Silzot®
Ceramics

QUALITY
MADE IN
GERMANY

New Level of Silicon Nitride Powder for Ceramics

alzchem
group

Production Process of Silzot®

Direct reaction between silicon and nitrogen at high temperatures without any use of catalysts and only dry production steps:

$$3\,Si + 2\,N_2 \rightarrow Si_3N_4$$

Silzot® Powder Grades

Silzot® HQ

- High Quality Grade Powder
- Since more than 30 years
- Silzot® HQ finer grade, also available with d98 <3µm

Characteristics	Typical Values
N-content	> 38.7%
O-content	< 0.6%
α-content	> 86%
Al	< 0.07%
Fe	< 0.03%
Ca	< 0.03%
Particle Size	
d98	< 10µm
d90	< 5µm
d50	< 1.9µm

Silzot® Processed Grades

Silzot® HQ <3µm + Sintering Additives + Organic Additives

Silzot® RTP

- Spray dried Silzot® HQ < 3 µm powder with sintering additives and organic binder
- Ready to Press granules with excellent flowability and pressability

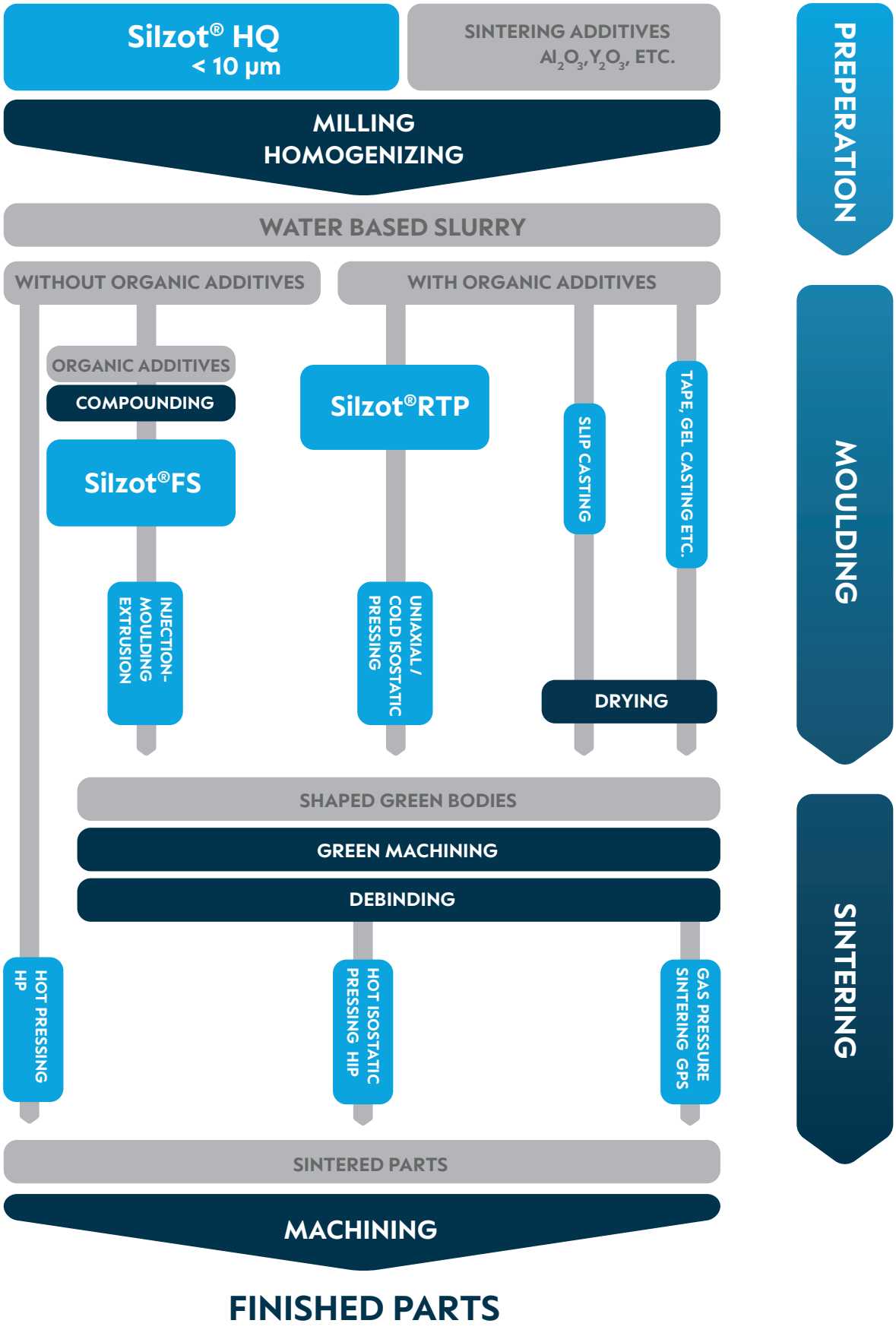
Silzot® FS

- Compounded and pelletized Silzot® HQ <3µm powder with sintering additives and organic binder
- Ready-to-Use Feedstock for injection moulding

Silzot® Enables E-Mobility

High performance silicon nitride ceramics based on Silzot® are essential to meet the increasing demands on materials for e-mobility and renewable electrification: e.g. substrates for power electronics, ball bearings, structural parts, etc.

Silzot® – Usage in the Production of SiN-based Materials



FINISHED PARTS

Your Benefits

- High quality raw materials and unique production technology used
- Only sustainable, ecological friendly and dry production steps; No wet purification steps needed (no acids)
- Very precise and controlled reaction conditions allow a constant high quality with a very tight specification
- Low oxygen content and low metal impurity levels for improved thermal conductivity in ceramics
- European supply chain and made in Germany

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