

## CHEVRON DEX-COOL® EXTENDED LIFE ANTIFREEZE/COOLANTS

#### PRODUCT DESCRIPTION

Chevron DEX-COOL® Extended Life Antifreeze/ Coolants are single phase, ethylene glycol antifreeze/ coolants based on patented aliphatic carboxylate corrosion inhibitor systems and are available as a concentrate and a 50/50 pre-dilute.<sup>1</sup>

#### **CUSTOMER BENEFITS**

Chevron DEX-COOL Extended Life Antifreeze/Coolants deliver value through:

- **OEM Approval** Meets requirements of GM DEX-COOL under the GM6277M specification.
- Wide service application Recommended use in Domestic, Asian and European automotive and light duty truck applications including newer hybrid vehicles.<sup>2</sup>
- Heat Transfer Improved heat transfer when compared to silicate containing antifreeze/coolant products.
- Long Service Life 150,000 miles/5 years of cooling system protection.
- Beneficial formulation Organic additive formulation that is free of silicate, nitrite, borate, phosphate, nitrate and amines and which allows longer service life.
- Protection Outstanding high temperature protection of cooling systems metals including aluminum.
- Water Pump Performance Compatible with water pump seal materials and minimizes formation of abrasive solids which can help extend water pump life.

- Performance Superior protection at high operating temperatures. Reduces the occurrence of hard water scale.
- Wide temperature application Protects against winter freeze up and minimizes chances of summer boil over.
- Reduced Inventory Can be used in mixed fleet applications where both cars and light duty trucks are present from various manufacturers.<sup>2</sup>
- Stability Storage stability for at least 8 years.

#### **FEATURES**

Chevron DEX-COOL Extended Life Antifreeze/Coolants are based on a patented aliphatic organic additive formulation that provides a service life of 150,000 miles/5 years and is approved under GM6277M. These products meet GM DEX-COOL requirements. These products can be used in mixed fleets where automobiles and light duty trucks are present.

The main corrosion inhibitors in Chevron DEX-COOL Extended Life Antifreeze/Coolants have been shown to remain above 95% of their original concentration with proper top off after 150,000 miles in automobiles. This allows much longer intervals between coolant changeouts.

Chevron DEX-COOL Extended Life Antifreeze/Coolants have been formulated without inhibitors such as silicates that have been shown to be abrasive to water pump seals. In comparison taxi field tests versus conventional coolants, Chevron DEX-COOL Extended Life Antifreeze/Coolants significantly reduced the need to replace water pumps during the 100,000 mile test. In addition to fleet tests, this product has also been tested by a major manufacturer of water pump seals and has been found to be more compatible with the seals than other coolants previously tested.

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

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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<sup>1</sup> DEX-COOL is a registered trademark of General Motors Corporation.

<sup>2</sup> Some OEMs require the use of silicate containing coolants. Follow your OEM's recommendation.

#### **APPLICATIONS**

Recommended applications for Chevron DEX-COOL® Extended Life Antifreeze/Coolants:

- Automotive and light duty truck engines regardless of fuel type used.<sup>1</sup>
- All General Motors vehicles post 1995
- · All Chrysler vehicles post 2001
- · All Ford Vehicles post 2003
- Mixed fleet applications where automotive and light duty trucks of various makes are used<sup>1</sup>
- · Industrial heating and cooling systems
- Applications where customer requires a non-nitrite containing antifreeze/coolant.

Chevron DEX-COOL Extended Life Antifreeze/Coolants are silicate free.

Approvals for Chevron DEX-COOL Extended Life Antifreeze/Coolants:

- Approved under: **GM** 6277M (DEX-COOL)
- Meets performance requirements of Ford WSS-M97B44-D
- Meets or Exceeds: ASTM D3306, D2809, D4985, D1384
- It is recommended that this product not be diluted with other coolant formulations by more than 25% in order to maintain performance claims.

# PRODUCT DILUTION AND BOIL OVER PROTECTION RECOMMENDATIONS FOR CHEVRON DEX-COOL EXTENDED LIFE ANTIFREEZE/COOLANT 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)	-24.4/-12 -36.7/-34 -52.2/-62

#### **Notes**

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

#### PRODUCT REFERENCE

**Note:** Starting January 1, 2010, Chevron began selling only bitterant containing antifreeze/coolant products. Bitterant is a flavor aversive that may help reduce the accidental ingestion of this product.

Product Number: 227807

Chevron DEX-COOL Extended Life Antifreeze/Coolant

Concentrate — Bittered
Product number: 227810

Chevron DEX-COOL Extended Life Prediluted 50/50

Antifreeze/Coolant — Bittered

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.

<sup>1</sup> Follow your OEM's recommendations. Some OEMs require the use of silicate containing coolants.

#### TYPICAL TEST DATA

## Chevron DEX-COOL® Extended Life Antifreeze/Coolants

Appearance	Orange
Specific gravity 15/15 °C	1.130
Freezing point, °Ca, ASTM D1177	-36.7
pH <sup>b</sup> , ASTM D1287	8.3
Reserve alkalinity <sup>c</sup> , ASTM D1121	6.0
Silicate, %d	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.

### Chevron DEX-COOL Extended Life Antifreeze/Coolants

#### **ASTM D1384 Glassware Corrosion Test**

ASTM D1384 Glassware Corrosion Test			
		Weight loss, mg	
	ASTM Limit	per coupon <sup>a</sup>	
Copper	10 max	2	
Solder	30 max	-2	
Brass	10 max	2	
Steel	10 max	-1	
Iron	10 max	-3	
Aluminum	30 max	4	

a Negative indicates net gain.

#### HANDLING PRACTICES

The primary limiting factor in the shelf life of a coolant is silicate instability. Since silicate will eventually polymerize to silicate gel, traditional coolants have a shelf life of about 18 months. Chevron DEX-COOL Extended Life Antifreeze/Coolants are silicate-free and therefore can be stored for at least 8 years, provided the integrity of the container is maintained.

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