

JM

FORMOX integrated UFC process

Reduce costs in your ammonia-urea plant

Urea formaldehyde concentrate (UFC) is a common stabilisation agent used in the production of urea. It is required in quantities often too small to be made economically on-site, and consequently the ammonia-urea complex must import it, often at considerable expense.

Johnson Matthey (JM) has combined its know-how in ammonia, methanol and UFC production to use proven technologies to develop an integrated process for the manufacture of UFC that will generate substantial savings on the ammonia-urea complex.

The FORMOX™ integrated UFC process offers:

- A secure and cost effective supply of UFC.
- Affordable capital investment.
- A simple flowsheet with low operating costs.
- An optimised process based on proven Johnson Matthey catalysts and technologies.

How the process works

The methanol feedstock for UFC production is beneficially made within the ammonia plant from a feed that otherwise only has fuel value using a process that has a positive impact on ammonia production.

Using the integrated FORMOX process the UFC plant has been designed and optimised to reduce complexity and cost whilst maintaining the high product yield of other FORMOX offerings. The simplicity of the integrated flowsheet means that no additional manpower is required to operate the new equipment which contributes to significant OPEX savings.

Utilising JM's extensive knowledge and experience in catalyst and technology developments for the ammonia, methanol and UFC markets, this low risk, simple to operate process is easily retrofitted into existing plants or can be installed as part of a new plant build. In addition, as a result of combining the processes, operators are no longer reliant on importing UFC from an external source, so the supply of this key additive is secured.

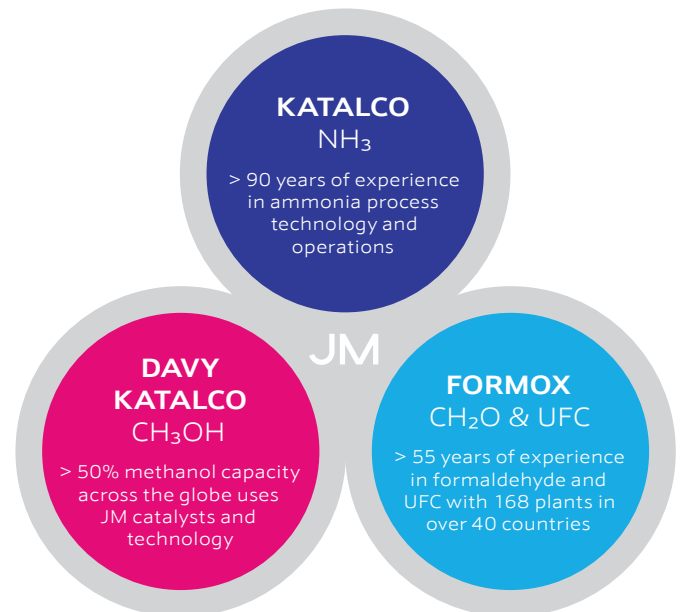


Figure 1: JM's experience and expertise

A flowsheet comparison

The current common supply chain for UFC to an ammonia-urea plant is complex, utilising many separate processes with associated overheads as shown in Figure 2.

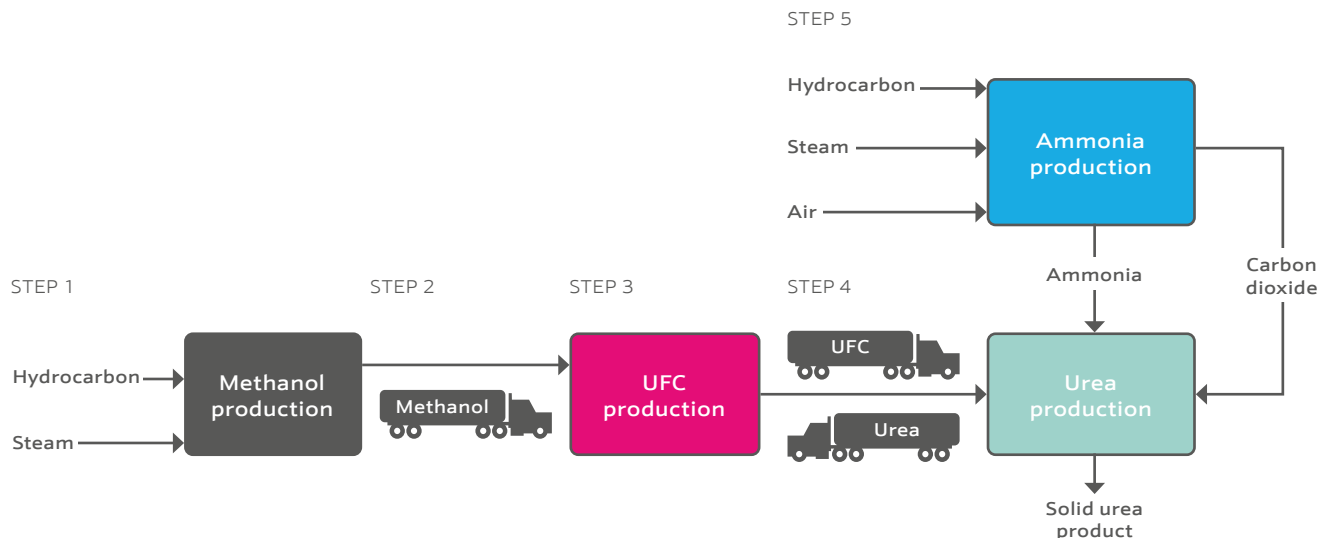


Figure 2: An example of a standard urea flowsheet when relying on imported UFC

The **FORMOX** integrated process (Figure 3) streamlines the supply chain for UFC as all manufacturing takes place on a single site. The **FORMOX** flowsheet has been simplified and integrated with the ammonia/methanol plant to reduce both capital expenditure (compared to a stand-alone UFC plant) and operating costs (compared to importing UFC), providing consistency and security of supply.

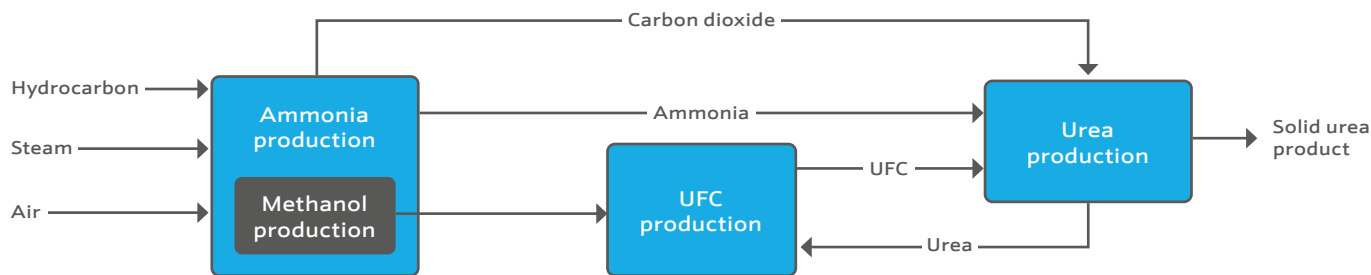


Figure 3: FORMOX integrated UFC flowsheet

Talk to Johnson Matthey today to find out how we can provide catalysts and technology to help you get the most out of your operations.

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