Additives Plus
Reinventing Corrosion Inhibition

PRODUCT BULLETIN
SCA-800
Supplemental Coolant Additive

PRODUCT CODE: 62080-1800

QUALITY CONTROL
To ensure quality control and assurance, all blending is controlled under Additives Plus's standards. Each individual batch of Add Pak is rigorously tested for conformance with product and industry specifications prior to storage, packaging, or shipment. This laboratory analysis is thoroughly conducted by both Additives Plus and our blending facilities. A Certificate of Analysis for each lot is produced and is available to customers.

TECHNICAL CONTACT INFORMATION
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PRODUCT DESCRIPTION AND APPLICATIONS
Heavy-duty diesel engine cooling systems must efficiently provide: efficient heat removal, corrosion protection, scaling control and fouling control over long change-out intervals, and under conditions of heavy load factors. Additives Plus's SCA-800 helps extend antifreeze-coolant life by providing an additional dose of inhibitors to protect all metals in the engine's cooling system. It includes additional stabilization for silicates, adds dispersing and suspending agents to help prevent scaling and fouling, and boosts additives that will control cylinder liner pitting, and pump cavitation, erosion and corrosion. Additives Plus's SCA-800 goes a step further to increase the nitrite levels in your coolant by virtue of its high nitrite content. SCA-800 can be used to convert antifreeze that meets the basic ASTM heavy-duty standard (ASTM D 4985) to antifreeze meeting ASTMD6210, the heavy-duty pre-charged antifreeze standard.

PRODUCT SPECIFICATIONS	
Visual	Light amber liquid
Odor	Slight
Specific Gravity (60°F) (800)	1.290-1.330
pH	12.0-13.5

USE INSTRUCTIONS
INITIAL PRECHARGE: When precharging new antifreeze concentrate which contains less than 2400 ppm Nitrite (as NO) as confirmed by a reliable test strip 2 or by analysis, add SCA-800 per the following guidelines to provide a minimum of 2400 ppm Nitrite:

New Antifreeze Nitrite (NO_2) ppm	Add This Volume % SCA-800	Or	Add This Volume SCA-800 Per 5,000 Gal
0	1.11%		56
500	0.90%		44
1000	0.65%		33
1200	0.56%		28

When converting antifreeze with Additives Plus's VGAP-700 Add Pak to a heavy duty pre-charged antifreeze, add 0.50% by volume or 25.0 gallons of SCA-800 per 5,000 gallons of antifreeze.

MAINTENANCE CHARGE: SCA-800 may be added to an engine cooling system on a fixed schedule at intervals of 20,000 miles, 250 hours of operation or 3 months to maintain proper inhibitor levels. However, for heavy-duty diesel applications with VGAP-800 it is best to use nitrites as an indicator of inhibitor levels. Check the nitrite level with an appropriate test strip or by analysis. If the nitrite level is below the minimum acceptable level (usually 800-1000ppm NO_2) as indicated by a test strip, add (1.5) ounces of SCA-800 per 4 gallons of cooling system capacity (assumed to be 50% coolant & 50% water). Retest and repeat as necessary.

USE OF SCA-800 AS A SUPPLEMENTAL COOLANT ADDITIVE FOR HEAVY DUTY DIESEL ENGINES

DETAILED USE INSTRUCTIONS

SCA-800 is a high nitrite supplemental coolant additive for use in heavy duty diesel engines requiring a pre-charged fully formulated antifreeze meeting ASTM D 6210, TMC of ATA RP329/330, Caterpillar EC-1, etc. SCA-800 is added to the coolant in an engine to maintain the levels of depleted corrosion inhibitors and other critical additives in effective/acceptable ranges. Some inhibitors, including nitrites, nitrates, silicates and MBT/tolyriazoles are converted into inactive com- pounds relative to corrosion protection as they perform their function of protecting engine metals, and must be boosted at intervals that depend upon engine operating conditions and hours of operation at various loading levels. The best way to determine when to add a supplemental coolant additive which contains these depleted antifreeze/coolant ingredients is to measure the concentrations of the depleted components in your antifreeze and add each based on these analyses. However, this is not a practical approach, because it is costly and requires significant analysis time at a qualified laboratory. A method that is commonly employed and practical is to measure the level of a “marker” inhibitor and add SCA when its level falls below a certain point. This “marker” inhibitor is the one that depletes to levels of inadequate protection most rapidly. If you keep this ingredient of the antifreeze within acceptable bounds, the other depleted additives will theoretically always remain above minimum acceptable levels.

In pre-charged antifreeze containing elevated levels of nitrite or nitrite/molybdate, nitrite and/or molybdate are the most appropriate “markers.” They can be checked quickly and with sufficient accuracy in the field with approved test strips or test kits. When these test methods indicate nitrite levels below:

800-1000ppm or molybdate levels below 300-400ppm, it is then time to add SCA-800 per the following schedule:

Measured Nitrite Level	Measured Molybdate Level	Add this much SCA-800 per 4 gallons of cooling system capacity
1000	400	1 ounce
800	350	1.5 ounces
500	300	2.0 ounces
0	0	3.0 ounces

Many companies add supplemental coolant additives based on a set elapsed operating time or mileage at standard operating conditions. Many add SCA to a heavy duty engine cooling system at approximate intervals of 12,000-18,000 miles, 225-275 hours of operation, or 3 months of operation. The best way to determine your recommended mileage or time intervals is to accumulate operating data while using the strips or kits. This data will allow you to establish statistically valid SCA addition intervals based upon the time or mileage over which nitrite/molybdate levels fall to recommended minimums.

PROPER USE FOR HEALTH AND SAFETY

Precautions: Where skin contact may occur, chemical-impervious gloves should be worn. Use chemical goggles or full face shield when the danger of splashing exists. Wash any areas of skin contact thoroughly after use of this product. Avoid contact with skin, eyes and clothing. Do not take internally. Clean up spills immediately. Keep containers tightly closed when not in use. Store only in containers which are resistant to alkaline solutions with a pH of 12-14. Consult the MSDS for additional safety information.

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