



AmyleMax

C5+ Olefins to High-Octane Gasoline

AmyleMax[®]

Enhancing Octane of Light Olefinic Gasoline

One of the major challenges in sustaining refinery margin is production of clean fuels meeting prevailing specifications at low cost. Etherification route producing Tertiary-Amyl-Methyl-Ether (TAME) or Tertiary-Amyl-Ethyl-Ether (TAE) is an attractive option for higher Octane requirements of BS-VI/Euro-VI gasoline.

AmyleMax, a catalytic etherification technology developed by IndianOil R&D for producing high Octane mixed ethers stream (C5-90°C) cut from cracked Naphtha (ex-Desulphurisation unit)/ Naphtha cracker streams, is a need-of-the-hour technology. Through enhancement of RON of Light Cracked Naphtha, AmyleMax technology provides flexibility to the Refiners to either increase gasoline production by blending low octane naphtha or produce premium grade gasoline with higher octane.



Salient Features

- RON improvement up to 4 units in mixed ether product as compared to feed
- Reduction of olefins
- Negligible methanol carryover in product
- No significant change in sulphur



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Major Benefits

- Able to process full range light gasoline cut without further splitting into narrower cut
- No requirement of additional feed pre-treatment
- Cost-effective solution requiring lower capital investment through a simple fixed bed reactor
- Simplified process with low Capex/Opex
- Low specific energy consumption and area footprint
- Direct blending of high octane product into gasoline pool

Commercial Experience

- Successfully demonstrated in 42 KTA revamp unit in 2019 in one of the Indian refineries
- Feasibility study in progress for two refineries

