

# KYANITE-SILLIMANITE FLOUR

**Other Names:** Kyanite flour, Disthene flour, Sillimanite flour,  
**CAS Number:** 1302-76-7

**Formula:**  $\text{Al}_2 [\text{SiO}_4] \text{O}$

**Technical conditions of Ukraine TU U 14-10-017-98**  
**Harmonized Commodity Code 2508500000**

## Chemical analysis

| / content, % /                               | GUARANTEED | TYPICAL |
|--|------------|---------|
| $\text{Al}_2\text{O}_3$ min                  | 57         | 58      |
| $\text{TiO}_2$ max                           | 2,5        | 1,5     |
| $\text{Fe}_2\text{O}_3$ max                  | 1          | 0,8     |
| CaO max                                      | 0,2        | 0,1     |
| MgO max                                      | 0,4        | 0,2     |
| $\text{Na}_2\text{O}+\text{K}_2\text{O}$ max |            | 0,1     |
| Th+U max                                     |            | 70 ppm  |
| Moisture max                                 | 0,5        | 0,1     |
| $\text{ZrO}_2$ max                           |            | 0,8     |
| Sieve Residue 50 mkm                         | 3          | 2,5     |

## Physical Description and Properties

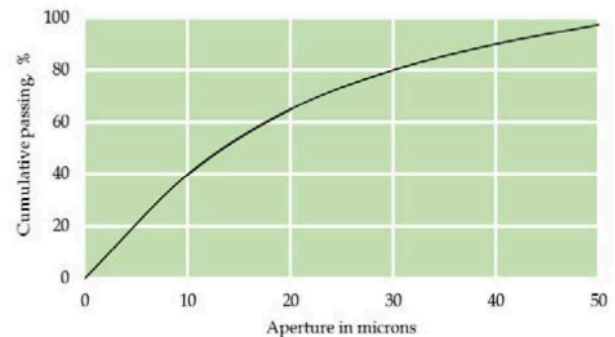
Appearance: dry powder of light-blue color.  
Melting Point: 1850 °C  
Mullite transformation: 1000 – 1450 °C  
Specific Gravity: 3200 - 3500 Kg/m<sup>3</sup>  
Bulk Density: 960 – 1000 kg/m<sup>3</sup>  
Grain size: 0 - 50 mkm  
Solubility in Water: Insoluble  
Repose Angle: 32 °  
Hardness: 4 - 6  
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 flour has round shape.



| Sieve Aperture, (microns) | Cumulative retained, % |
|---------------------------|------------------------|
| -0                        | 0                      |
| -10                       | 40                     |
| -20                       | 65                     |
| -30                       | 80                     |
| -40                       | 90                     |
| -50                       | 97.5                   |

## Note:

The Plant is ready to consider the possibility of upgraded quality concentrate with different demand for granulometric content.

## End use:

Raw material for steelmaking refractories, glassmaking refractories, ceramics coating, mullite manufacture, glass additive and in production of silumine.

## Shipment:

- bulk in railway cars;
- 30 kg bags (paper bag in cloth bag);
- soft containers (big bags) 0,4 MT Net.