



DNX®

SCR catalysts

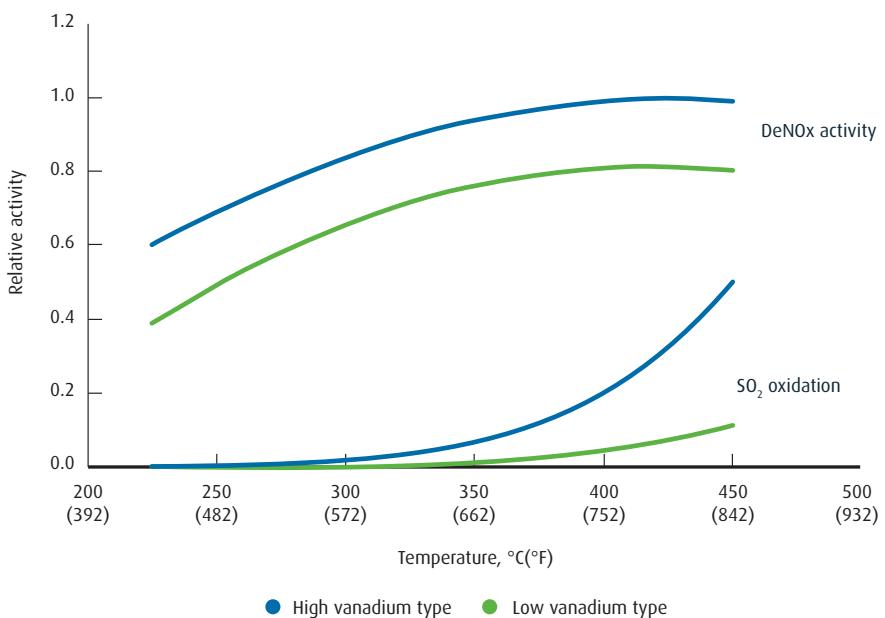
For minimizing SO₂ oxidation

Get a grip on SO₂ oxidation

Tri-modal pore structure prevents ABS fouling and unwanted stack plumes

SO₃ resulting from SO₂ oxidation, either during combustion or during catalysis, is bad news for any plant, as it can lead to ABS fouling and visible blue plumes from the stack. Umicore DNX® SCR catalysts can minimize SO₂ oxidation to just 0.1%.

The DNX® is different from other SCR catalysts in that it features a DeNOx activity-boosting tri-modal pore structure that also minimizes oxidation of SO₂ into SO₃. Large macro-pores draw the reactants into the catalyst interior, where meso-pores and micro-pores greatly enhance access to active sites, while keeping SO₂ oxidation to a bare minimum. The result is less ABS fouling of downstream equipment and an end to undesired stack plumes.



Protect downstream equipment from ABS fouling

When processing gases that contain sulfur, nearly all sulfur is converted into SO₂. However, a small fraction of the SO₂ is subsequently oxidized into SO₃. When the SO₃ reacts with residual ammonia, ammonia bisulfate (ABS) is formed and can foul downstream equipment. The special pore structure of the DNX® catalyst minimizes this process, protecting the equipment without sacrificing high NOx removal.

Avoid unwanted stack plumes

In addition to reacting with ammonia to form ABS, SO₃ can react with water vapor as flue gas cools and form sulfuric acid mist. Since this mist cannot be removed in most setups, it ends up in the stack as a visible blue plume. By keeping SO₂ oxidation to as little as 0.1%, the DNX® can prevent this from occurring.



Benefits

- Customized catalysts for SO₂ oxidation down to 0.1%
- Minimize downstream equipment from ABS fouling
- Avoid unwanted stack plumes caused by sulfuric acid mist
- No need to choose between high performance and low oxidation