

The background of the page features a close-up, grayscale photograph of industrial ceramic components. On the left side, there are several large, cylindrical ceramic parts with circular openings. Below them, a circular flange with four screws is visible. A large, solid red diagonal shape cuts across the bottom right of the image, serving as a design element for the text.

CERAMIC PRODUCTS FOR FOUNDRY INDUSTRY

High-performance ceramics

TECHNICAL CERAMICS FOR FOUNDRY INDUSTRY

Foundries are facing major challenges today. Challenging manufacturing processes, short delivery times, cost-efficiency and a strong focus on quality awareness are essential to successfully keeping pace in a globally competitive environment. Kyocera is your reliable and expert partner. We are well-known for decades of experience, high degree of flexibility in implementing our customers' requirements, and of course for outstanding quality "Made in Germany and Japan".

With its StarCeram® AT and StarCeram® N products, Kyocera offers two high-performance materials that were specifically developed for applications with non-ferrous metal melts. The unique combination of thermal and physical properties ensures superior service life and continuous cost-effective and efficient process control.



ONE SINGLE SOURCE - FROM POWDER PREPARATION TO THE FINISHED PRODUCT

KYOCERA PRODUCT PORTFOLIO

- ▶ Riser tubes for low-pressure die casting
- ▶ Thermocouple protection tubes for temperature control
- ▶ Fill tubes and dosing tubes for pneumatic conveying furnaces
- ▶ Tubes for pumping systems
- ▶ Sprue bushings, nozzles and slide valves for flow control
- ▶ Heater protection tubes for heating and keeping the melt warm
- ▶ Crucibles, ladles and stopper rods for dosing and filling operations
- ▶ Customized components

VERSATILE FIELDS OF APPLICATIONS

- ▶ Conveying and dosing
- ▶ Heating and keep warm
- ▶ Flow control
- ▶ Temperature control
- ▶ Melt refining



Contact us now!

KYOCERA Fineceramics Europe GmbH
Plant Selb

Lorenz-Hutschenreuther-Strasse 81
95100 Selb / Germany
Tel: +49 9287 807-0
E-mail: sales@kyocera-fineceramics.de



THERMOCOUPLE PROTECTION TUBES STARCERAM® N

FEATURES

- ▶ Excellent thermal shock behaviour
- ▶ Extraordinary high mechanical strength
- ▶ High corrosion and wear resistance
- ▶ Extremely low wettability with non-ferrous metal melts
- ▶ High lifetime
- ▶ Quick and easy installation with special metal connections

RISER TUBES MADE FROM STARCERAM® AT AND STARCERAM® N

FEATURES

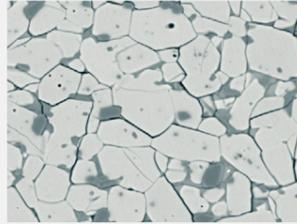
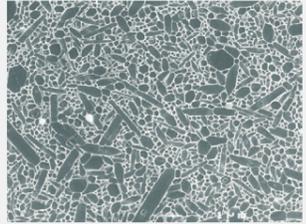
- ▶ Very low wettability by aluminum and non-ferrous metal melts
- ▶ Excellent thermal shock resistance
- ▶ High corrosion and wear resistance

Kyocera manufactures riser tubes for conveying light-metal melts for low-pressure die casting.

Kyocera riser tubes are available in the following standard sizes*:

Type	Diameter [mm]	Max. length [mm]
HC TSR 16	16/8	800
HC TSR 22	22/12	1,000
HC TSR 28	28/16	1,200
HC TSR 32	32/20	1,500



Properties	Unit	StarCeram® AT Aluminum titanate	StarCeram® N7000 Silicon nitride
Density	g/cm ³	3.32	3.22
Fracture toughness	MPa	25	800
Weibull modulus	-	60	>15
Hardness (DPH)	GPa		15
Young's modulus	GPa	10	290
Thermal conductivity	W/mK	1.4	20
Thermal expansion coefficient (RT -1,000 °C)	10 ⁻⁶ /K	1	3.4
Thermal shock coefficient (R1)	K	2,000	620
Max. working temperature	°C	1,300	1,000
Microstructure			

The above indicated properties are typical values, determined by use of standardized test specimens.
The values do not necessarily apply to other shapes.



