NOT MEASUREMENT SENSITIVE

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SUPERSEDING
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# COMMERCIAL ITEM DESCRIPTION

# ANTIFREEZE, MULTI-ENGINE TYPE

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

1. SCOPE. This commercial item description (CID) covers the requirements for ethylene glycol-based and propylene glycol-based automotive engine antifreeze. The antifreeze is to be suitable for use in all administrative vehicles, construction and materiel handling vehicles and equipment, and military ground combat and tactical vehicles and equipment.

2. CLASSIFICATION.

2.1 Type. The antifreeze will be of the following types:

Type I - Ethylene glycol-based
Type II - Propylene glycol-based

2.2 Concentration. The antifreeze will be of the following concentrations:

Concentration A - 100 percent (%) glycol, by volume
Concentration B - 60% glycol, by volume
Concentration C - 50% glycol, by volume

3. SALIENT CHARACTERISTICS.

3.1 Material. Recycled, recovered, and environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the requirements of this CID. The recycled antifreeze supplied by either an on-site recycler unit or an off-site recycling service shall meet the requirements specified herein.

3.2 Basic performance. Type I antifreeze shall meet all of the requirements of ASTM D 6210. Type II antifreeze shall meet all of the requirements of ASTM D 6211.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-TR-E/AEIT, Warren, MI 48397-5000.

AMSC N/A FSC 6850

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

3.3 Silicon concentration. The antifreeze shall have a maximum silicon concentration of 250 parts per million (ppm) when tested in accordance with (IAW) ASTM D 6130.

3.4 Compatibility. The antifreeze shall be compatible with ASTM D 3585 reference fluid when tested IAW the following test method. Obtain a sample of antifreeze and a sample of reference fluid IAW ASTM D 3585. Prepare a 60% by volume solution of each, using corrosive water IAW ASTM D 1384. (Note: For Concentration B and Concentration C antifreezes, do not dilute with corrosive water; use as is.) In a suitable glass stoppered 100-milliliter (mL) graduated cylinder, combine 50 mL of the diluted antifreeze solution and 50 mL of the diluted reference fluid solution. Thoroughly mix the resultant solution. Allow this solution to stand undisturbed in a lighted area at room temperature for 24 hours. After 24 hours, observe the solution for any precipitate, phase separation, turbidity or cloudiness. For an additional 24 hours, place the stoppered solution in an oven at 60 degrees Celsius (°C). After 24 hours, remove the solution from the oven and again observe the solution for any precipitate, phase separation, turbidity or cloudiness. Report observations. The observation of turbidity or cloudiness, or precipitates or phase separations in excess of 0.5% by volume of the total solution, constitutes failure of this test.

3.5 Storage stability. The antifreeze shall demonstrate storage stability when tested IAW the following test method. Place 100 mL of antifreeze in a suitable glass stoppered 100-mL graduated cylinder. Allow this solution to stand undisturbed in a lighted area at room temperature for 24 hours. After 24 hours, observe the solution for any precipitate, phase separation, turbidity or cloudiness. For an additional 24 hours, place the stoppered solution in an oven at 60°C. After 24 hours, remove the solution from the oven and again observe the solution for any precipitate, phase separation, turbidity or cloudiness. Report observations. The observation of turbidity or cloudiness, or precipitates or phase separations in excess of 0.5% by volume of the total solution, constitutes failure of this test.

3.6 Color. Type I antifreeze shall be green in color. Type II antifreeze shall be purple in color.

4. REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, IAW paragraph 23.403 of the Federal Acquisition Regulation (FAR).

