



TECHNICAL INFORMATION

DOW ANTIFREEZE GN INHIBITED ETHYLENE GLYCOL-BASED COOLANTS

Dow Antifreeze GN Industrial Coolant is a fully formulated product with a unique additive package intended primarily for use in jacket water cooling systems for heavy-duty diesel engines, particularly those containing aluminum components, while providing excellent freeze protection. This product meets ASTM D4985, ASTM D3306, and ASTM D6210 standards.

TYPICAL APPLICATIONS

Dow Antifreeze GN Coolants are also commonly used in the following:

- Heavy-duty diesel and automotive engines
- Cooling of field compression units (natural gas gathering systems)
- Natural gas line heaters
- Wellhead heaters

UNIQUE ADVANTAGES OF DOW ANTIFREEZE GN PRODUCTS:

Dow Antifreeze GN Industrial Coolants contain supplemental coolant additives that protect aluminum, brass, copper, solder, steel and cast iron components up to a maximum operating temperature of 135°C (275°F) when used properly.

Dow Antifreeze GN Coolants meet ASTM D4985 for low silicate-containing heavy-duty diesel engine coolant, including ASTM D2809 aluminum water pump cavitation erosion-corrosion testing.

Dow Antifreeze GN Coolants meet ASTM D3306 for automobile and light-duty service, including ASTM D4340 heat-rejecting aluminum corrosion testing.

Dow Antifreeze GN Coolants meet ASTM D6210 for fully formulated engine coolant for heavy-duty diesel engines and do not require any supplemental coolant additives.

Heat transfer systems using Dow Antifreeze GN Coolants will require complete fluid replacement every two to three years to ensure maximum heat transfer efficiency and optimal protection of aluminum, brass, copper, solder, steel and cast iron components.

Physical Properties • Typical Properties¹ of Dow Antifreeze GN Inhibited Ethylene Glycol-Based Coolants

	Dow Antifreeze GN
Composition (% by volume Ethylene Glycol)	96.7
Color	Green
Specific Gravity (at 20°C/20°C)	1.118
pH of Solutions	9.0 to 11.0
Reserve Alkalinity (min)	5.0
Flash Point °C (P.M.C.C. ²)	126.7

¹Typical properties, not to be construed as sales specifications.

²Pensky-Martens closed cup.

Physical Properties • Typical Properties¹ of Dow Antifreeze GN Aqueous Solutions (Glycol Percentage by Volume)

Freezing Point		% Glycol (by vol.)	Boiling Point	
°C	°F		°C	°F
-12	10	25	102.7	217
-16	3	30	103.4	218
-20.5	-5	35	104.2	220
-25	-13	40	105.1	221
-30.5	-23	45	106.1	223
-38	-36	50	107.3	225
-45	-49	55	108.7	228
-55	<-67	60	110.2	231
<-57	<-70	65	112.2	234

¹Typical properties, not to be construed as sales specifications.

Performance Data • Typical Corrosion Rate Test Results of Dow ANTIFREEZE GN COOLANTS (MILS PER YEAR (MPY))¹

Material of Construction	Dow Antifreeze GN	ASTM Maximum
Copper	0.36	0.5
Brass	0.18	0.5
Solder	0.065	0.5
Steel	0.046	0.5
Cast Iron	0.105	0.5
Aluminum	0.64	2.5

¹ASTM D1384

STORAGE AND HANDLING

Storage of Dow Antifreeze GN Coolants presents no unusual problems during the recommended shelf life of the product. The materials do not readily solidify or have high flash points. As a precaution, however, sparks or flames should be avoided during transfer or processing operations because undiluted glycols can be ignited. Tank truck shipments can be emptied into storage tanks or clean drums. Ordinary steel tanks are normally satisfactory for storage of Dow Antifreeze GN Coolants. However, during extended storage, slight discoloration may occur from iron contamination.

PRODUCT STEWARDSHIP

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products – from the initial concept and research, to manufacture, use, sale, disposal and recycle of each product.

A NOTE ABOUT PRODUCT SAFETY

Dow encourages its customers and potential users to review their applications from the standpoint of human health and environmental aspects. To help ensure that Dow products are not used in ways for which they are not intended or tested, Dow personnel will assist customers in dealing with environmental and product safety considerations. Dow literature, including Material Safety Data Sheets, should be consulted by customers and potential users prior to use.

CUSTOMER NOTICE

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

TO LEARN MORE...

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**Toll free service not available in all countries.*



Oil & Gas

For more information, visit www.DowOilandGas.com.

Note: This guide is designed as a general product overview. Please contact your local Dow Oil & Gas representative for up-to-date, detailed technical information including registrations and use limitations and to discuss individual applications or requirements.

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