

# Safe Operations of Low Temperature Shift Reactors Under Harsh Conditions

Selecting a highly active and stable catalyst for the Low Temperature Shift (LTS) converter is of high importance when considering the potential harsh operating conditions it may work under. Under the risk of condensation (wetting), sulfur poisoning, and high temperatures (due to poor temperature control), a high-quality LTS catalyst is essential to ensure proper catalyst operation without any loss of production.

Clariant ShiftMax® 217 was developed with enhanced activity to allow higher conversion at low temperatures, high stability to mitigate the risk under upset conditions and finally an excellent crush strength in the oxide and reduced state for overall robustness.

This paper summarizes several case studies where ShiftMax® 217 achieved excellent performance under harsh conditions. This paper discusses how OCI Iowa Fertilizer Company has benefited from the stability and high activity of ShiftMax® 217.

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