



## HeraPur® Oxidation Catalysts

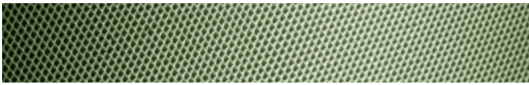
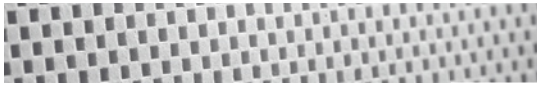
High efficiency for a cleaner tomorrow

Today, one of the biggest challenges facing Heraeus are the steadily tightening global emission limits regarding the treatment of diesel and lean burn exhaust gas which differ depending on the country.

Heraeus steps up to the plate with its HeraPur® portfolio which provides customised coating solutions for oxidation catalysts (DOC) and you can rely on the high quality of our products which meet the highest standards in activity and long-term stability.

HeraPur® coatings have been used on ceramic and metallic substrates for many years – either as original equipment or as a tailor-made concept for the aftermarket – always with the aim of achieving the most efficient emission reduction possible. Heraeus is especially experienced in handling precious metals and is therefore eminently qualified to design oxidation catalyst coatings which are highly resistant to ageing and maintain low working temperatures at cost-efficient low precious metal loadings.

## Heraeus catalyst portfolio – diesel

Diesel engine	Diesel oxidation catalyst (DOC)	Diesel particle filter (DPF)
		
<b>Substrates</b>	metallic/ceramic honeycombs	full & partial DPF substrates
<b>Abatement*</b>	HC, CO, SOF	PM, SOF
<b>Coating</b>	precious metal coating	precious metal or base metal coating (optional)
<b>Strategy**</b>	DOC performance options: retrofit, CRT type, HC injection	DPF regeneration strategies: CRT type, HC injection, fuel burner-system

\* **HC**: hydrocarbons, **CO**: carbon monoxide, **SOF**: soluble organic fraction, **PM**: particulate matter, **NOx**: nitrogen oxides

\*\* **CRT**: continuously regenerating trap, **HCI**: hydrocarbon injection, **ASC**: ammonia slip catalyst

### Catalyst portfolio

Heraeus offers different catalyst solutions, each tailor-made for different fields and applications:

- HeraPur® catalysts work efficiently at low light-off temperatures, for example, in the automotive aftermarket;
- HeraPur® CRT-type catalysts show a superior performance generating NO<sub>2</sub> with a high ageing stability. This reaction may be used, for example, for regeneration of particle filters or for a DeNO<sub>x</sub> system based on fast SCR;
- HeraPur® HCI catalysts, which are used to increase the exhaust gas temperature in front of a filter by catalytic combustion, are suited to withstand high temperatures without losing their ability to perform. Depending on the design of the coating, the oxidation of nitrogen oxides can be increased or suppressed to a great extent.

Heraeus offers HeraPur® oxidation catalysts with varying precious metal loadings. In all fields of application, further costs can be saved if the platinum, which is generally more expensive, is partly substituted by the economical and equally efficient palladium.

### Available geometries and dimensions

Thanks to our reliable and flexible production process, we are able to coat a large variety of catalyst types of all geometries and sizes. We coat large volumes of small to large sized honeycomb substrates fully automatically, whereas our semi-automated coating equipment allows flexible small volume production and fast sampling. All processes are characterised by precise PGM handling.

DOC	Type	Size	PGM	PGM loading	Qualification
<b>OxiCat series</b>	H1455	0.5–2.5 L	15–30 g/ft <sup>3</sup>	pt-only	ECE R103, passenger car, aftermarket
	H1456	0.5–2.5 L	25–45 g/ft <sup>3</sup>	1:1:0	passenger car, aftermarket
	H1449	1.5–3 L	15–25 g/ft <sup>3</sup>	pt-only	passenger car, aftermarket
	H1428	2–120 L	15–30 g/ft <sup>3</sup>	pt-only	stationary engines
<b>CRT type</b>	H1444	1–2.5 L	40–50 g/ft <sup>3</sup>	pt-only	passenger car, aftermarket EU3/4
	H1444	2.5–12 L	45–100 g/ft <sup>3</sup>	pt-only	LD & HD aftermarket EU3/4
	H1444	20–30 L	40–100 g/ft <sup>3</sup>	pt-only	locomotive
	H14XX	2.5–12 L	40–100 g/ft <sup>3</sup>	4:1:0	LD & HD, aftermarket EU3/4
<b>HCI type</b>	H1451	0.5–12 L	40–70 g/ft <sup>3</sup>	1:1:0	on-road, aftermarket
	H14XX	0.5–12 L	40–70 g/ft <sup>3</sup>	2:1:0	on-road aftermarket, off-road-OE
	H14XX		180–280 g/ft <sup>3</sup>	pd-only	off-road OE

### Heraeus Deutschland GmbH & Co. KG

Heraeus Chemicals  
 Heraeusstraße 12-14  
 63450 Hanau, Germany  
 Phone 049 6181 35-4854  
 chemicals@heraeus.com