

Dealer:

EmiFighter

The future particulate filter system and catalyst

The newest particulate filters technology and the latest generation of modern catalyst.

The Emicon-Systems EmiFighter-system catalyst is the cost-effective solution for high-sulphur applications and applications that require low NO₂ emissions. The coating is based on a base metal oxides composition. The coating has a low content of precious metal. The catalyst can be fitted into any engine size – built up by modular substrates.

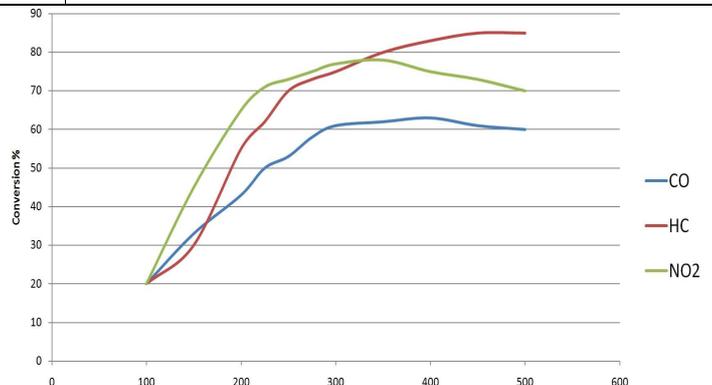
Physical Catalyst Identification

Name	EmiFighter
Type	Flow-through substrate made from cordierite
Dealers name;	Emicon-Systems A/S
Country of origin;	Denmark
Cell structure;	300, 400 CPSI

Regeneration process

Catalytic Active Elements	Confidential (combination of base metals) and smaller content of precious metals
Concentrations of above-mentioned (w/w-%)	Confidential
Temperature recommendations	The catalyst is active in the range of a normal diesel engine between 100-500°C.
Thermal durability	Up to 900°C (peaks only)
Light off HC	150-190°C depending on exhaust gas composition

The performance of the EmiFighter, like other oxidation catalysts, is highly dependent on the temperature of the exhaust gas. For the reduction of each of the exhaust gas components CO, HC and NO₂ certain temperature windows are optimal. Whereas the oxidation rate of HC and CO improves with temperatures, the NO₂ reduction will decrease. A typical conversion profile is shown to the right.



Expected emission reductions

Chemical processes

CO	40-60%	$\text{CO} + \text{O}_2 \rightarrow \text{CO}_2$
HC	70-80%	$\text{HC} + \text{O}_2 \rightarrow \text{H}_2\text{O} + \text{CO}_2$
NO ₂	50-80%	$\text{NO}_2 + \text{HC} + \text{C} \rightarrow \text{NO}_x + \text{N}_2 + \text{CO}_2 + \text{H}_2\text{O}$
PM (mass)	10-45% *)	$\text{PM (SOF)} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
Sulphur resistance	2000ppm	

*) Oxidising SOF (Solid organic fraction). The amount of this oxidation depends on the character of the soot or the composition of exhaust gas coming from the engine.

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