



~~Designation: D 4669—98 (Reapproved 2002)^{ε1}~~ Designation: D 4669 – 07

Standard Test Method for Polyurethane Raw Materials: Determination of Specific Gravity of Polyols ¹

This standard is issued under the fixed designation D 4669; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

~~^{ε1}Note—Editorially updated the organizational reference in Footnote 1 in November 2002.~~

1. Scope*

~~1.1 This test method measures the specific gravity of polyols using a pycnometer. (See~~

1.1 These test methods measure the specific gravity of polyols. (See Note 1.)

1.2 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.

NOTE 1—There is no equivalent ISO standard.

2. Referenced Documents

~~2.1 ASTM Standards:~~

~~D 883 Terminology Relating to Plastics~~

~~E 1 Specification for ASTM Thermometers~~

~~E 202 Test Methods for Analysis of Ethylene Glycols and Propylene Glycols—ASTM Standards: ²~~

D 883 Terminology Relating to Plastics

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

E 1 Specification for ASTM Liquid-in-Glass Thermometers

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

3. Terminology

~~3.1 Definitions—For definitions of terms used in ~~these~~ test methods see Terminology D 883.~~

~~3.2 Description of Term Specific to This Standard: ASTM D4669-07~~

3.2.1 specific gravity—the ratio of the weight in air of a given volume of the material at a stated temperature to the weight in air of an equal volume of water at a stated temperature. It shall be expressed as specific gravity, 25/25°C, indicating that the sample and reference water were both measured at 25°C.

4. Significance and Use

~~4.1 This test method is suitable for quality control, as a specification test, and for research. It is necessary when converting from kinematic to absolute viscosity.~~

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TEST METHOD A—SPECIFIC GRAVITY USING A PYCNOMETER

5. Apparatus

5.1 *Pycnometer*, of 25 or 50-mL capacity, conical shape with a capillary side arm overflow tube complete with a standard-taper $\frac{5}{12}$ ground-glass joint to receive a ground-glass vented cap. A thermometer with a scale graduated from 12 to 38°C in 0.2-degree

¹ ~~This~~ These test method ~~is~~ methods are under the jurisdiction of ASTM Committee D20 on Plastics and is the direct responsibility of Subcommittee D20.22 on Cellular Materials—Plastics and Elastomers. It was recommended to ASTM by the ~~Alliance~~ Center for the Polyurethane Industry's Polyurethane Raw Materials Analysis Committee, Industry of the American Chemistry Council.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

*A Summary of Changes section appears at the end of this standard.