Liberato
LUBRICANTS & CLEANING SOLUTIONS

PRODUCT INFORMATION

Red Coolant Concentrate

Long Life (OAT) CAT

5 years or 250,000km Protection

Product Information

Suitable for vehicles using red/orange Coolant.

Red Coolant Concentrate is based on proprietary **Organic Acid Technology (OAT)** and is free of silicates, phosphates, borates, nitrates, nitrites and amines. It is fully compatible with General Motor's DEXCOOL™ automotive engine coolant. The main corrosion inhibitors in this product have shown little or no depletion from original levels during extensive laboratory and fleet testing.

Red Coolant Concentrate provides protection for **5 years or 250,000km**, whichever comes first when diluted with demineralised water to 50%.

Red Coolant Concentrate is formulated using a powerful Corrosion Inhibitor package to ensure maximum protection for your engine. It is suitable for **passenger cars, 4WD's and light duty diesel vehicles** made in Australia, Japan, Europe, Korea and North America.

Advantages when used at 50%:

- 5 year or 250,000km lifetime in automotive applications
- DEXCOOL™ compatibility
- Extended shelf life stability (5 years). No possibility of silicate drop-out or gel formation
- Phosphate free
- Compatible with other long life OAT based engine coolants free of silicate. For best performance it is recommended to flush the old coolant and replace entirely

Red Coolant Concentrate is formulated at a lower pH range than conventional engine coolants and must NOT be mixed with conventional high pH, phosphate/borate/silicate containing coolants.
While deleterious effects are not expected to be significant, mixing with conventional coolants will result in lower than expected lifetime (changeover intervals).

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Red Coolant Concentrate meets or exceeds the performance requirements of the following engine coolant specifications at 50% dilution.

OEM/Agency	Specification
ASTM	D-3306
AS/NZS	2108. 1:2004 Type A
JIS	2234
SAE	J1034 / J1941
GM - DEXCOOL™	GM 6277M (Sections 4.1 - 4.13)
Ford	WSS-M97B44-C (Sections 3.1 – 3.4)
Renault	Type D
VW	TL 774 D
Peugeot	B71 5110

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Performance Testing

Coupon	ASTM D 1384-94 Glassware Corrosion		ASTM D 2570-94 Simulated Service	
Type	***Test Results*** [1]	***Max. Spec.*** [1]	***Test Results*** [1] [2]	***Max. Spec.*** [1]
Copper	1.2	10	1.2	20
Solder	+0.1	30	4.2	60
Brass	0.3	10	0.9	20
Steel	+0.6	10	0.3	20
Cast Iron	1.9	10	0.4	20
Aluminium	+0.4	30	1.8	60

[1] Weight Loss/Coupon (mg)
[2] Aluminium radiator results

ASTM Test Procedure	Test Results[1]	Specification
D4340-89 Heat Rejecting Aluminium Corrosion	0.3 mg/cm²/week	1.0 maximum
D2809 Aluminium Water Pump Cavitation-Erosion Corrosion (rating from 1 to 10)	9	8 minimum

[1] Weight loss per coupon in milligrams (average for 3 tests)

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Physical and Chemical Properties

Test	Performance	Test Method
pH (50% v/v)	7.8 - 8.5	ASTM D 1287
Specific Gravity (15°C)	1.110 - 1.135	ASTM D 1122
Freeze Point (50% v/v)	-37°C	ASTM D 1177
Foaming Properties – Volume (mL)	50 max.	ASTM D 1881
Foaming Properties – Break time (sec.)	5 max.	ASTM D 1881
Flash Point	116°C min.	ASTM D 92
Ash Content (% w/w)	5 max.	ASTM D 1119
Odour	Characteristic	
Colour	Red	
Shelf life	5 years	
Total Glycols (% w/w)	94.0 min.	
Inhibitors and water (%w/w)	6.0 max.	
Chloride (ppm)	25 max.	ASTM D 3634
Silicon (ppm)	<10	ICP
Boron (ppm)	<10	ICP
Phosphorous (ppm)	<10	ICP

The performance and physical property data described for this product are presented in good faith and believed to be reliable; however, they should be considered as typical results and not as sales specifications.

Notice: Because use conditions and applicable laws may differ from one location to another and may change with time, customer is responsible for determining whether products and the information in this document is appropriate for customer's use and for ensuring that customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Warranty is limited to the claims of product meeting stated specifications. It is the responsibility of the end user to determine product suitability as recommended in the Owner's Manual and to follow engine manufacturer's instructions.

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