ABSCO MATERIALS

Spray Dried Bodies

ALUMINIUMTITANATE (Al_2TiO_5 RS)

Bodies ready to press:

Typical chemical analysis	
Al_2O_3	59 ± 2,5 %
TiO_2	37 ± 2,5 %
SiO_2	3,7 ± 1,5 %
Rest	other
Phase composition	
Al_2TiO_5	Aluminiumtitanate
Al_6SiO_{13}	Mullite
Al_2O_3	Alumina

Typical physical properties	
Filled density:	1,05 g/cm³
Tapped density:	1,15 g/cm³
Pressed density:	(100 MPa) 2,13 g/cm³
Sintered density	(1600°C/1h) 3,53 g/cm³
Shrinkage:	(100 MPa) ~ 14,2 %
Mean particle size:	$D_{50} \leq 1$ µm
Fraction and mean granulate size:	0 - 150 µm D_{50} = 90 µm

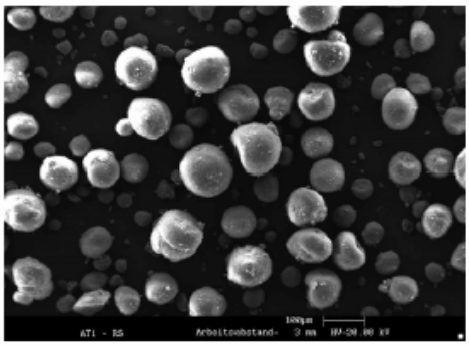
Fire process:

Sintering process is about 1600°C in an electrical or gas heated kiln.

Heat up to 500°C with about 0,5 – 2 K/min. Maintenance at 500°C for about 2 – 3 h for removal of organic bonding agent. After debindering heat up with about 1 – 3 K/min to the sintering-temperature of 1600°C. After reaching 1600°C holding the temperature for about 1 – 2 h. Cooling down to room temperature with about 1 – 3 K/min.

Additional technical support to the sintering-programme can be given on request.

Granulated Al_2TiO_5:



Remarks:

The bodies can be uniaxially or isostatically pressed and green machined after the forming process.

The aluminiumtitanate (ATi RS) can be ordered as a powder or as a ready to press spray dried granulate.

Delivery/Packing & Storage:

Our standard packaging is usually 25kg or 50kg paper sacks, or lined cardboard boxes on europalett in shrink plastic. For amounts above 100kg or 200kg delivery in lined drums on request. For 500kg and 1000kg delivery in big bags on request.

ATTENTION: Storage of powder or granulated powder must be cool and dry. Storage in the sun and temperatures below 3°C (freezing) must be strictly avoided! Otherwise properties could be changed irreversibly.

The above mentioned values should be taken only as indications and not as guaranteed properties!

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A partnership between ABSCO Ltd and Hertford Resources Ltd