



HeraPur® Catalysts for Motorcycles

High efficiency for a cleaner tomorrow

Motorcycle catalysts – Innovation

Catalytic technology has continuously improved since its invention by French engineer Eugene Houdry about 60 years ago. Today Heraeus plays a leading role in both economic and ecological innovations of catalytic converters.

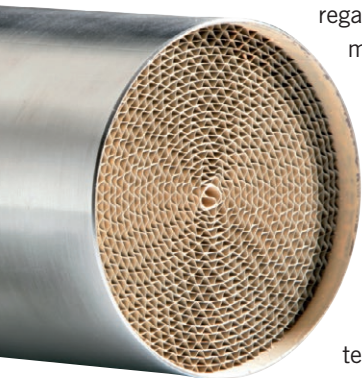
Heraeus develops latest washcoat formulations and cutting-edge catalyst coatings at its headquarters in Hanau, Germany, where the R&D operations are seated. Heraeus works closely with its partners to meet the requirements of their clients' applications and to satisfy the demands of our customers. Profound knowledge in

design and technical expertise enables our R&D department to achieve not only the best results, but also an outstanding performance of their catalysts. Our catalysts offer significant emission reductions, which often already undercut the future air quality limit values.

The goal of our research and the guideline for all our innovations is maximum pollution control. As a result, we develop catalysts with customized precious metal loadings in varying degrees of platinum, palladium, and rhodium. It goes without saying that none of these loadings lose their catalytic performance over their lifespan.

Our advanced manufacturing equipment lets us coat standard honeycombs with straight channels as well as those with structured elements – even with double instead of single matrices.

In our ongoing effort to keep track of all trends in regard to catalyst volume and precious metal reduction, we collaborate closely with local certification centers and our customers. We thereby not only ensure the competitiveness of our clients and their success in their markets, but are also prepared to meet future emission regulations. We work closely with universities, which ensures that we are continuously at the forefront of the latest technologies, such as low cost EFI systems for small motorcycles as produced in China.

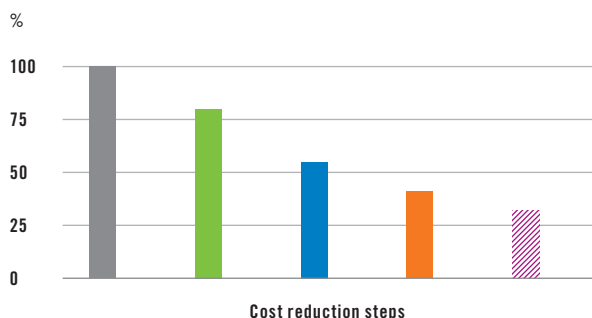


Heraeus introduced motorcycle catalysts at various OEM's continuously by lowering the precious metal costs while maintaining performance.

Motorcycle catalysts – Performance

Motorcycles manufactured in China represent a special case in catalyst formulation. They require broad lambda windows to regulate the fuel-air ratio due to their mechanical carburetors. Heraeus steps up to these challenges by supplying its customers with tailor made catalyst solutions: special coatings, specific lambda windows, low light-off temperature, high durability, and the required emission and noise reductions. Heraeus catalysts have been field-tested for many years and they demonstrate a proven track record for many applications in Europe, Asia and the United States. Our hands-on experience means that there is an ongoing exchange of information between us and our clients to meet their needs.

Continous cost reduction by innovative progress



Test condition ECE R40 cycle [g/km]

Test condition	ECE R40 cycle [g/km]		
	CO	HC	NO
Raw emissions	5.59	0.827	0.258
1000 km	0.78	0.183	0.114
2500 km	0.79	0.153	0.110
3700 km	1.08	0.141	0.114
4800 km	0.99	0.157	0.116

HeraPur® 3-way catalysts represent the perfect synthesis of environmental protection, design, sound, and consistent high performance.

Emission regulation	Inner dimensions [mm]	Precious Metal loading	Precious Metal ratio
	[diameter x length]	[g/ft³]	[Pt/Pd/Rh]
Euro 3	80 x 90	22	1/0/1
Euro 3	39.7 x 70	40	4/20/3
Euro 3	118 x 90	75	4/20/3
Euro 3	70 x 101.6	22	1/0/1
Euro 3	44.8 x 74.5	25	6/11/1
Euro 3	51.5 x 45	40	4/20/3
China 3	40 x 50.8 + 40 x 50.8	40	2/35/3
China 3	40 x 60 + 40 x 90	50	2/35/3
China 3	40 x 90	40	2/35/3

Heraeus Deutschland GmbH & Co. KG

Heraeus Precious Metals
 Heraeusstraße 12-14
 63450 Hanau, Germany
 Phone +49 (0)6181 35-4854
 chemicals@heraeus.com