

Oxide Ceramic Matrix Composites

Since 1922, Saint-Gobain Advanced Ceramic Composites formerly known as Saint-Gobain Quartz or Quartz & Silice has been a solution provider to Aeronautic, Defense and Railway industries. Based in Nemours (France), Courtenay (France) and also in Louisville, KY (US), Saint-Gobain Advanced Ceramic Composites is continuously developing its technology to offer oxide Ceramic Matrix Composites for Industrial applications worldwide.



Oxide Ceramic Matrix Composite (o-CMC) family is a unique range of material, combining the advantages of ceramic material without its fragile behaviour, thanks to the incorporation of ceramic filaments. The potential combinations are endless and allow a huge variety of finished products, matching all the expectations.

Unique features of oxide Ceramic Matrix Composites

High-performances material

- Resistance to thermal shock and Fire-proof solution
- Resistance to corrosion
- High thermo-mechanical stability
- Lower density vs. dense ceramics
- High tolerance to damages
- Thermal & electrical insulation properties
- Excellent dielectric properties
- Functionalized surface

Handling and manipulation

- Flexible
- Possible to repair
- Possible to drill and screw
- Complex shapes
- Machinable

Additional benefits

High value solution for greater Total Cost of Ownership

- Enhanced durability vs. existing solutions
- Lighter products at equivalent/increased performances

Sovereignty

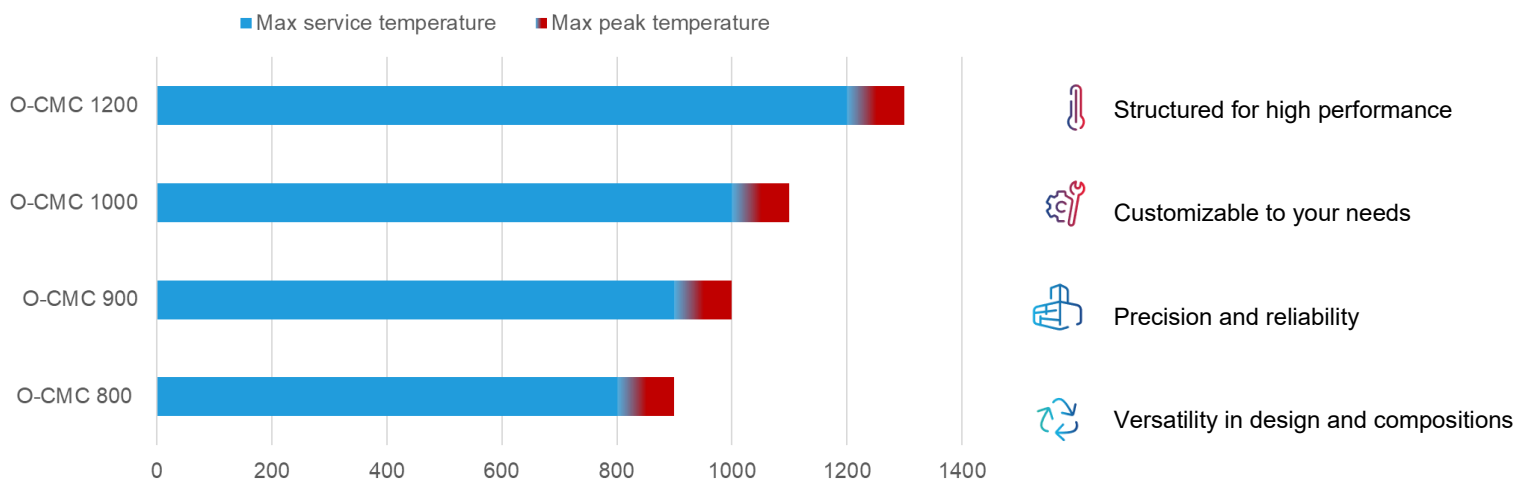
- European supply

Tailor-made solutions

- High versatility in shapes, surface preparations and functionalizations
- Joint-development

O-CMC PRODUCT PORTFOLIO

The following table gives details of the product portfolio of oxide Ceramic Matrix Composites:



Please contact our team with your specific needs and we will gladly assess the ideal solution with you.

TYPICAL USE CASES Industrial Markets

| Segments | Products | Corrosion resistance | Temperature resistance >1000°C | Thermal shock resistance | Thermal gradient resistance | Non-fragile behaviour | Light weight | Thermal insulation |
|--------------------|------------------|----------------------|-----------------------------------|--------------------------|-----------------------------|-----------------------|--------------|--------------------|
| Powder Calcination | Saggars | ✓✓ | ✓ | ✓✓ | | ✓ | ✓✓ | |
| Thermal Treatment | Kiln Furniture | ✓ | ✓✓ | ✓✓ | | ✓ | ✓✓ | |
| Aluminum Casting | Protecting Liner | ✓✓ | | ✓ | ✓✓ | ✓ | | ✓✓ |
| Glass Furnaces | Insulating liner | ✓ | | ✓ | ✓✓ | ✓✓ | | ✓✓ |

Dual-use disclaimer: Continuous Matrix Composites are all classified as a dual-use commodity by the European and US authorities. Therefore, an export license is required to export these goods to some countries. Our team will support you in this process.

The information given in this data sheet is believed to be accurate and reliable. However it is the users responsibility to determine whether the material is suitable for their particular application, process and/or environment. This data sheet may be modified without prior notice.

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<https://www.advanced-ceramic-composites.saint-gobain.com/>

SAINT-GOBAIN QUARTZ S.A.S.

77140, 10 Rue des Etangs
Saint-Pierre-Les-Nemours, FRANCE
Tel : +33 (0)1 64 45 45 00
E-Mail : quartzsalesfr@saint-gobain.com
SIRET : 562 053 314 00075

SAINT-GOBAIN QUARTZ U.S.A.

7201 Distribution Drive
40258 Louisville, Kentucky, USA
Tel : +1 502-933-1005
E-Mail : quartz.sales.usa@saint-gobain.com