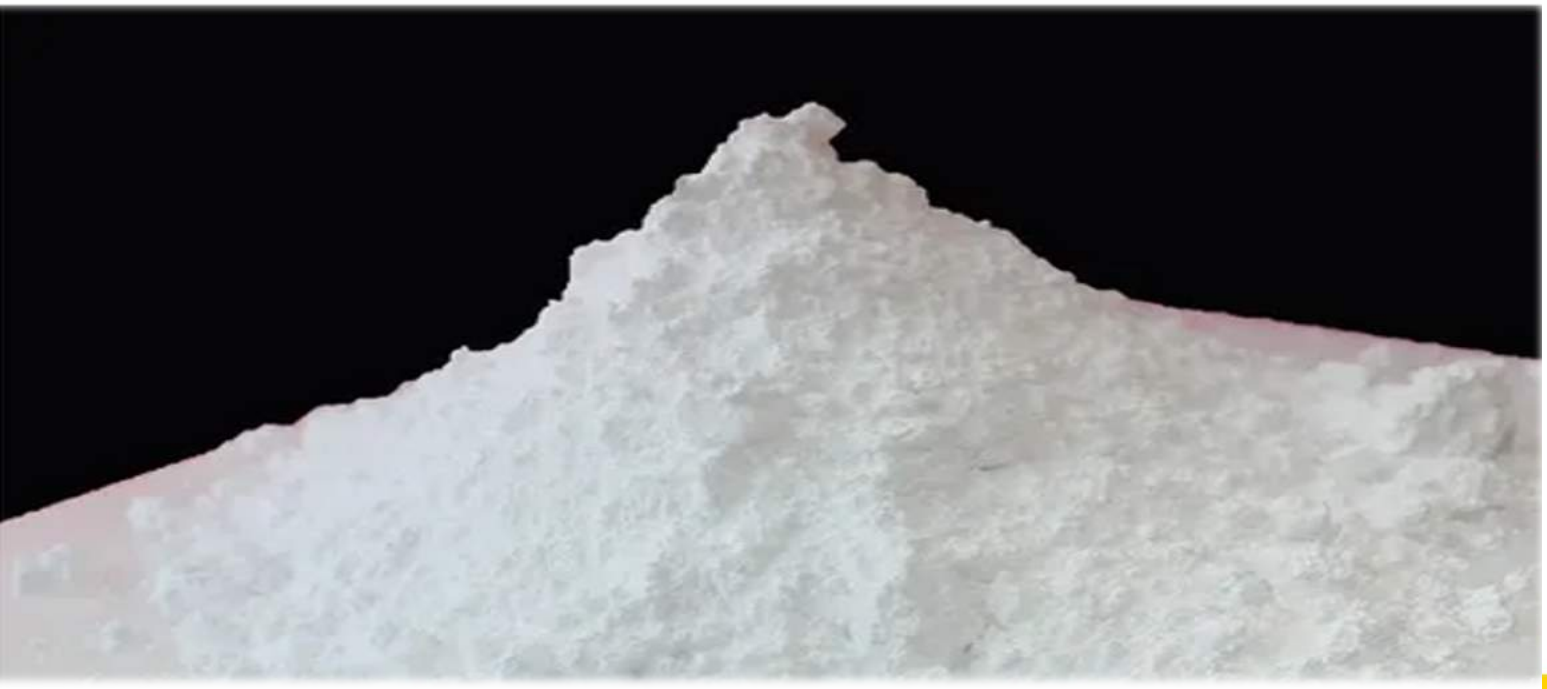
