



TEXACO EXTENDED LIFE COOLANT SYSTEM

Code 7997 **Texaco Extended Life Coolant/Anti-Freeze**
Code 7998 **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze**
Code 7999 **Texaco Extender**

Texaco Extended Life Coolant/Anti-Freeze is a single-phase, ethylene glycol type heavy duty diesel engine coolant based on Texaco's patented extended life carboxylate corrosion inhibitor system with nitrite and molybdate. Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze is a 50/50 mixture of Texaco Extended Life Coolant/Anti-Freeze with deionized water. Texaco Extender is the prescribed recharge for Texaco Extended Life Coolant/Anti-Freeze. It is recommended that only Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze be used for initial fill and top-off. Use Texaco Extended Life Coolant/Anti-Freeze should you need to adjust the freeze point as required by ambient conditions.

Product Application

Texaco Extended Life Coolant System is a heavy duty engine coolant system which incorporates a patented carboxylate inhibitor technology. This system of coolant products includes **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze**, a 50/50 mixture of coolant and deionized water, **Texaco Extended Life Coolant/Anti-Freeze**, a concentrate and **Texaco Extender**, a prescribed recharge package. **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze** meets ASTM D 4656 and D 5345. When properly employed, in solution, **Texaco Extended Life Coolant/Anti-Freeze** meets both ASTM D 3306 for automotive service and ASTM D 4985 for heavy duty diesel service. This is a, nitrate-, borate-, phosphate-, silicate-, and amine-free formulation which uses Texaco's patented carboxylate technology to provide maximum protection of the six basic metal alloys found in most heat transfer systems. Since the coolant contains no phosphates or silicates, hard water deposits in the cooling system are reduced. Water pump seal wear is reduced as a result of fewer abrasive dissolved solids in **Texaco Extended Life Coolant System** which results in improved water pump seal life.

The patented carboxylate technology in **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze** has been shown to remain above 80% of their original concentration after 300,000 miles of on-road use (three years or 6,000 hours of off-highway use) in heavy duty diesels without the addition of supplemental coolant additives.

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

Product Description and Features

Texaco Extended Life Coolant/Anti-Freeze is manufactured from ethylene glycol and a highly effective, extended life corrosion inhibitor package. This inhibitor system eliminates the need for silicates, phosphates, borate's, nitrates, and amine additives traditionally used for this purpose.

Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze is a 50/50 mixture of **Texaco Extended Life Coolant/Anti-Freeze** with deionized water for freeze protection down to minus 34°F (-36.7°C) and boil over protection to 265°F (129°C) with a 15 lb. pressure cap. These products need no precharging or recharging for 300,000 miles of on-road use (three years or 6,000 hours of off-highway use). After 300,000 miles, simply add **Texaco Extender**, and **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze** is good for another 300,000 miles of on-road use (three years or 6,000 hours of off-highway use). **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze** is compatible with other traditional silicate antifreezes, but the extended life benefits may be reduced if mixed.

Texaco Extender is the prescribed recharge for **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze**. It has been specifically formulated to double the life of **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze**. It should only be added at 300,000 miles of on-road use (three years or 6,000 hours of off-highway use) in heavy duty commercial engines to restore protection against scale buildup, corrosion, cavitation erosion, and pitting of wet sleeve

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liners. Use of this product at the specified interval is necessary to ensure maximum coolant life of 600,000 miles of on-road use (six years or 12,000 hours of off-highway use). After 600,000 miles of on-road use (six years or 12,000 hours of off-highway use), simply drain your system and fill with a fresh charge of **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze**. The 600,000 mile service interval could be further extended but laboratory analysis of the coolant would be required. It is recommended that coolant be changed at least every six years and disposed of properly.

Do not add traditional coolants or SCAs to **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze**, since doing so will reduce the products' extended life benefits. **Texaco Extender** is not recommended for use with the initial fill of **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze**.

Benefits

- 300,000 miles on-road use (three years or 6,000 hours off-highway use) on initial fill
- Additional 300,000 miles on-road use (three years or 6,000 hours off-highway use) by adding **Texaco Extender**
- Easy maintenance
- No inhibitor level testing required
- Excellent pitting protection for wet sleeve cylinder liners
- Effective, long term corrosion protection for aluminum, brass, cast iron, steel, solder, and copper
- Improved water pump seal life due to reduced water pump seal wear resulting from fewer dissolved solids
- No silicate dropout or gel formation during use or storage
- Excellent heat transfer
- Reduced hard water scale
- Superior protection in high operating temperatures
- Protects against winter freeze up and minimizes the chance of summer boil over
- Outstanding hot surface aluminum protection
- Suitable for gasoline powered automotive and industrial engines
- 100% biodegradable in its pure unused form
- Compatible with conventional antifreeze. Dilution with conventional antifreeze will reduce extended life benefits. Texaco recommends that this product not be diluted by more than 10% with conventional coolants
- Can be used to top up systems with conventional coolant but SCAs must continue to be added.

Product Recommendations and Approvals

Texaco Extended Life Coolant System is recommended for all heavy duty and natural gas engines including Caterpillar, Navistar, Cummins, Detroit Diesel, Mack, and other original equipment manufacturers (OEMs). **Texaco Extended Life Coolant System** is especially recommended for use in the cooling systems of all types of industrial internal combustion engines including systems containing large amounts of aluminum alloys.

Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze meets or exceeds:

- ASTM D 4656 for automotive service
- ASTM D 5345 for heavy duty diesel service

Texaco Extended Life Coolant/Anti-Freeze (freeze point adjustment only) meets or exceeds the requirements:

- ASTM D 3306 for automotive service
- ASTM D 4985 for heavy duty diesel service
- TMC RP 329

Texaco Extended Life Coolant System meets:

- Phosphate free requirement of European OEMs
- Silicate free requirement of Japanese OEMs
- Caterpillar EC-1
- Navistar B1, Type 3

ASTM D 1384 Glassware Corrosion Test

Weight loss in milligrams per coupon, negative indicates net gain

	Copper	Solder	Brass	Steel	Iron	Aluminum
Texaco Extended Life Coolant/Anti-Freeze	2	0	-1	-1	-1	3
ASTM Limits (Max.)	10	30	10	10	10	30

Product Maintenance

Traditional phosphate and borate containing coolants exhibit high pH and reserve alkalinity (RA) when compared with **Texaco Extended Life Coolant/ Anti-Freeze**. Texaco Extended Life Coolant's unique corrosion inhibitor system is designed to protect aluminum and other system metals at lower pH levels than conventional coolants. A comparison of Texaco Extended Life Coolant/Anti-Freeze versus traditional coolants is shown below.

	Texaco Extended Life Coolant/Anti-Freeze	Traditional Antifreeze/Coolant
Typical pH	8.3	10.5
Typical RA (ml)	6.0	12.0

The above comparison should not be used to draw conclusions about the relative corrosion protection of Texaco Extended Life Coolant versus conventional coolants. RA (reserved alkalinity) is defined as the amount in milliliters (ml), of 0.1 normal hydrochloric acid required to reduce the pH of 10 ml of antifreeze to 5.5. Since RA is based upon the buffering curve of inhibitors which are not present in Texaco Extended Life Coolants, we suggest that it is more important that initial pH not change drastically during service interval versus using RA as a corrosion protection indicator. The American Society for Testing Materials (ASTM) has recently eliminated RA level requirements in both key antifreeze specifications: ASTM D3306 for automotive engines and ASTM D4985 for heavy duty engines. This action by the ASTM acknowledges that coolants which are not based on phosphate and borate can provide excellent corrosion protection for cooling system metals.

Boiling and Freeze Protection for **Texaco Extended Life Prediluted 50/50 Coolant/Antifreeze**:

Boiling Protection, °F (C) (15 lb. pressure cap)	265 (129.4)°C
Freezing Protection, °F (C)	-34°F (-36.7)°C

Texaco Extended Life Coolant/ Anti-Freeze Prediluted 50/50 should be used as manufactured. No further dilution is recommended.

Because this product is silicate free, **Texaco Extended Life Coolant/ Anti-Freeze** and **Texaco Extended Life Prediluted 50/50 Coolant/ Anti-Freeze** can be stored at least 8 years provide the container integrity is maintained.

Always dispose of used coolant in accordance with local, state and federal guidelines.

Typical Characteristics

Texaco Extended Life Coolant/Anti-Freeze	Typical
Code No.	7997
Appearance	Red
Specific gravity 60/60 °F	1.130
Freezing point, °F (ASTM D 1177) 50 vol % q.s. aqueous solution	-34°F
pH (ASTM D 1287), 1:2 dilution with water	8.3

Reserve Alkalinity (ASTM D 1121), as received	6.0
Silicate, % (as Anhydrous Alkali Metasilicate)	None

To obtain optimum protection, a 50/50 Texaco Extended Life Coolant/Anti-Freeze and water mixture is recommended.

For maximum protection against freezing in extremely cold areas, a 60 percent solution can be used. Adjust **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze** by the table amounts with **Texaco Extended Life Coolant/Anti-Freeze** for freeze protection to minus 59°F/-50.6°C. Concentrations greater than 67 percent or less than 40 percent are not recommended.

Freeze Point Adjustments as Required by Ambient Conditions										
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Total System Capacity (Gal., Qt. or L)	5	10	15	20	25	30	35	40	45	50
Amount of Concentrate (Gal., Qt. or L)	1	2	3	4	5	6	7	8	9	10

Texaco Extender	
Code No.	7999
Appearance	Red
Specific Gravity	1.06
Silicate, %	None

Texaco Extender has been specially formulated to double the life of **Texaco Extended Life Prediluted 50/50 Coolant Anti-Freeze**. It should only be added at 300,000 miles of on-road use (three years or 6,000 hours of off-highway use).

Quantity of Texaco Extender needed at 300,000 miles of on-road use (three years or 6,000 hours of off-highway use) .		
Cooling System Capacity		Texaco Extender
Gal.	(L)	Qty.
6-8	22-30	0.5 quarts
8-13	30-49	1 quarts
13-22	49-83	1.5 quarts
22-30	83-114	2 quarts
30-41	114-155	3 quarts
41-52	155-197	4 quarts
52-64	197-243	5 quarts

Texaco Extender should only be used with **Texaco Extended Life Coolants**.

Handling Practices

Texaco recommends thoroughly flushing your system with clean water if you have been using conventional coolants before you install Texaco Extended Life Coolant. Texaco does not recommend commercial flushes but if significant deposits are visible use a commercial cooling system flush designed for your engine, follow the manufacturer's flushing procedure and dispose of properly. Be sure to flush the system thoroughly with water twice afterwards. When changing **Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze**, flush with clean water only. Do not use commercial flushes. In the event that a commercial flush is inadvertently used, completely flush the cooling system (twice) with clean water.

The primary limiting factor in the shelf life of a coolant is silicate instability. Since silicate will eventually polymerize to silicate gel, all traditional silicate-based coolants have a shelf life of about 18 months. **Texaco Extended Life Coolant System** is silicate-free and, therefore, can be stored for extended periods (up to 8 years) provided the integrity of the container is maintained.

For information on the safe handling and use of these products, refer to their Material Safety Data Sheets at <http://www.equivatexacomds.com>. For more information and availability, call **1-800-782-7852**.