Designation: D5606 – 16

Standard Specification for Toluene for Toluene Diisocyanate (TDI) Feedstock[1]

This standard is issued under the fixed designation D5606; 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.

1. Scope*

1.1 This specification covers toluene for toluene diisocyanate (TDI) feedstock.

1.2 The following applies to all specified limits in this specification: for purposes of determining conformance with this specification, an observed value or a calculated value shall be rounded off to the nearest unit in the last right-hand digit used in expressing the specification limit, in accordance with the rounding-off method of Practice E29.

1.3 Consult OSHA regulations and supplier's Safety Data Sheets for all materials used in this specification.

1.4 The values stated in SI units are to be regarded as standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D848 Test Method for Acid Wash Color of Industrial Aromatic Hydrocarbons

D2360 Test Method for Trace Impurities in Monocyclic Aromatic Hydrocarbons by Gas Chromatography (Withdrawn 2016)[3]

D3437 Practice for Sampling and Handling Liquid Cyclic Products

D5386 Test Method for Color of Liquids Using Tristimulus Colorimetry

D6526 Test Method for Analysis of Toluene by Capillary Column Gas Chromatography

D7504 Test Method for Trace Impurities in Monocyclic Aromatic Hydrocarbons by Gas Chromatography and Effective Carbon Number

D8005 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

2.2 *Other Document:*

OSHA Regulations, 29 CFR paragraphs 1910.1000 and 1910.1200 [4]

3. Properties

3.1 Toluene for TDI feedstock shall conform to the following requirements:

Property	Specification	ASTM Test Method
Purity, min, wt %	99.9[A]	D2360 or D6526 or D7504
Acid wash color, max	pass with 2	D848
Benzene, max, mg/kg	300[A]	D2360 or D6526 or D7504
Nonaromatics, max, wt %	0.1[A]	D2360 or D6526 or D7504
Ethylbenzene, max, mg/kg	300[A]	D2360 or D6526 or D7504
Xylenes, max, mg/kg	500[A]	D2360 or D6526 or D7504
Appearance	[B]	...
Color, max, Pt–Co scale	10	D5386 or D8005

[A] If more than one method is listed, the producer and user should agree on the referee method.
[B] Clear liquid free of sediment and haze when observed at 18.3 to 25.6°C (65 to 78°F).

4. Sampling

4.1 Sample the material in accordance with Practice D3437.

5. Keywords

5.1 impurities in toluene; toluene; toluene diisocyanate feedstock

[1] This specification is under the jurisdiction of ASTM Committee D16 on Aromatic Hydrocarbons and Related Chemicals and is the direct responsibility of Subcommittee D16.01 on Benzene, Toluene, Xylenes, Cyclohexane and Their Derivatives.

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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.

[3] The last approved version of this historical standard is referenced on www.astm.org.

[4] Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401, http://www.access.gpo.gov.

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