



State-of-the-art toluene disproportionation

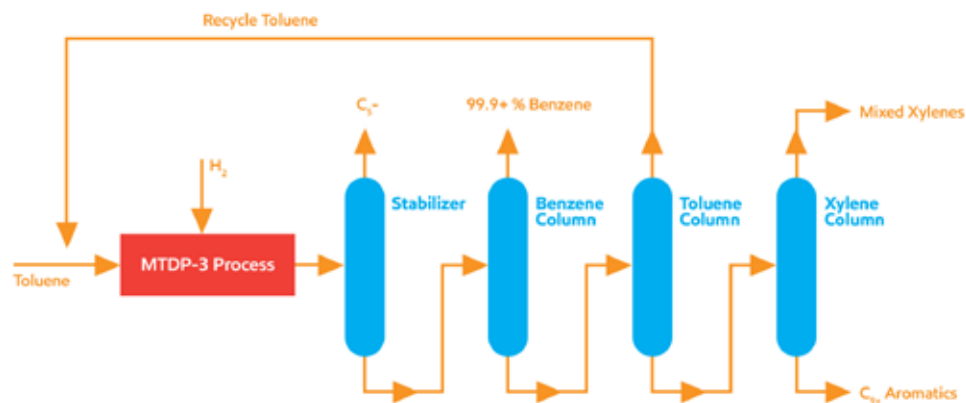
MTDP-3 technology upgrades toluene to high-value products

Energy lives here

MTDP-3 is designed to process toluene and limited amounts of C₉ aromatics and can allow for inexpensive debottlenecking of existing toluene disproportionation (TDP) facilities. The process is ideal for toluene upgrade to more valuable chemicals without investing in paraxylene separation facilities.

MTDP-3 process

Based on a proprietary zeolite catalyst, MTDP-3 toluene-conversion technology allows for robust production of high-value mixed xylenes and high-purity benzene at minimal cost. Highly selective and stable, MTDP-3 is a simple fixed-bed process with first cycle lengths typically exceeding seven years with stable product yields across the cycle.



Key benefits

-  **High product yields**
 - High benzene and mixed xylene yields
 - Excellent xylene/benzene ratio
-  **Low operating cost**
 - Low catalyst costs
 - Very low H₂ consumption
-  **High product quality**
 - Benzene product exceeds 99.9% purity

Legacy of leadership and support

ExxonMobil has led the development and application of technologies for xylenes and benzene production since the discovery of ZSM-5 in the late 1960s. As part of our license, we provide full support from initial consultation through technology transfer and ongoing improvements to ensure operators achieve full value.

Performance advantages

The MTDP-3 toluene-conversion process offers significant benefits to operators, including:

- Very high toluene conversion per pass
- High benzene product and mixed xylenes product yields
- High weight hourly space velocity
- Excellent xylenes/benzene ratio
- Benzene product with greater than 99.9% purity
- Very low H₂ consumption
- Low catalyst cost
- Low operating cost
- Long catalyst cycles
- Low costs and inexpensive debottlenecks
- Easy retrofits

About us

ExxonMobil helps refiners and petrochemical manufacturers increase capacity, lower costs, improve margins, reduce emissions and operate safe, reliable and efficient facilities. Along with a commitment to helping to implement best practices and to achieve better results, we provide cutting-edge proprietary catalysts and license advantaged process technologies for refining, gas and chemical needs.

Commercial experience at multiple sites
over the past 20+ years.

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