

# RECERAMAX® RT

## Properties

RECERAMAX® RT is a microcrystalline ceramic grain with a triangular shape. It is ideal for Coated Abrasives, Bonded Abrasives, Cut-Off wheels and Roughing wheels. Tools with RECERAMAX® RT abrasive grain are preferably used for high-pressure grinding of high-strength stainless steels, Ni-, Co-, Cr-, Ti-based alloys and even for the processing of putty, composites and paints. Due to the very good cutting



| Ceramic Grain                          | RECERAMAX® RT   |
|--|---|
| Grain Type                             | microcrystalline sintered ceramic grain with micro clusters |
| Grain Profile                          | triangle shaped profile                                     |
| Grain Color                            | blue  |
| Grit Size Range Standards              | #36 - #400<br>RT+ (Reckel Standard)                         |
| Hardness Vickers (kN/mm <sup>2</sup> ) | 19,8 – 20,5   |
| Grain Density (g/cm <sup>3</sup> )     | 3,85 – 3,97   |
| Bulk Density (g/cm <sup>3</sup> )      | 1,66 – 1,89 (due to grit size)                              |

properties of the sharp cutting edges, the sharpness of the abrasive grain also shows excellent grinding behavior with very long tool life when used for fine finishing in the grit sizes range RT+80 to RT+400.

In a new grain crushing process developed by RECKEL, the abrasive grain gets a polyhedral shape, similar to a triangular profile. This makes the grain very resistant against breakage when used with high grinding forces. Furthermore, the grain was modified in a refining production process in such a way that microcrystalline clusters are formed in the line-shaped structure. This structure causes that a dull grain creates new cutting edges when it fractures down. Thus a self-sharpening effect is resulting in a very long tool lives with high stock removal rates. When coating the RT grain in an electrostatic field on Coated Abrasives, it must be taken into account, that the RT grain has a higher mass compared to other grain types and correspondingly higher electrical voltages must be used, e.g. for RT+36 approx. 40 to 60 KV to achieve an optimum grain coating\*. The maximum loading temperature within the hardening process of bonded abrasives is 1430°C.

## Availability

RECERAMAX® RT ceramic grain is offered in accordance with the market grit sizes of geometrically shaped abrasive grains, available in the grit range of RT+36 to RT+400.

| RECERAMAX® RT     | 36  | 40  | 50  | 60  | 80  | 100 | 120 | 150 | 180 | 220 | 240 | 320 | 400 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RT+               | x   | x   | x   | x   | x   | x   | x   | x   | x   | x   | x   | x   | x   |
| dk 50% Wert<br>µm | 850 | 550 | 450 | 350 | 300 | 250 | 200 | 150 | 120 | 110 | 90  | 75  | 63  |

\*Attention: this may vary due to grain humidity, relative humidity and the amplitude shape of the frequency.

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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 ensure its sustainable quality. All test processes are part of an internationally approved quality control.

| chemical element               | wt %      |
|--------------------------------|-----------|
| Al <sub>2</sub> O <sub>3</sub> | 94 – 96   |
| La <sub>2</sub> O <sub>3</sub> | 1,9 – 2,3 |
| MgO                            | 1 – 1,4   |

| chemical element              | wt %         |
|-------------------------------|--------------|
| Y <sub>2</sub> O <sub>3</sub> | 1 – 1,5      |
| TiO <sub>2</sub>              | 0,9          |
| CoO                           | 0,01 – 0,024 |

## 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

- grinding wheels and rollers
- rapid-cut wheels
- grinding segments
- Cut-Off and roughing wheels

### Coated Abrasives

- grinding belts and sleeves
- flap-, fiber- and velcro discs
- nonwoven abrasives

## Applications

- ID and OD gear
- Crank- and Camshafts
- Bearings
- hardened precision parts
- medical parts and implants
- tubes, rods, spindles, rollers
- metal surface stock removal and finishing
- cutting and roughing
- automotive body (OEM and repair)

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