

Meta Toluene Diamine



**Karun Petrochemical
Company**

Address :

Head office:

No.17, Khalilzadeh St.,
Vali-e-asr Ave., Vanak
Sq., Tehran-Iran

Factory:

Site 2, Petrochemical
Special Economic Zone
(Pet zone), Bandar-e-
Imam Khomeini-Iran

Property	Specification	Analytical Method
Appearance	Dark Brown to Black solid	Visual
Purity (wt%)	Min. 97.5	2-2.9.3-I033
Other Isomers (wt%)	max. 1.0	2-2.9.3-I033
Tar & Unknown (wt%)	max. 1.5	2-2.9.3-I033
Toluidins (ppm)	max. 0.05	2-2.9.3-I033

⇒ Meta toluene diamine (MTD) is an organic compound with a close formula $C_6H_3CH_3(NH_2)_2$. It mainly consists of 2,4-Diamino-Toluene and 2,6-Diamino-Toluene isomers, with an isomer ratio of $80 \pm 1 / 20 \pm 1$ respectively. It is a colorless to light yellow crystalline solid. The pure compound is colorless, but tends to darken on storage & exposure to air, due to oxidizing reaction. When heated to decomposition, it emits toxic fumes of nitrogen oxides.

In KARUN Petrochemical Company, MTD is produced by nitrating toluene to produce a dinitrotoluene mixture containing approximately 80% 2,4-isomer and 20% 2,6-isomer (with small amounts of 2,3- and 3,4-dinitrotoluene, followed by catalytic reduction to a mixture of the corresponding diamines, at around 115 °C at 16 Bara pressure, in presence of Palladium-Platinum (Pd-Pt) Catalyst.

• Application areas

MTD is mainly used as a precursor in the production of toluene



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diisocyanate (TDI). The other applications are in color, resin, and pharmaceutical industries.

- **Handling and storage conditions**

Careful consideration should be given to handling this product. Use only with adequate ventilation. Toxic by inhalation, skin absorption, and ingestion. Irritating to eyes and skin. Do not eat, drink, or smoke in working area. MTD is readily absorbed through the skin, so skin and eye contact should be prevented. The handlers must wear special equipment which prohibits contact with skin or eyes. It is recommended to shower at the end of work shift.

Store MTD in a cool, dry, well-ventilated area away from heat generation sources, strong oxidizing agents and strong acids. Store solidified MTD in tightly closed containers.

- **Packing details**

In 220 lit (200 kg Net.) new steel drum, each 4 drums strapped on a wooden pallet.

- **Licensor: Chematur Engineering (CEAB), Sweden.**