H.C. CARBON GmbH

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PRODUCT-INFORMATION

1. Product Name

MECHANO-COND® 6P1

2. Product description

MECHANO-COND® 6P1 is a partly delaminated, hexagonal boron nitride (HBN). Hexagonal boron nitride is also known as white graphite. A special feature of HBN is the excellent thermal conductivity and the missing electrical conductivity as well as the high temperature and oxidation resistance. MECHANO-COND® 6P1 can be used in all fields where the typical features of graphite are not desired (such as avoidance of electrical conductivity) or where they are insufficient (e.g. oxidation resistance). Because of the special grinding method MECHANO-COND® 6P1 has an outstanding platelet structure and a high aspect ratio. Therefore MECHANO-COND® 6P1 shows an improved thermal conductivity as well as an excellent lubricating effect. Due to its particle structure and distribution the percolation limit is achieved considerably earlier saving costs in this way.

3. Applications

- Reduction of friction coefficient (outstanding lubricating and separating effects)
- Improvement of thermal conductivity
- Synergistic effects with other lubricants like graphite, molybdenum disulfide, tungsten disulfide and PTFE
- Coatings and lacquers
- Production of suspensions
- Mechanical reinforcing of thermoplastics, resins and elastomeres
- High temperature resistance even in oxidizing environment
- Electrical isolation
- Chemical inert
- Non toxic

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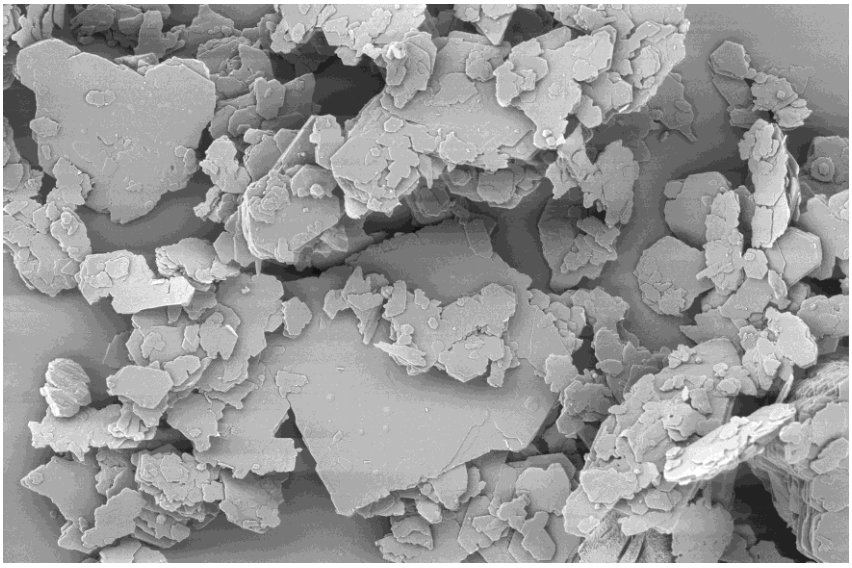
4. Properties

Property	Specification	Unit
Boron nitride	>98.0	Weight-%
Crystal structure	hexagonal	-
Color	white	-
Thermal conductivity	120	W/mK ⊥
Electrical resistance	$>10^{12}$	Ωcm
Melting point	2700-3000	°C
Specific weight	2.25	g/cm²
Bulk density	370	g/l
Moisture	max. 0.5	Weight %
Particle size D_{50}	18	µm

5. Typical particle shape



SEM picture shows a typical particle shape which is valid for all our special carbons.
The picture above was taken from a larger particle size D_{50} 10µm.