

Technical Data Sheet

TDI

Toluene diisocyanate

Toluene diisocyanate (TDI) is a colorless to pale yellow liquid with a pungent odor. TDI can have different forms or isomers. TDI isomers have the same chemical formula $C_9H_6N_2O_2$, but the atoms are arranged differently. So, the term "TDI" represents the isomeric compounds along with mixtures of these isomers.

Applications:

TDI is commonly used to manufacture:

Flexible foams: used for the fabrication of bedding, furniture, automotive seating, flexible packaging and carpet underlay; this is the largest market application for TDI.

"Foamed-in-place" polyurethane plastics – ranging from soft and sponge-like to hard and porous for use in furniture, packaging, insulation and boat building.

Polyurethane coatings – used on leather, wire, tank linings and masonry.

Elastomers: used to produce adhesives, films and linings, and abrasive wheels and other mechanical items that require abrasion and solvent resistance.

Rigid, "pour-in-place" foams – for use in appliances, and, in smaller amounts, packaging

Urethane sealants – used in construction applications.

Cast elastomers: for production of articles such as roller blade wheels

Properties	Value	Units	Test Method
Appearance @ 30 °C	Clear liquid	-	Visual
Purity	Min. 99.5	%wt.	GC
2,4-TDI Content	80.0 ± 1.0	%wt.	ASTM D4660.00
2,6-TDI Content	20.0 ± 1.0	%wt.	ASTM D4660.00
Total Acidity	Max. 40	ppm by wt.	ASTM D5629.05
Hydrolysable chlorine	Max. 100	ppm by wt.	ASTM D4663.98
Total chlorine	Max. 500	ppm by wt.	ASTM D4661.03
Colour (APHA)	Max. 25	-	ASTM D4877.04
Sp.gr @ 25 °C	1.22 ± 0.	-	ASTM D4659.03
Nitro Isocyanate compounds	Max.30	ppm	H900.5800