No. 7/12

Vecom Marine

clean ships - clean seas

COOL TREAT NCLT

(CWT Diesel QC-2)

Corrosion and scale inhibitor for closed circuit cooling water systems

- Highly effective anodic inhibitor treatment, protects ferrous and non-ferrous metals
- Deposits a microscopic protective film on surfaces
- Built-in pH buffering compounds
- Controls formation of hard scale deposits
- Will not damage seals, glands, packing, hoses, and gaskets
- Compatible with all types of Glycol based anti-freeze

For product characteristics and for the nature of special risks and safety advice consult our Material Safety Data Sheet.

APPLICATIONS

COOL TREAT NCLT is a nitrite, borate and organics based corrosion inhibitor suitable for all types of engines and other closed re-circulating water systems.

DIRECTIONS FOR USE

Determine the quantity of treatment required for the system from the product dosage chart. Sacrificial anodes (magnesium or zinc) and galvanized coating contained inside the cooling water system must be removed prior to *COOL TREAT NCLT* treatment. These materials are unnecessary in the treated system. It can cause undesirable deposits if not removed. *COOL TREAT NCLT* should be added to the system at a point where the circulation is high. Do not add to expansion tank if there is little or no circulation.

Systems contaminated with oil and/or scale should be cleaned before applying *COOL TREAT NCLT* treatment. Use *SEA CLEAN* for degreasing and *DESCALING LIQUID* for descaling operation.

DOSAGE AND CONTROL

The effective control range of *COOL TREAT NCLT* is 1200 - 2000 PPM NO2. To maintain adequate reserves, nitrite level should not be allowed to fall below 1200 PPM. Initial dosage is 6 lt. of *NLCT* for every ton of cooling water. Maintenance dosages are based on the nitrite concentration shown in the product dosage chart.

DOSAGE CHART	
Nitrite (PPM NO2)	**COOL TREAT NCLT (lt. per ton)**
Initial dose	6.0
200	5.2
400	4.4
600	3.6
800	2.8
1000	2.0
1200	1.2
1500 - 2000	satisfactory

The condition of the cooling water treated with *COOL TREAT NCLT*, should be within the following recommendation:

Nitrite: 1200 - 2000 PPM
Chloride: Below 100 PPM Cl
Hardness: Below 180 PPM CaCO3
pH: 8.5 - 9.5

Use *NITRITE TEST SET* to determine the *COOL TREAT NCLT* level. If there are no leaks and a apparent drop in nitrite value is observed in the system, this could be due to bacteria contamination.

Contact your *VECOM MARINE* representative for assistance.

INSTRUCTION ON RECOMMENDED NITRITE RANGE

Normal-speed engine		
Types of water chlorides concentration	**Initial dosage for 1 ton of water**	**Min. conc. Nitrite PPM (NO2)**
De-ionized or up to 50 PPM chlorides	4 lt.	1200
From 50 up to 100 PPM Chlorides	6 lt.	1600
High-speed engine		
De-ionized or up to 50 PPM chlorides	6 lt.	1800
From 50 up to 100 PPM Chlorides	8 lt.	2400

RECOMMENDATION FOR COOLING WATER TREATED WITH *COOL TREAT NCLT*

Sodium nitrite (NaNO2): from 2300 to 4500 (see instructions below)
Or nitrite (NO2): from 1500 to 3000 (see instructions below)
Chlorides: Normal-speed engine 300 PPM maximum
High-speed engine 80 PPM maximum
Hardness: Max. 180 PPM CaCO3
pH: from 8,5 to 9,5

If the pH is below 8,5 add a small dose of alkalinity control to increase.

TABLE OF DOSAGE OF *COOL TREAT NCLT* ACCORDING TO NITRITE HACH TEST KIT

Initial dosage on NCLT: 4 lt. per ton of water (1000 lt.)										
Nitrite (NO2) PPM	0	400	750	1100	1500	1500/2000				
NCLT lt. / ton	4	3	2	1	0	suspend dosage				
Initial dosage on NCLT: 6 lt. per ton of water (1000 lt.)										
Nitrite (NO2) PPM	0	400	800	1150	1500	1900	2300	2300 / 3000		
NCLT lt. / ton	6	5	4	3	2	1	0	suspend dosage		
Initial dosage on NCLT: 8 lt. per ton of water (1000 lt.)										
Nitrite (NO2) PPM	0	400	750	1100	1500	1900	2250	2600	3000	3000 / 3500
NCLT lt. / ton	8	7	6	5	4	3	2	1	0	suspend dosage

Interpretation the table of dosage of Cool Treat NCLT according to the Nitrite Hach test kit

Normal-speed engine, with a dosage of 4 or 6 lt. of Cool Treat NCLT per ton of water
Multiply scale reading by 20 to obtain nitrite
Exam*ple no.* 1: dosage 4 lt. of Cool Treat NCLT per ton of water, scale reading 40 x 20 = 800 *PPM* nitrite. Add 2 lt. of Cool Treat NCLT per ton of water in the circuit to obtain 1500 / 2000 PPM.
Exam*ple no.* 2: dosage 6 lt. of Cool Treat NCLT per t*on of* water. Add 4 lt. of Cool Treat NCLT per ton of water in the circuit to **obtain 1200 / 1600 PPM.**

High-speed engine, with a dosage of 8 lt. of Cool Treat NCLT per ton of water
Multiply scale reading by 40 to obtain nitrite
After adding NitriVer 2 nitrite reagent powder pillow fill both tubes to the upper mark (= 10 ml.) with demineralised (or battery-) water, stopper again and invert ot mix. Repeat step 5, 6 and 7 and read the scale.
*Exa*mple: dosage 8 lt. of Cool Treat NCLTper ton of water, scale reading 40 x 40 = 1600 PPM ni*trit*e. Add about 4 lt. of Cool Treat NCLT per ton of water to the circuit to **obtain 1800 / 2400 PPM**.

Always add Cool Treat NCLT at the point where the circulation is high. Some new systems' header tanks are only for expansion and have very little or no circulation. In case of loss of treatment levels

check first for leakage in the system. Always use distilled or de-*IONIZED* water. Call your VECOM MARINE Service Engineer if the loss of treatment is not caused by leakage of the cooling system, but by other reasons such as bacteria contamination or oxidation of nitrite. On new buildings or overhauled systems follow the advice of the manufacturer in conjunction with VECOM MARINE.

All competitors nitrite / borate - based water treat*ment*s are compatible with Cool Treat NCLT, but allow old product to drop to lowest limit before dosi*ng t*he VECOM MARINE product.
Cool Treat NCLT will slowly remove sludge and other residues during the first period of operation. This can result in cloudy water, which will clarify after draining small quantities of water. It is not necessary to remove all existing coolant unless inspection has shown excessive contamination.

If the treatment is changed after the soluble oil inhibitor type complete draining, cleaning and even degreasing of the circuit is advised. Please consult your VECOM MARINE representative for the correct *pro*cedure of *changing to Cool Treat NCLT*.

Contains sodium nitrite