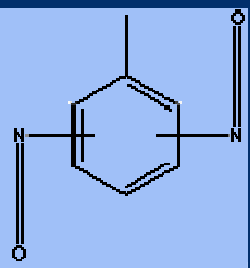
TOLUENE DIISOCYANATE

PRODUCT IDENTIFICATION

CAS NO.	584-84-9 (2,4-TDI) 91-08-7 (2,6-TDI) 26471-62-5 (Isomer mixture)
EINECS NO.	202-039-0
FORMULA	$CH_3C_6H_3(NCO)_2$
MOL WT.	174.16
H.S. CODE	2929.10
TOXICITY	
SYNONYMS	Diisocyanatomethylbenzene; TDI; TDI 80/20;



Methyl phenylene ester Isocyanic acid; Toluylene diisocyanate; Tolylidene diisocyanate;

DERIVATION	
CLASSIFICATION	

GENERAL DESCRIPTION

Commercial production involves conversion of toluene to a diamine which is reacted with phosgene to yield TDI, a liquid used mainly for flexible polyurethane foams. TDI is used for the production of polyurethane foam and otherr polyurethane including elastomers, synthetic leather, coated fabrics, paints and adhesives

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	clear to pale yellow liquid, Sharp odor
MELTING POINT	12 C
BOILING POINT	250 C
SPECIFIC GRAVITY	1.22
SOLUBILITY IN WATER	Reacts
pH	
VAPOR DENSITY	6
AUTOIGNITION	
NFPA RATINGS	Health: 3; Flammability: 1; Reactivity: 1
REFRACTIVE INDEX	
FLASH POINT	> 110 C
STABILITY	Stable under ordinary conditions

APPLICATIONS

Diisocyanates (or polyisocyanates) are monomers for polyurethane production. Polyurethane is made from a variety of diisocyanates in conjunction with polyether and polyester polyols as co-reactants by addition polymerization which needs at least two -N=C=O groups. Polyurethanes are widely used in the manufacture of flexible and rigid foams, fibres, coatings, and elastomers. The most common diisocyantes for this reaction are:

SALES SPECIFICATION

TDI 80/20	
APPEARANCE	clear to pale yellow liquid
PURITY	99.7% min
COLOR, APHA	15 max
TOTAL CHLORINE	0.1% max
MELTING POINT	12.5 ± 1 C
ACIDITY	20 - 40 ppm
ISOMER RATIO	2,4-isomer 80 +/- 1% + 2,6-isomer 20 +/- 1%

TRANSPORTATION

PACKING	240kgs in drum
HAZARD CLASS	6.1 (Packing group: II)
UN NO.	2078

OTHER INFORMATION