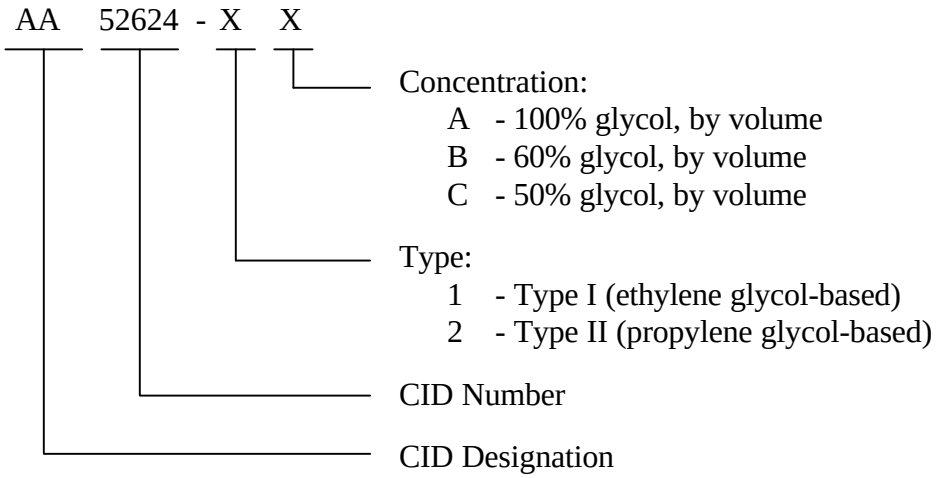
4.1 Federal Hazardous Substances Act requirements. Under authority of the Federal Hazardous Substances Act, antifreeze containing ethylene glycol shall be labeled IAW 16 CFR Part 1500.

5. PRODUCT CONFORMANCE. The products provided shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial marketplace. The Government reserves the right to require proof of such conformance.

6. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order (see 7.3).

7. NOTES.

7.1 Part or Identification Number (PIN). The following PIN procedure is for Government purposes and does not constitute a requirement for the contractor. The PINs to be used for antifreeze acquired to this CID are created as follows:




7.2 Addresses for obtaining copies of referenced documents.

7.2.1 Copies of 16 CFR Part 1500 are available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, or via the GPO web site at http://www.access.gpo.gov/nara/cfr/index.html/.

7.2.2 Copies of ASTM D 1384 "Standard Test Method for Corrosion Test for Engine Coolants in Glassware", ASTM D 3585 "Standard Specification for ASTM Reference Fluid for Coolant Tests", ASTM D 6129 "Standard Test Method for Silicon in Engine Coolant Concentrates by Atomic Absorption Spectroscopy", ASTM D 6130 "Standard Test Method for Determination of Silicon and Other Elements in Engine Coolant by Inductively Coupled Plasma-Atomic Emission Spectroscopy", ASTM D 6210 "Standard Specification for Fully-Formulated Ethylene-Glycol-Base Engine Coolant for Heavy-Duty Engines", and ASTM D 6211 "Standard Specification for Fully-Formulated Propylene Glycol-Base Engine Coolant for Heavy-Duty Engines" are available from the American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or via the ASTM web site at http://www.astm.org/.

7.3 Ordering data. The contract or order should specify the following:

a. Title, number, and date of this CID.
b. Issue of the Department of Defense Index of Specifications and Standards (DoDISS) to be cited in the solicitation.
c. Type of antifreeze (see 2.1).
d. Glycol concentration of antifreeze (see 2.2).
e. Packaging requirements.

7.4 Freeze point data. Expected freeze point values, based on concentration of glycol, are listed in table I.

TABLE I. Expected freeze points.

| Glycol concentration, % by volume | Freeze point, °F (°C) | |
|---|---|---|
| | Ethylene glycol | Propylene glycol |
| 40 | -12 (-24) | -6 (-21) |
| 50 | -34 (-37) | -27 (-33) |
| 60 | -62 (-52) | -56 (-49) |

7.5 Material Safety Data Sheets (MSDS). Contracting officers should identify those activities requiring copies of MSDS's prepared IAW FED-STD-313. The pertinent Government mailing addresses for submission of data are listed in FED-STD-313; and 29 CFR 1910.1200 requires that the MSDS for each hazardous chemical used in an operation must be readily available to personnel using the material. Contracting officers should identify the activities requiring copies of the MSDS.

7.6 Key words.

Coolant
Engine
Ethylene
Freeze point
Glycol
Propylene

MILITARY INTERESTS:

Custodians:
Army - AT
Air Force - 68
Navy - SH

Review Activities:
Army - EA
DLA - GS

CIVIL AGENCY COORDINATION ACTIVITY:
GSA - FSS

Preparing Activity:
Army - AT

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