Question 14: What are the advantages and challenges associated with alkylating amylenes?

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Some advantages to alkylating amylenes are:

- It helps reduce the RVP of the FCC gasoline

- It helps reduce the RVP of the entire gasoline pool (although not as much as it might appear on the surface due to the Hydrogen Transfer Reaction)

- It reduces the total olefin content of the gasoline pool.

- It increases the volume of gasoline produced from the amylenes (or another way to look at it is that it allows the refiner to convert some iso-butane into gasoline)

Some challenges are:

- Dealing with the increased amount and type of feed contaminants (sulfur and diolefins)

- Increased ASO production – difficulty maintaining acid purity

- More olefin feed means lower iso-butane/olefin ratio for most units

- Increased iC5 production in the Alky (due to the Hydrogen Transfer Reaction). This can cause higherRVP of the alkylate or more iC5 in the n-butane produc

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