be added at 500,000 miles, 800,000 km, 10,000 hours or 4 years in order to obtain a service interval of 1,000,000 miles, 1,600,000 km, 20,000 hours or 8 years.

Delo FleetFix CME has been specifically formulated to double the life of Delo ELC PG Antifreeze/Coolant. It should only be added at 500,000 miles/800,000 km/10,000 hours/4 years.

Quantity of Delo FleetFix CME needed at 500,000 miles (800,000 km) of on-road use (4 years or 10,000 hours of off-highway use)		
Cooling System Capacity		Add Required Quantity of Delo FleetFix CME
Gallons	Liters	Quantity
5-8	22-30	1/2 Quart Bottle
8-13	30-49	1 Quart Bottle
13-22	49-83	1-1/2 Quart Bottles
22-30	83-114	2 Quart Bottles
30-41	114-155	3 Quart Bottles
41-52	155-197	4 Quart Bottles
52-64	197-243	5 Quart Bottles

Delo FleetFix CME should only be used with Delo PG ELC Coolants.

TYPICAL TEST DATA

Delo FleetFix CME

Appearance	Red
Specific Gravity	1.06
Silicate, %	None

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 ELC PG Antifreeze/Coolants are silicate-free and therefore can be stored for at least 8 years, provided the integrity of the container is maintained. Products 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.