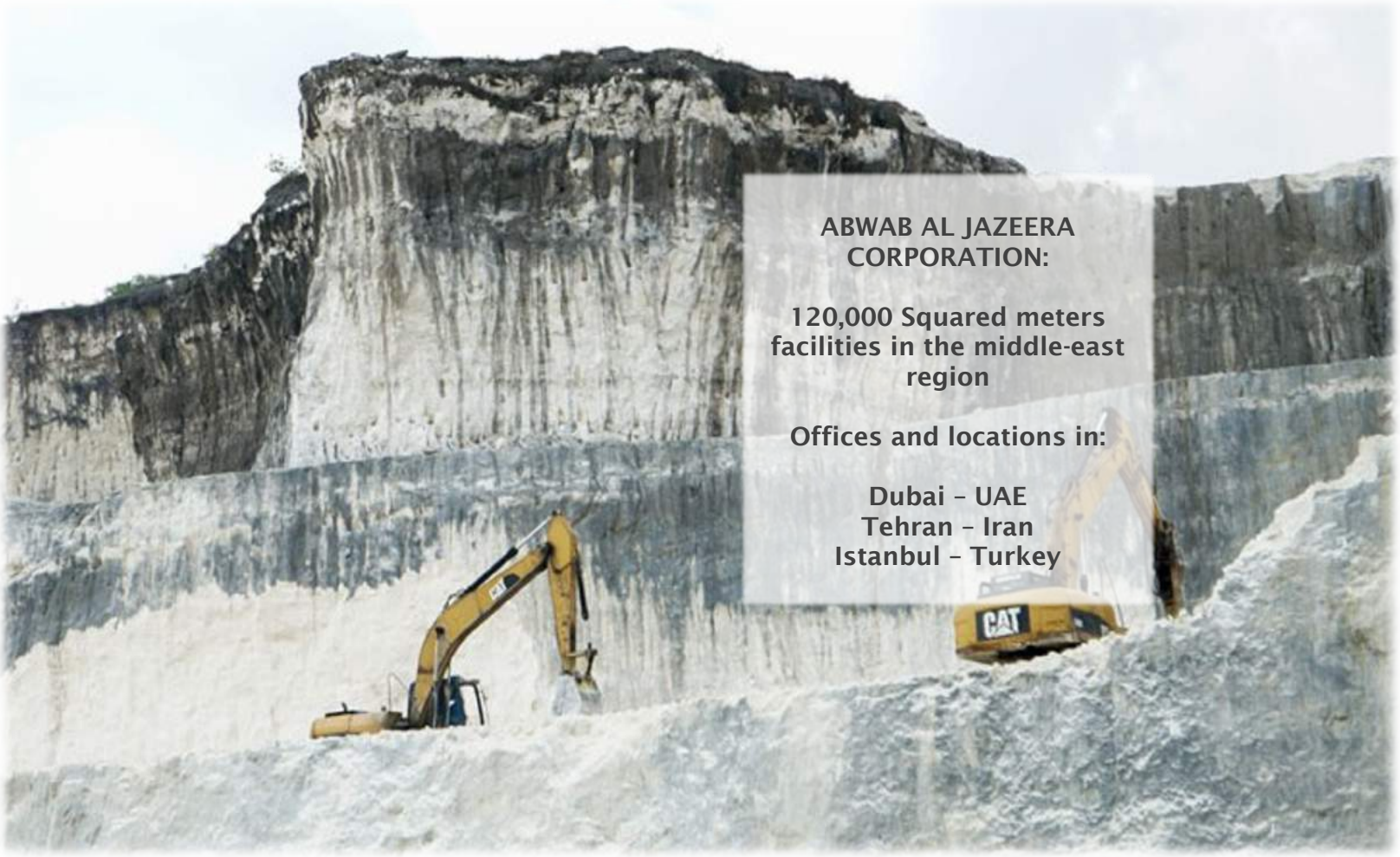


