



Syalon 21R Polytype Powders

21R Polytype is a silicon aluminium oxynitride structural modification of aluminium nitride (AlN), having the formulation (SiAl₆O₂N₆). It is a refractory material which is predominately used in sialon formulations. It is used to increase the aluminium and nitrogen content of sialon formulations but has the advantage over AlN in that it is not readily hydrolysed by water. This allows sialon formulations containing 21R Polytype to be processed by aqueous slip casting or spray drying, for example.

The tables below show the typical composition and particle size for 21R Polytype, which is available in two grades, standard 21R and fine 21RF:

| 21R Polytype | | |
|-------------------------|--------|------|
| Property | Value | Unit |
| 21R Polytype | > 90 | % |
| Aluminium Nitride (AlN) | < 10 | % |
| Iron (Fe) | < 0.10 | % |
| Calcium (CaO) | < 0.02 | % |
| Oxygen (O) | 9.3 | % |
| D ₅₀ | < 5.50 | µm |

| 21RF Polytype | | |
|-------------------------|--------|------|
| Property | Value | Unit |
| 21R Polytype | > 90 | % |
| Aluminium Nitride (AlN) | < 10 | % |
| Iron (Fe) | < 0.10 | % |
| Calcium (CaO) | < 0.02 | % |
| Oxygen (O) | 10.3 | % |
| D ₅₀ | < 2.50 | µm |

Technical Support

Our technical specialists are available to discuss your sialon powder requirements in detail and to assist in exploiting the significant advantages which our powders have to offer.

