



CA-Z Abrasive Grains

Ceramic grain with market-leading hardness
for maximum performance on hard materials

Tyrolit CA-Z Abrasive Grains

CA-Z is a seeded abrasive grain with a very fine crystal structure composed of submicron crystalline alpha alumina, magnesium alumina spinel and tetragonal zirconia. The additives stabilize the crystalline alpha alumina structure and improve the thermal heat resistance compared to regular seeded ceramic grains. The CA-Z ceramic grain enables exceptional results when grinding hardened steels.

Physical properties

| Colour | Hardness | Specific density | Type |
|---|----------|--------------------------|----------------|
| White (translucent) to off-white (opaque) | 23 GPa | > 3.88 g/cm ³ | Seeded sol-gel |

Chemical composition

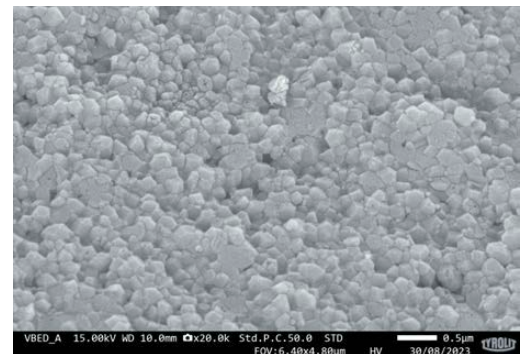
| | Al ₂ O ₃ | ZrO ₂ | MgO | Fe ₂ O ₃ | Traces |
|------|--------------------------------|------------------|-------|--------------------------------|---|
| In % | > 94.0 | < 5.0 | < 2.0 | < 0.05 | SiO ₂ , TiO ₂ , CaO |

Applications:

CA-Z is a highly versatile ceramic grain, enabling highest performance across a wide range of grinding pressures. The carefully controlled composition enables the continuous generation of new, sharp cutting edges. It is widely used to produce high-performing coated abrasives. Typical applications in bonded abrasives include roll grinding, disc grinding and spring end grinding.

Bulk density P-grits (coated abrasives, in g/cm³)

| Grit | Min. – Max. | Grit | Min. – Max. |
|------|-------------|------|-------------|
| P20 | 1.70 – 1.90 | P60 | 1.60 – 1.80 |
| P24 | 1.70 – 1.90 | P80 | 1.55 – 1.75 |
| P30 | 1.70 – 1.90 | P100 | 1.55 – 1.75 |
| P36 | 1.70 – 1.90 | P120 | 1.50 – 1.70 |
| P40 | 1.60 – 1.80 | P150 | 1.50 – 1.70 |
| P50 | 1.60 – 1.80 | P180 | 1.50 – 1.70 |



CA-Z has a very fine crystal structure

Bulk density F-grits (bonded abrasives, in g/cm³)

| Grit | Min. – Max. | Grit | Min. – Max. |
|------|-------------|------|-------------|
| F16 | 1.75 – 1.95 | F54 | 1.70 – 1.90 |
| F20 | 1.75 – 1.95 | F60 | 1.65 – 1.85 |
| F24 | 1.75 – 1.95 | F70 | 1.65 – 1.85 |
| F30 | 1.75 – 1.95 | F80 | 1.65 – 1.85 |
| F36 | 1.70 – 1.90 | F90 | 1.65 – 1.85 |
| F40 | 1.70 – 1.90 | F100 | 1.65 – 1.85 |
| F46 | 1.70 – 1.90 | F120 | 1.65 – 1.85 |



White seeded ceramic grains