*Please request for other sizes and suitable metal connections.

ABOUT KYOCERA



The global Kyocera corporation - a strong partner.

- ▶ **Headquarters:** Kyoto, Japan
- ▶ **Foundation:** 1959
- ▶ **Employees:** over 80,000 worldwide
- ▶ **European headquarters:** Esslingen, Germany
- ▶ **European production sites:** Mannheim, Germany
Selb, Germany
(further subsidiaries in Europe)

KYOCERA = KYOTO CERAMICS

KYOCERA – it all began with ceramics

KYOCERA Fin ceramics Europe GmbH is a subsidiary of KYOCERA Europe GmbH, which has been successful in Europe for over 50 years. The Kyocera Group is one of the world's leading providers of high-performance ceramic components for the technology industry, offering over 200 different ceramic materials, as well as state-of-the-art technologies and services tailored to the specific needs of each market.

KYOCERA Fin ceramics Europe GmbH has grown steadily in recent years – and is now a leading European supplier of customised solutions made of technical ceramics. Working in partnership, we develop and manufacture products that offer our customers added value in their respective markets and secure their technological lead in the long term. We are committed to this every day.

Throughout Europe, we are represented by two production and development sites in Mannheim and Selb, as well as six sales offices –

in Mannheim, Selb, Esslingen, Neuss, Rungis (France) and Frimley (United Kingdom).

Our hearts beat completely for ceramics. Our team provides comprehensive advice on the selection of ceramic materials, product design and project execution – from the development stage to prototyping. We supply system components for high-tech applications in numerous industries. Our products are characterised by high quality, precision and durability.

Our business partners benefit from the fact that we think and work across divisions within the Kyocera Group. Because innovations and real milestones can only be achieved together – across industries and national borders.

This is what we believe.

About the KYOCERA Group

KYOCERA Europe GmbH is a company of the KYOCERA Corporation headquartered in Kyoto/ Japan, a world leader in semiconductor, industrial and automotive components as well as electronic components, printing and multifunction systems, and communications technology. The technology group is one of the world's most experienced manufacturers of smart energy systems, with more than 45 years of industry expertise. The Kyocera Group comprises of around 300 subsidiaries.

Kyocera aims to create a better future for the world, using the power of technology to solve issues we face as a global society. This ambition is rooted in our Kyocera Management Rationale: to contribute to the advancement of society and humankind.

We will continue to work together with people around the world to solve issues critical to society leveraging all of the technologies and management capabilities we have accumulated during our 60-plus year history.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation established by Kyocera founder Dr Kazuo Inamori to individuals worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind.

Contact us now!

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Plant Selb

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E-mail: sales@kyocera-fin ceramics.de





KYOCERA Fineceramics Europe GmbH

Steinzeugstrasse 92
68229 Mannheim / Germany
Tel: +49 621 40547-300
E-mail: info@kyocera-fineceramics.de
www.kyocera-fineceramics.de/en

Plant Selb

Lorenz-Hutschenreuther-Strasse 81
95100 Selb / Germany
Tel: +49 9287 807-0

Sales office Esslingen

Fritz-Müller-Strasse 27
73730 Esslingen / Germany
Tel: +49 711 93 93 4-0

Sales office Neuss

Hammfelddamm 6
41460 Neuss / Germany
Tel: +49 2131 16 37-0

Sales office Great Britain

Prospect House, Archipelago, Lyon Way
Frimley, Surrey
GU16 7ER / Great Britain
Tel: +44 1276-69 34 50

Sales office France

Parc Icade Orly - Rungis
21 rue de Villeneuve
94150 Rungis / France
Tel: +33 1 41-73 73 30