

# Dexcool Frequently Asked Questions

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## Introduction:

Equilon (owned by Texaco® and Shell®) markets a European coolant technology (OAT) that consists of ethylene glycol inhibited with a combination of sebacic acid and 2-ethylhexanoic acid supplemented with tolyltriazole. It was originally called "Long Life", but a lawsuit brought by Warren Oil, who markets a fully formulated coolant under the brand name "Long Life®" forced the retraction of that term from the DEXCOOL, Texaco and Caterpillar® packaging. The combination of a mono and dibasic carboxylic acids permitted Texaco to obtain a patent on the specific combination. Other companies have obtained similar patents, by varying the mixture somewhat and by using similar, but not exactly the same, chemistry.

General Motors® has been using this coolant technology in their cars and light trucks since the start-of-production of the 1996 model year vehicles (except Saturn®, which began in 1997). GMC® medium trucks equipped with Caterpillar engines, have been getting a nitrite-added form of DEXCOOL (NOAT) to insure protection against wet sleeve liner cavitation-erosion.

## Frequently Asked Questions:

### Can DEXCOOL organic acid antifreeze be mixed with ethylene glycol antifreeze?

It is ethylene glycol based antifreeze! The concern with mixing comes from the fact that there are very different chemical inhibitor packages in use. Most leading technologies will work very well when used as intended, typically at 50% in good quality water. If the coolants become mixed with DEXCOOL, however, one study showed a possible aluminum corrosion problem in certain situations. The other question is a concern for dilution of the protection packages. At what mix is there too little of either inhibitor to protect the engine? As a precaution, both GM and Caterpillar instruct that contaminated systems must be maintained as if they contained only conventional coolant.

### How long will it last?

Uncontaminated, the engine manufacturers instruct that it may be kept in service for 5 years or 150,000 miles in cars. In trucks, Caterpillar and GM currently recommend that the nitrated version of the coolant be run 300,000 miles or 2 years, re-inhibited with a nitrite-tolyltriazole "extender", and run to a total of 600,000 miles.

### Are there different brands that meet the spec?

Yes. Any brand displaying the DEXCOOL trademark meets the spec, others advertising compatibility are from the same family of coolants.

### How can a customer tell if he has DEXCOOL?

If the customer owns a GM car and has orange coolant, then it's DEXCOOL! In GM trucks the coolant is "orange-red", indicating that it contains nitrite. Orange coolant in Daimler-Chrysler® vehicles is NOT Dexcool. (Daimler Chrysler owners with orange color factory coolant should consult their owners' handbooks).

### Does it protect aluminum?

Yes, even though it contains no silicate, the primary aluminum protector in conventional antifreezes, published data shows that it protects aluminum.

### What are the advantages of DEXCOOL compared to the previous GM 6043 factory-fill?

Compared to old-fashioned phosphated antifreeze, it may be more stable and improve water pump life. Evaluations of the two technologies to compare their respective service lives has found them comparable. In fact, a Ford Motor Company study concluded that organic acid coolants do not offer any significant advantages for the consumer over current North American coolants. In a modern car with a well maintained cooling system, current North American and OEM factory fill coolant corrosion protection can be extended far beyond previous expectations.

### What are the disadvantages?

Higher cost, possible incompatibility, limited availability.

### Is it environmentally safe?

It is ethylene glycol based. It is toxic. While it does reduce coolant waste, it is not environmentally safer than conventional EG coolant.

### How can you test it?

Use a refractometer to test the freeze point. The inhibitor levels can not be cost effectively tested. If in doubt, throw it out and start over.

### Should we recommend that Pencool® 2000 or Pencool 3000 be used with Dexcool?

Penray does not recommend the use of Pencool in Dexcool coolant.