

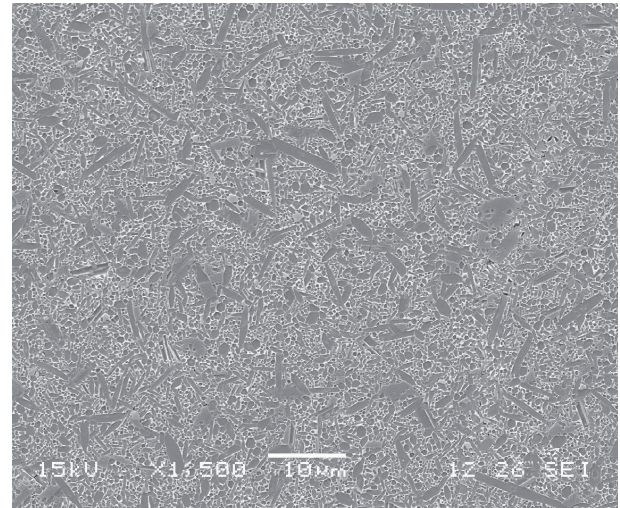
# Standard grade data sheet

## Grade CTN3105

ISO Code  
 US Industry Code  
 Version 08.1

### Chemical composition

| Element                        | Weight % |
|--------------------------------|----------|
| Binder                         | 6.0      |
| Si <sub>3</sub> N <sub>4</sub> | balance  |



Typical microstructure (x1500)

### Physical and mechanical properties

| Average grain                            |                                  | ultrafine |
|--|----------------------------------|-----------|
| Density (ISO 3369)                       | g/cm <sup>3</sup>                | 3.24      |
| Hardness (ISO 3878)                      | HV <sub>10</sub>                 | 1625      |
| Hardness (ISO 3878)                      | HV <sub>30</sub>                 | 1605      |
| Hardness (ISO 3738)                      | HRA                              | 92.0      |
| Transverse rupture strength (ISO 3327)   | MPa                              | 1100      |
| Compressive strength                     | MPa                              | 3000      |
| Young's modulus                          | GPa                              | 300       |
| Fracture toughness (SEVNB)               | MPa.m <sup>1/2</sup>             | 6.5       |
| Thermal conductivity                     | Wm <sup>-1</sup> K <sup>-1</sup> | 25        |
| Thermal expansion coefficient (20-400°C) | 10 <sup>-6</sup> K <sup>-1</sup> | 3.3       |

The information is conveyed as an example only and does not constitute neither a specification nor a representation.