



# Standard Specification for Toluene for Toluene Diisocyanate (TDI) Feedstock<sup>1</sup>

This standard is issued under the fixed designation D 5606; 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 ( $\epsilon$ ) 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 E 29.

1.3 Consult OSHA regulations and suppliers' material safety data sheets for all materials used in this specification.

1.4 The values stated in SI units are to be regarded as the standard.

## 2. Referenced Documents

### 2.1 ASTM Standards:

D 848 Test Method for Acid Wash Color of Industrial Aromatic Hydrocarbons<sup>2</sup>

D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)<sup>2</sup>

D 2360 Test Method for Trace Impurities in Monocyclic Aromatic Hydrocarbons by Gas Chromatography<sup>2</sup>

D 3437 Practice for Sampling and Handling Cyclic Products<sup>2</sup>

D 5386 Test Method for Color Using Tristimulus Colorimetry<sup>2</sup>

D 6526 Test Method for Analysis of Toluene by Capillary Column Gas Chromatography<sup>2</sup>

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications<sup>3</sup>

### 2.2 Other Document:

OSHA Regulations, 29 CFR, paragraphs 1910.1000 and 1910.1200<sup>4</sup>

## 3. Properties

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

Property	Specification	ASTM Test Method
Purity, min, wt %	99.9 <sup>A</sup>	D 2360 or D 6526
Acid wash color, max	pass with 2	D 848
Benzene, max, mg/kg	300 <sup>A</sup>	D 2360 or D 6526
Nonaromatics, max, wt %	0.1 <sup>A</sup>	D 2360 or D 6526
Ethylbenzene, max, mg/kg	300 <sup>A</sup>	D 2360 or D 6526
Xylenes, max, mg/kg	500 <sup>A</sup>	D 2360 or D 6526
Appearance	<sup>B</sup>	...
Color, max, Pt-Co scale	10	D 1209 or D 5386

<sup>A</sup>Test Method D 2360 is the referee test method in case of dispute.

<sup>B</sup>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 D 3437.

## 5. Keywords

5.1 impurities in toluene; toluene; toluene diisocyanate feedstock

<sup>1</sup> 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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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 06.04.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 14.02.

<sup>4</sup> Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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

**SUMMARY OF CHANGES**

Committee D16 has identified the location of selected changes to this standard since the last date of issue that may impact the use of this standard.

- (1) Added alternative method for purity and impurities, Test Method D 6526.      (2 ) Defined Test Method D 2360 as the referee test method in case of dispute.

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