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Standard Specification for Ethylene Glycol^{1,2}

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1. Scope

1.1 This specification covers ethylene glycol for use in the preparation of surface coatings.

1.2 For specific hazard information and guidance, consult the supplier's Material Safety Data Sheet.

2. Referenced Documents

2.1 ASTM Standards:

D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter³

E 202 Test Methods for Analysis of Ethylene Glycols and Propylene Glycols⁴

E 300 Practice for Sampling Industrial Chemicals⁴

2.2 U.S. Federal Specification:

PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of⁵

3. Properties

3.1 Ethylene glycol shall conform to the following requirements:

Apparent specific gravity	
20/20°C	1.1151 to 1.1156
25/25°C	1.1129 to 1.1134
Color, Pt-Co units, max	15
Distillation range, 760 mm Hg	
Initial boiling point, °C, min	193
Dry point, °C, max	204
Water, wt %, max	0.2
Acidity as acetic acid, wt %, max	0.005
Diethylene glycol, wt %, max	1.0
Iron, ppm, max	1.0

4. Sampling

4.1 The material shall be sampled in accordance with Practice E 300.

5. Test Methods

5.1 The properties enumerated in this specification shall be determined in accordance with Test Methods E 202.

5.2 The specific gravity can also be determined in accordance with Test Method D 4052.

6. Packaging and Package Marking

6.1 Package size shall be agreed upon by the purchaser and the supplier.

6.2 Packaging shall conform to applicable carrier rules and regulations or when specified shall conform to Fed. Spec. PPP-C-2020.

7. Keywords

7.1 ethylene glycol

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² This compound is also known as 1, 2-ethanediol.

³ Annual Book of ASTM Standards, Vol 05.02.

⁴ Annual Book of ASTM Standards, Vol 15.05.

⁵ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094.

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