



Standard Specification for Industrial Grade Ethylene Glycol¹

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This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers industrial grade ethylene glycol.

1.2 The following precautionary caveat pertains only to the test method portion, Section 5, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

1.3 Review the current Materials Safety Data Sheets (MSDS) for detailed information concerning toxicity, first aid procedures, handling and safety precautions.

2. Referenced Documents

2.1 ASTM Standards:

- E 202 Test Methods for Analysis of Ethylene Glycols and Propylene Glycols²
- E 300 Practice for Sampling Industrial Chemicals²
- E 347 Test Method for Ash in Polybasic Acids²

3. Requirements

3.1 Industrial grade ethylene glycol shall conform to the following chemical and physical requirements:

		ASTM Test Method
Ethylene Glycol, % by weight	99.0 min	E 202
Diethylene Glycol, % by weight	0.5 max	E 202
Other Glycols, % by weight	0.1 max	E 202
Total Glycols, % by weight	99.5 min	E 202
Water, % by weight	0.3 max	E 202
Acidity as Acetic Acid, % by weight	0.005 max	E 202
Ash, % by weight	0.0045 max	E 347
Color, Platinum-Cobalt	10.0 max	E 202
Apparent Specific Gravity		
20/20°C	1.1151–1.1156	E 202
25/25°C	1.1129–1.1134	
Distillation Range, 760 mm Hg		
Initial boiling point, °C	193 min	E 202
Dry point, °C	204 max	

4. Sampling

4.1 Sample ethylene glycol in accordance with the appropriate sections of Practice E 300 for liquid samples.

5. Test Methods

5.1 Test each composite sample for chemical and physical requirements using the test methods specified in 3.1.

6. Keywords

6.1 ethylene glycol; industrial grade

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² *Annual Book of ASTM Standards*, Vol 15.05.