

RECERAMAX® TW

Properties

RECERAMAX® TW is a microcrystalline sintered ceramic grain type, which was developed by RECKEL in accordance to the Seeded-Gel Technology. The very hard and tough grain has a Spaghetti-shaped profile. It can be used very well for ceramic bonded grinding wheels.



Ceramic Grain	RECERAMAX® TW
Grain Type	microcrystalline sintered ceramic grain
Grain Profile	longitudinal rods
Grain Color	white
Grit Size Range Standards	#16 - #120 (related to diameter analog to FEPA d ₅₀)
Hardness Vickers (kN/mm ²)	20,6 – 24,5
Grain Density (g/cm ³)	3,85 – 3,97
Bulk Density (g/cm ³)	1,68 – 2,1 (due to grit size)

Under high grinding forces, the grain fractures down and creates new sharp cutting edges. This leads to a self-sharpening process. The Spaghetti profiles of the ceramic grains have a low bulk density, this creates an open structure when grinding wheels are produced.

The binder join the Spaghetti rods to a very stable binder/grain matrix. A porous (open) but durable structure accrues, which can withstand also high grinding pressure. The open structure ensures a very good permeability of the cooling lubricant and leads to a cool grinding.

In spite of high grinding forces and high metal removal rates, a material-friendly grinding is possible. The sharp RECERAMAX® TW grain and the open structure of the grinding wheel prevents the undesired workpiece burn marks. The maximum loading temperature within the hardening process of bonded abrasives is 1300°C.

Availability

RECERAMAX® TW ceramic grain is offered in accordance to the market grit sizes. The grit size specification refers to the diameter of the TB ceramic grain Spaghetti rods.

RECERAMAX® TW	16	20	22	24	36	46	60	80	100	120
∅ analog d ₅₀ FEPA-F	x	x	x	x	x	x	x	x	x	x
Aspect Ratio	2:1 - 5:1	2:1 - 5:1	2:1 - 5:1	2:1 - 5:1	2:1 - 5:1	3:1 - 8:1	5:1 - 10:1	3:1 - 7:1	5:1 - 8:1	5:1 - 8:1

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Packaging

RECKEL RECERAMAX® ceramic grains come in paper bags of 25 kg. Special sizes are available on request.

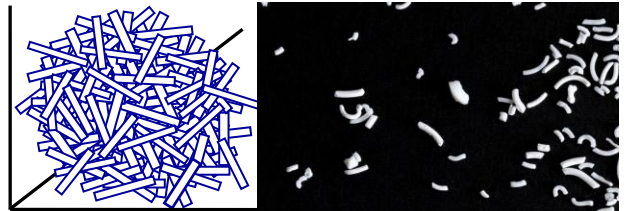
Storage

RECKEL RECERAMAX® ceramic grains should be protected from frost, heat and other extreme circumstances.

Chemical Properties

Constantly chemical and physical tests during the whole production process of all RECERAMAX® grain types ensures its sustainable quality. All test processes are part of an internationally approved quality control.

chemical element	wt %
Al ₂ O ₃	94 – 96
La ₂ O ₃	1,9 – 2,3
Others	1,7 – 4,1



Applications

RECERAMAX® products offer our customers ceramic grain types with high efficiency. Thus a wide range of applications in different fields are approachable. Constantly opening up new market fields in close collaboration with our experts.

Tools

Bonded Abrasives

- open structured grinding wheels

Coated Abrasives

- creep feed grinding
- profile grinding
- high stock removal grinding
- power grinding

Mode of Action RECERAMAX® TW

- Creates an open porous structure in the wheel
- very good bonding behavior
- very good coolant penetration
- Multiple stock removal per time Q'_w accessible
- lower cutting forces
- self sharpening effect during grinding

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