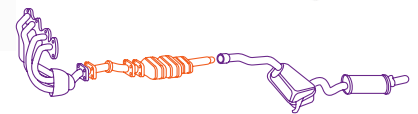
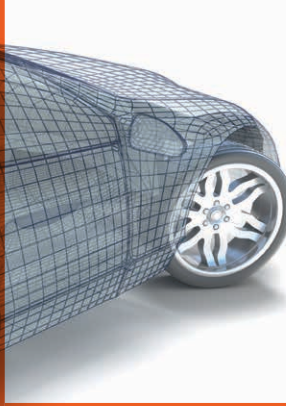


# Selective Catalytic Reduction (SCR)

## SCR - Catalytic Converter

Largely used in the car exhaust market, stainless steel will now also be used for trucks and off-road vehicles. However, with these new applications comes new challenges. For example, to satisfy stringent regulations on NOx emissions, these applications demand complex designs capable of integrating a catalytic converter and particle filter. As a result, new technology has been developed for diesel cars and trucks - the most promising being Selective Catalytic Reduction (SCR). By taking advantage of the reduction feature of ammonia (NH3) on NOx, SCR helps reduce the vehicle's NOx emission levels.



### Our offer

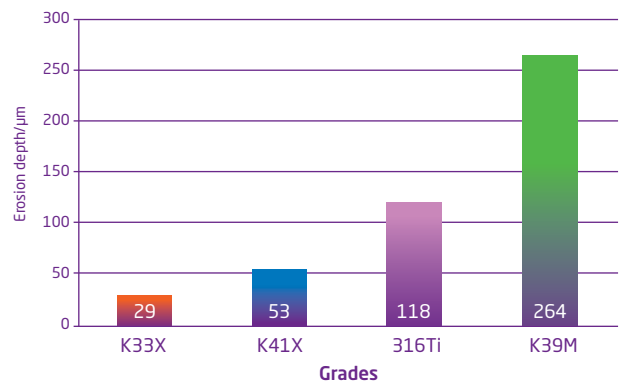
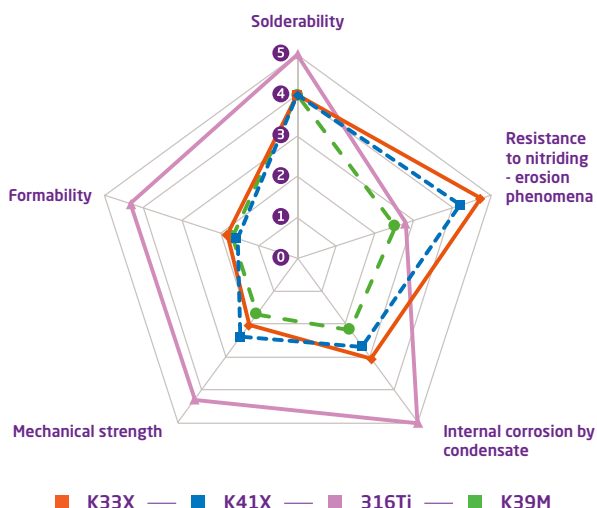
		Standards			
Commercial designations		ASTM	UNS	EN	
<b>Ferritic stainless steels</b> 	K33X	—	—	1.4513	
	K41X	44L	S43932/S43940	1.4509	
	K39M	430Ti	S43036	1.4510	
<b>Austenitic stainless steel</b>	316T	316Ti	S31635	1.4571	

### Thicknesses

Aperam Stainless Europe

from 0.40 to 4 mm

### Technical information



Maximum erosion depth observed on material after 180 h of tests under a thermal cycle of 200–550 °C and simultaneously exposed to the injection of 100 g/h of AdBlue.

## Which grade is best for which usage?

The main material properties of SCR-Catalytic Converter applications are:

- Corrosion resistance
- Mechanical strength
- Formability
- Welding
- Nitriding erosion (only for SCR)

Our K33X is more resistant to the nitriding erosion phenomenon that occurs in the mixing area of the SCR system (during the urea decomposition that follows the injection of AdBlue) than austenitic material. Furthermore, it is available at a cost-effective price. Nitriding erosion causes the buildup of a brittle layer that is susceptible to cracking during high-pressure injection. As K33X presents better mechanical resistance, this nitriding erosion phenomenon is substantially reduced.

### Contact

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