

## Corrosion Protection by Organic Acid Technology

Developments in the last decade have brought about significant changes in engine design construction and operation. Power output has increased, fuel economy has improve, and engine operating temperatures have increased.

Higher operating temperatures not only increase the importance of maintaining the cooling system in a clean condition to dissipate waste heat efficiently, but also accelerate the corrosion of metals in the system.

Engine cooling systems contain a mix of materials: cast iron, steel, copper, brass and aluminium. Each of these materials must be considered individually as well as their interaction within the complete system. The widespread use of aluminium in many engine systems necessitates the adoption of new standards of care and protection.

New Formulation **RADGUARD** contains a balanced package of corrosion inhibitors which are based on **ORGANIC ACID TECHNOLOGY** and give complete protection to all the metals normally found in the cooling system, including aluminium. Corrosion protection measured by ASTM 1384 and ASTM 4340 is excellent for all materials and exceeds the requirements of Australian and New Zealand Standard 2108 Type B.

**Organic Acid Technology (OAT)** is now being widely adopted as the most effective treatment for protection against corrosion in cooling systems and the new RADGUARD is based upon this technology. The new formulation offers many advantages over the traditional chemical inhibitors previously used.

### DISPOSAL

The new Radguard formulation based on Organic Acid Technology is NON TOXIC AND BIO DEGRADABLE and eliminates many of the problems associated with the disposal of the older chemical inhibitors.

### HARD WATER

Hard water such as bore hole water has less effect on performance and stability of the new RADGUARD formulation.

### SERVICE LIFE

New RADGUARD does not deplete in service and continues to give full protection throughout its service life of **THREE YEARS**. It is then prudent to drain, flush and retreat the cooling system.

### Anglomoil Superior Lubricants

Lubricants for Automotive - Industry - Food - Farm Machinery - Marine - Earthmovers - Road Transport

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## DOSAGE RATE:

Radguard is effective at concentration of 5% i.e. 50 millilitres in every litre of engine coolant (check drivers hand book for cooling system capacity). As a rough guide, about half a litre for the average engine.

## RUBBER HOSES

Rubber hoses are attacked by the by-products of corrosion of some metals (particularly copper) and the regular use of Radguard will extend the life of the hoses in the cooling system.

## ANTI-FREEZE

Anti-Freeze from reputable suppliers contains excellent anti-corrosion treatment but is only necessary if high or low extremes of temperature are encountered. Otherwise it is far more economical to use Radguard.

## APPLICATION

- Drain and flush the cooling system with clean water (don't forget the heater circuit).
- Half fill system with clean soft water, add appropriate amount of Radguard, then top up the radiator to the correct level with water.
- Run engine for 10 minutes with heater turned on, check level of coolant and add more water if necessary.
- If it is necessary to top up the radiator before the next service, always use a mixture of Radguard and clean water.

## SUMMARY OF MAIN ADVANTAGES

- Long lasting—three year life
- Hard water tolerant
- Non foaming
- Non toxic
- Biodegradable

**NOTE: Combination of amines and sodium nitrite have been long recognised a health hazard. However accepted best practice now is that a combination of OAT and supplements of amines or nitrite or nitrate, etc. provides the best all round protection. Claims that these chemicals are damaging are inaccurate and usually due to ignorance of the current technology.**

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