



ANTIFREEZE AND SUMMER COOLANT

UNIVERSAL FORMULA - Gasoline or Diesel

PRODUCT DESCRIPTION

PENNZOIL[®] ANTIFREEZE AND SUMMER COOLANT is a premium quality, single phase, ethylene glycol-based product. It provides year-round protection of the cooling system. PENNZOIL[®] ANTIFREEZE AND SUMMER COOLANT protects all common cooling system metals including solder, copper, brass, steel, cast iron, and aluminum. This low silicate "universal" formula provides excellent heat rejecting aluminum protection for all automotive and light duty gasoline applications. It also provides outstanding protection for heavy duty diesel applications when combined with supplemental coolant additives (SCA's). PENNZOIL[®] ANTIFREEZE AND SUMMER COOLANT is compatible with all other major brands of antifreeze and will not affect automotive hoses and gaskets. It contains an effective defoamer to prevent foaming in the cooling system for the life of the coolant. It helps prevent freeze-up in winter and boilover in summer (especially in cars with air conditioning), and provides protection from rust and corrosion. A special green dye is included to signal its presence in the cooling system.

APPLICATION

PENNZOIL[®] ANTIFREEZE AND SUMMER COOLANT is recommended for automotive and truck cooling systems. When used at a 50/50 concentration (one part antifreeze to one part water), it will provide protection over a temperature range from -34°F to 265°F with a 15 psi pressure cap on the radiator. For best coolant system protection, maintain at least 33% PENNZOIL[®] ANTIFREEZE AND SUMMER COOLANT in the radiator. Recheck coolant level occasionally and replenish as required.

PENNZOIL[®] ANTIFREEZE AND SUMMER COOLANT meets the performance requirements of the following industry specifications or performance requirements:

- ASTM D-3306, D-4985, D-4340
- SAE J 814, J 1034, J 1941
- Cummins 90T8-4
- Mack
- Chrysler MS-7170
- Detroit Diesel 7SE298
- Ford ESE - M97B44-A
- GSA CID A-A-870A
- General Motors GM1825M
- General Motors GM1899M
- Kenworth R026-170-97
- Peterbilt 8502.002
- TMC of ATA RP-302B Recommended Practice
- Freightliner 48-22880
- White / GMC

PENNZOIL[®] ANTIFREEZE AND SUMMER COOLANT is recommended for both domestic and imported automobiles requiring an ethylene glycol-based antifreeze. Vehicle manufacturers' recommend changing antifreeze regularly, usually every two years or 30,000 miles.

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES PENNZOIL[®] ANTIFREEZE AND SUMMER COOLANT

TEST	METHOD	TYPICAL RESULTS
Specific Gravity, 60/60°F	ASTM D-1122	1.12-1.14
pH (50% Solution)	ASTM D-1287	10.0-11.0
Freezing Pt., 50% Solution °C(°F)	ASTM D-1177	-37 (-34)
Boiling Pt., 50% Solution °C(°F)	ASTM D-1120	109(228)
Flash Point, 70% Solution °C(°F)	ASTM D-93	none
Weight per gallon @ 60°F, lbs		9.4
Ash Content, % wt.		1.5
Antifoam		Present
Color		Fluorescent Green
Silicate, max % wt.		0.03
Foam Test	ASTM D-1881	15 ml max, <1 sec max brk time
Material Numbre		
Bulk	3	8548
6/1 Gallon Case		8542
55 Gallon Drum		8546

Cooling System Capacity in Quarts	Quarts of Pennzoil [®] Antifreeze and Summer Coolant required for protection to temperature (°F) shown										
	2	3	4	5	6	7	8	9	10	11	12
8		-7	-34								
9	24	14	-21	-50							
10	16	4	-12	-34	-62						
11	18	8	-6	-23	47						
12	19	10	0	-15	34	-57					
13		13	3	-9	-25	-45					
14		15	6	-5	-18	-34	-54				
15		16	8	0	-12	-26	-43	-62			
16		17	10	2	-8	-19	-34	-52			
17		18	12	5	-4	-14	-27	-42	-58		
18		19	14	7	0	-10	-21	-34	-50	-65	
19		20	15	9	2	-7	-16	-28	-42	-56	
20			16	10	4	-3	-12	-22	-34	-48	-62
21			17	12	6	0	-9	-17	-28	-41	-54
22			18	13	8	2	-6	-14	-23	-34	-47
23			19	14	9	4	-3	-10	-19	-29	-40
24			19	15	10	5	0	-8	-15	-24	-34
25			20	16	12	7	1	-5	-12	-20	-30

For cooling systems larger than shown, double the quantity required for a system one-half as large.
Reverse procedure for systems smaller than shown.