

SAINT-GOBAIN PERFORMANCE CERAMICS & REFRACTORIES

# CERAMIC ROLLERS

## AUTOMOTIVE HOT STAMPING



## DESIGNED TO PERFORM & OUTLAST

We understand the operation issues associated with hot stamping AISi-coated steels. Our Duraform® Premium roller solution greatly improves operational efficiencies by reducing premature roller failures and maintenance-related downtime.

### BENEFITS



Extended service life



Reduced maintenance cost/time for cleaning/replacement (OEE+)



Reduced waste & cost - Reusable after refurbishment at Saint-Gobain



Customized solutions



SAINT-GOBAIN

# CERAMIC ROLLERS

## AUTOMOTIVE HOT STAMPING

Saint-Gobain's hot stamping rollers are manufactured using a **Silicon Carbide (SiC)** material which offers unique advantages for challenging applications.

### ALSI CONTAMINATION - AFFECTS PROCESS REJECTIONS AND MAINTENANCE COSTS



### BENEFITS OF SiC ROLLERS

#### Easy maintenance

Duraform® Premium unique coating enables easier contamination removal and reduced maintenance time

#### Long product life

SiC performs better than mullite as a result of its high strength (FOS), lower deflection, and longer service life

Property	SiC	Mullite	Fused Silica
Density, $\rho$ / g.cm <sup>-3</sup>	2.75	2.4 - 2.9	1.9 - 2.0
Elastic Modulus, E / GPa	240	70 - 95	30 - 40
Flexural Strength, $\sigma_f$ / MPa	180	45 - 75	30 - 60
Thermal conductivity, k / W (m.K) <sup>-1</sup>	20	1.4 - 6	1 - 2
Linear Coefficient of Thermal Expansion, $\alpha_L$ / 10 <sup>-6</sup> m (m.K) <sup>-1</sup>	4.4	5.5 - 6.3	0.5 - 0.9
Thermal shock resistance / 10 <sup>-3</sup> W m <sup>-1</sup>	3.4	0.1 - 0.9	1 - 6

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For more information:  
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