ABWAB AL JAZEERA

Aluminum Silicate and Kaolin Catalog

ABWAB CORPORATION

Trusted experts. Proven reliability. Simply ABWAB.



Abwab Mineral is the mining and processing department of Abwab Al Jazeera corporation in Dubai. Since our establishment in 2010 we expanded our area of work to all over the region and now have offices in Dubai, Istanbul, Tehran along with some modern processing facilities.

Abwab Mineral is focused on some highly demanded processed minerals that are being used in diverse industries such as Medicines, Cosmetics, Electrical wires and cables, Construction, Detergents, Painting and coating, Food and agriculture, Rubber and Plastic, Tiles and Ceramics and so on.

Our offered products can be categorized as the following:

Kaolin (Processed)	**Aluminum Silicate**	**Barit**
Calcium Carbonate	**Talc**	**Silicon Dioxide (Silica)**
Bentonite	**Gypsum**	**Glass beads**

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Aluminum Silicate:

Aluminum silicate is a name commonly applied to chemical compounds which are derived from aluminum oxide, Al_2O_3 and silicon dioxide, SiO_2 which may be **anhydrous** or **hydrated**, naturally occurring as **minerals** or **synthetic**

Kaolin:

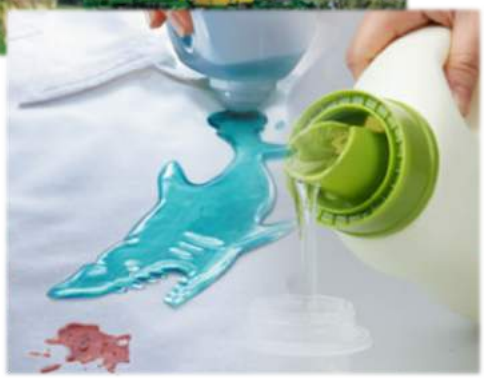
Kaolin is a hydrated aluminum silicate obtained by mining naturally occurring mineral deposits.

Application:

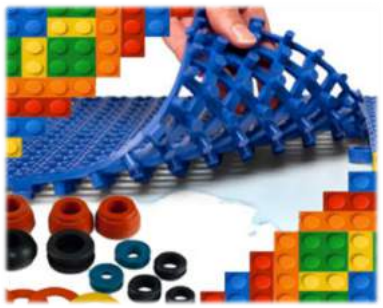
Both Kaolin and Aluminum Silicate are widely used **as a white pigment in paints, printing inks and paper**, where it acts as a partial substitute for titanium dioxide (extender), while it also increases the covering power and brightness of both paint and paper.

There are also other applications of that products in different industries which can be categorized into the following:

- Medicine
- Cosmetics
- Food and Agriculture
- Printing inks and Packaging
- Electrical Wires and Cables (Insulator)
- Ceramics and Tils
- Rubber and Plastic
- Detergents



In this Catalog we are focusing on different Grades of Aluminum Silicate and Kaolin which are supplied by ABWAB CORPORATION along with their applications and technical data.



Kaolin-P108

Specialized engineered Kaolin for Paint industry

Product description:

P108 is a specialized product for paint and coating industry.
While kaolin isn't an absolute replacement for **titanium dioxide**, it is an excellent and economical extender, helping keep manufacturing costs down in a number of architectural paints and coatings.

But the benefits don't stop there. P108 offers increased opacity and tint strength, stain and scrub resistance, improved pigment suspension, sheen control and improved holdout.

As ABWAB Minerals, we offer a wide range of color pigments and special effect pigments with kaolin that are designed to brighten, whiten, strengthen and visually enhance architectural features.

Major applications:

Filler (extender) in architectural and constructional paints and coatings

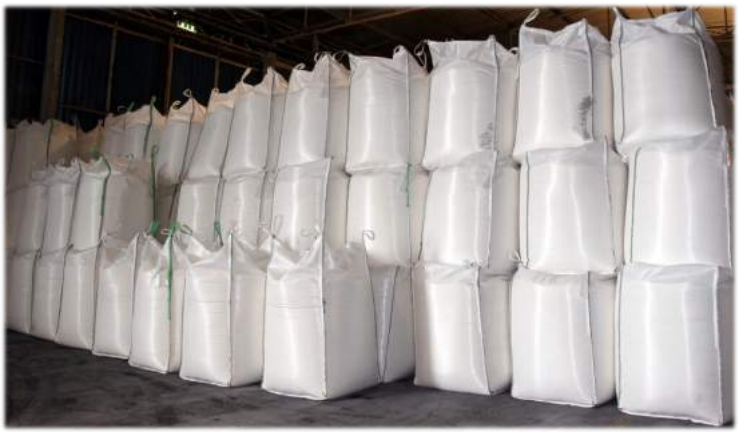
Packing:

25 kg bags – 1 ton jumbo bags

Specifications:

