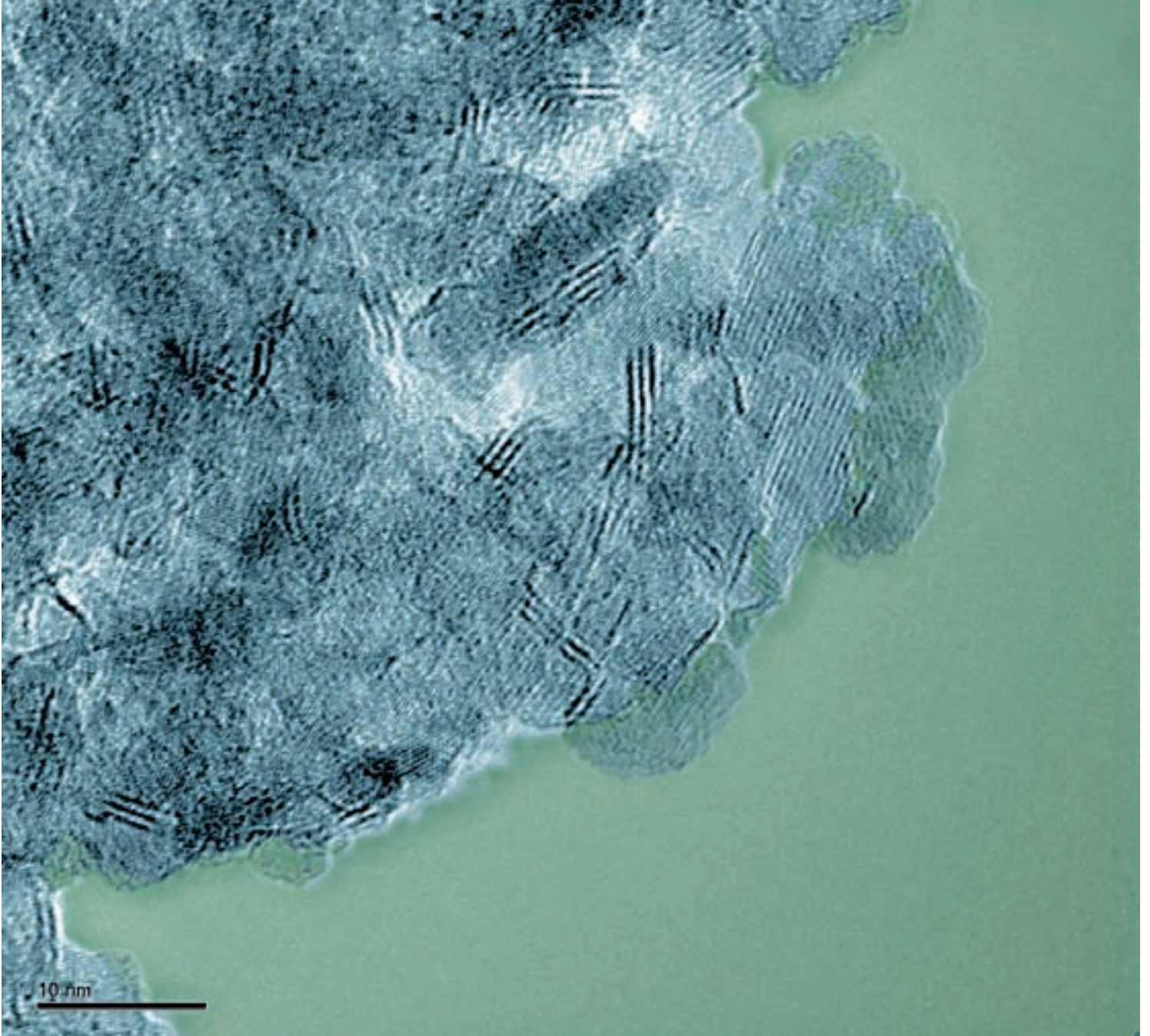


# SSK catalyst Sulphur resistant/sour water-gas shift catalyst

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Sulphide particles and slabs photographed by transmission electronic microscope

# SSK catalyst

## Sulphur resistant/sour water-gas shift catalyst

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Topsøe offers technology solutions for sulphur resistant water-gas shift, also called sour shift, including proprietary catalysts.

The Topsøe catalyst for sour shift – the SSK catalyst – has been developed to cover a wide range of operating conditions.

Features include

- unique flexibility of operations in configuring the water-gas shift section, which requires adaptability to site specific conditions for optimum performances
- high catalyst flexibility allows use of adiabatic beds, which are easy to operate and have low capital cost

The SSK catalyst series is designed to offer a solution for all the processes requiring CO conversion into hydrogen.

### High activity

Topsøe's SSK catalyst is based on metal sulphides and promoters. Due to a proprietary production and activation procedure, the sulphides appear as finely dispersed metal sulphide slabs resulting in a stable and high activity.

### Mechanical stability

The SSK catalyst is produced to ensure the highest possible crush strength, resulting in low and stable pressure drop throughout the catalyst lifetime.

The stability of the SSK catalyst has been proven in in-house tests and in commercial operation. Whereas the lifetime of the catalyst in the first reactor depends largely on the operating conditions, the stability of the catalyst in the subsequent beds is unique. Some of our clients have experienced more than 15 years of continuous operation with the same charge of SSK catalyst.

### Wide operating flexibility

Normal operating temperatures are between 200 and 500°C (390-930°F). The inlet temperature may be as low as 15°C (27°F) from above dew-point.

Operating pressure can be up to 80 barg (1200 psi).

### By-product formation

Formation of by-products such as methane and alcohols is minimal.

### Facts and typical figures

Pressure range	Up to 80 barg/1200 psi
Range of operating temperature	200-500°C/390-930°F
Distance from dew-point	Min. 15°C (27°F)
Standard shape	Quadrolobes
Size	1/10"