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Standard Specification for Diethylene Glycol^{1, 2}

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1. Scope

1.1 This specification covers diethylene 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 Diethylene glycol shall conform to the following requirements:

Apparent specific gravity 20/20°C	1.1170 to 1.1200
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25/25°C	1.1147 to 1.1177
Color, Pt-Co units, max	15
Distillation range, 760 mm Hg	
Initial boiling point, °C, min	240
Dry point, °C, max	250
Water, wt %, max	0.2
Acidity as acetic acid, wt %, max	0.01
Ethylene glycol, wt %, max	0.5
Triethylene 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 apparent 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 diethylene glycol

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² This compound is also known as 2,2'-oxydiethanol.

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, Attn: NPODS.

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