



# TECHNICAL DATA

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## #258 CLEAN & COOL

Clean & Cool is a highly concentrated multi-functional supplemental coolant additive that is specially formulated for use in all conventional types of ethylene glycol based antifreeze mixtures used in diesel and gasoline engines.

Clean & Cool contains a highly concentrated additive package that contains a combination of molybdate, low nitrate corrosion inhibitor system, dispersants, surfactants, and synthetic organic polymers. When used at the recommended treatment levels, Clean & Cool provides the following performance benefits:

1. Prevention of the formation of rust, scale and iron corrosion deposits by the formation of a monomolecular film on all metal surfaces including aluminum.
2. Removal of existing rust, scale and iron corrosion deposits, while the engine is in operation.
3. Reduces the potential for overheating.
4. Prevention of galvanic corrosion caused by electrolysis.
5. Inhibition of corrosion to copper and its alloys due to the presence of a tolytriazole corrosion inhibitor.
6. Lubrication of water pumps and seals.
7. Prevention of the formation of green goo.
8. Elimination of coolant foaming by reducing the surface tension of the coolant. This reduces the potential for cavitation.
9. Neutralization of harmful acids that result as antifreeze chemically breaks down.
10. Prevention of the erosion of soft metals.
11. Improved efficiency and extended engine life.
12. Will not affect gaskets and hoses.
13. Non-toxic and non-corrosive in use concentration.
14. Will not support bacterial growth due to its low nitrate formulation.

### TREATMENT LEVEL

One (1) pint of Clean & Cool to each eight (8) gallons of cooling system capacity. Clean & Cool can be added to any point in the cooling system and should be added to any point in the cooling system and should be added with each flush and in accordance to the following maintenance guidelines and testing guidelines.

**Not recommended for use with “Extended-Life” coolants, OAT-type and Hybrid-type coolants.**

TD-258 (Rev. 1/2014)

**MAINTENANCE AND TESTING GUIDELINES:**

**New Vehicles**

If the new vehicle contains a chemically charged coolant filter, remove and Replace with a plain un-charged filter.

Take a sample from the radiator and perform the tests listed below utilizing coolant test strips.

**In-Service Vehicles**

At every oil change or regularly scheduled maintenance for coolant take a sample of coolant and perform the tests listed below.

**Test for pH**

pH should be between **9.0-10.5**

If below **9.0**, remove all of the coolant and dispose of properly. Flush and replace with a new 50/50 antifreeze/water solution.

If above **10.5**, remove some coolant and replace with a 50/50 antifreeze/water solution.

**Test for Nitrate Level**

Nitrate level should be **300-1200ppm**

If above **1200ppm**, remove some coolant and add a 50/50 mixture of antifreeze/water.

If below **300ppm**, add 1 pint of Clean & Cool to each 8 gallons of cooling system capacity.

**Test for Molybdate Level**

Molybdate level should be **400-2000ppm**

If below **400ppm**, add 1 pint of Clean & Cool to each 8 gallons of cooling system capacity. (If Clean & Cool has already been added to raise the nitrate levels **DO NOT** add any additional Clean & Cool.)

If above **2000ppm**, remove some coolant and add a 50/50 mixture of antifreeze/water then recheck both the nitrate and molybdate levels.