# KYANITE-SILLIMANITE SAND

## Technical Data Sheet

**Other Names: Kyanite, Disthene, Sillimanite**
**CAS Number: 1302-76-7**
**Formula: Al2 [SiO4] O**
**Technical conditions of Ukraine TU U 14-10-017-98**
**Harmonized Commodity Code 2808500000**

## Chemical analysis

| / content, %/ | GUARANTEED | TYPICAL |
|---|---|---|
| $Al_2O_3$ | 57 min | 58 |
| $TiO_2$ | 2.5 max | 1.5 |
| $Fe_2O_3$ | 0.8 max | 0.7 |
| CaO | 0.2 max | 0.1 |
| MgO | 0.4 max | 0.2 |
| $Na_2O+K_2O$ | | 0.1 |
| Th+U | | 70 ppm |
| Moisture | 0,5 max | 0.1 |
| $ZrO_2$ | | 0.8 |

## Physical Description and Properties

Appearance: dirty white free running sand
Grain shape: flap type elongated, abnormally angular
Grain color: colorless, pale blue, grey.
Melting Point: 1850 °C
Mullite transformation: 1000 – 1450 °C
Specific Gravity: 3200 - 3500 Kg/m3
Bulk Density: 1860-1920 kg/m3
Grain size: 100 - 225 mkm
Grain size (average): 0.15 mm
Solubility in Water: Insoluble
Repose Angle: 32 °
Hardness: 4 - 6
pH: 6.5 – 7.0

| Minerals | Contents, % |
|---|---|
| Kyanite-Sillimanite: | 93 - 94 |
| Rutile/ilmenite: | 1 - 2 |
| Zircon: | 1 - 1.5 |
| Quartz: | 1 - 3 |

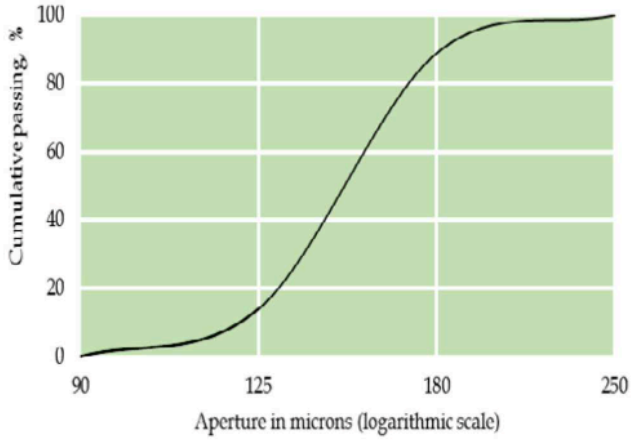
Storage: in closed containers or bags, covered area under the roof, free from moisture.

Terms of storage unlimited.

### PARTICLE DISTRIBUTION

Kyanite-sillimanite concentrate is a grainy material of natural size.

Typical particle size distribution:




| Sieve Aperture, microns | Cumulative retained, % |
|---|---|
| -90 | 0.2 |
| -125 | 14 |
| -180 | 89 |
| -250 | 100 |

## End use:

Raw material for steelmaking refractories, glassmaking refractories, ceramics, mullite manufacture, glass additive and foundry uses.

## Shipment:

- bulk in railway cars;
- 40-50 kg bags (paper bag in cloth bag);
- soft containers (big bags) 0.8 – 1.0 MT Net.