P108 Kaolin

Chemical Analysis %		Mineralogical Analysis %		Particle Size Distribution %	
L.O.I	9.5 ±1	**Kaolinite**	72 ±2	>150 µ	0
SiO2	59 ±1	**Quartz**	20 ±2	>40 µ	0
Al2O3	28 ±1	**Calcite**	2 ±0.5	<10 µ	95
Fe2O3	0.45 ±0.1	**Total Feldspar**	-	<2 µ	50
TiO2	0.04 ±0.01	**Others**	6 ±1		
CaO	0.8 ±0.2				
MgO	0.55 ±0.1				
Na2O	0.5 ±0.1				
K2O	0.5 ±0.1				
Sulfur	Trace				



Other grades of Refined Kaolin we offer:

		Refined Kaolin														
Products		TZWNK	PZWNK	GZWNK	ESZWNK1	SZWNK1	ZWNK1-T	ZWNK1-S	SZWNK2	GZWNKB	SI	SZWMK1	ZWMK1	ZMK1H	ZMK1	ZMK2
Chemical Analysis %	L.O.I	10±1	9.5±1	9±1	9±1	9±1	8.5±1	8.5±1	7±0.5	7.5±0.5	8.5±1	9±1	8.5±1	6.5±0.5	6.5±0.5	6±1
	SiO_2	58±1	59±1	61±1	61±1	63±1	64±1	65±1	72±1	71±1	63±1	63±1	64±1	74±1	74±1	74±1
	Al_2O_3	29±1	28±1	26±1	25±1	24±1	23±1	22±1	17±1	18±1	23±1	24±1	23±1	15.5±1	15.5±1	15±1
	Fe_2O_3	0.45±0.1	0.45±0.1	0.35±0.1	0.55±0.1	0.55±0.1	0.55±0.1	0.75±0.1	0.5±0.1	0.3±0.1	0.9±0.2	0.55±0.1	0.55±0.1	0.3±0.1	0.25±0.1	0.4±0.1
	TiO_2	0.04±0.01	0.04±0.01	0.04±0.01	0.04±0.01	0.04±0.01	0.04±0.01	0.04±0.01	0.04±0.01	0.04±0.01	0.1±0.02	0.04±0.01	0.04±0.01	0.04±0.01	0.04±0.01	0.04±0.01
	CaO	0.8±0.2	0.8±0.2	0.8±0.2	1.2±0.2	1.2±0.3	1.4±0.3	1.5±0.5	1.4±0.3	1±0.2	1.8±0.5	1.2±0.3	1.4±0.3	1±0.3	0.8±0.3	1.5±0.3
	MgO	0.55±0.1	0.55±0.1	0.3±0.1	0.55±0.1	0.4±0.1	0.35±0.1	0.35±0.1	0.4±0.1	0.4±0.1	0.5±0.1	0.4±0.1	0.35±0.1	0.3±0.1	0.3±0.1	0.4±0.1
	Na_2O	0.5±0.1	0.5±0.1	0.4±0.1	0.4±0.1	0.3±0.1	0.3±0.1	0.3±0.1	0.3±0.1	0.3±0.1	0.3±0.1	0.3±0.1	0.3±0.1	0.3±0.1	0.3±0.1	0.3±0.1
	K_2O	0.5±1	0.5±0.1	0.3±0.1	0.3±0.1	0.4±0.1	0.4±0.1	0.4±0.1	0.4±0.1	0.4±0.1	0.3±0.1	0.4±0.1	0.4±0.1	0.4±0.1	0.4±0.1	0.4±0.1
	Sulfur	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace	Trace
Mineralogical %Analysis	Kaolinite	74±2	72±2	69±2	68±2	64±2	61±2	60±2	45±2	45±2	61±2	64±2	61±2	42±2	42±2	41±2
	Quartz	18±2	20±2	23±2	23±2	27±2	30±2	31±2	46±2	46±2	28±2	27±2	30±2	52±2	52±2	52±2
	Calcite	2±0.5	2±0.5	2±0.5	2.5±0.5	2.5±0.5	2.5±0.5	2.5±0.5	2.5±0.5	2±0.5	2.9±0.5	2.5±0.5	2.5±0.5	1.5±0.5	1±0.5	3±0.5
	Total Feldspar	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
	Others	6±1	6±1	6±1	6±1	6±1	6±1	6±1	6±1	6±1	6±1	6±1	6±1	4±1	4±1	4±1
Particle Size %Distribution	>150 µ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<5	<5	<5
	>40 µ	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<4	<3	<0.5	<0.5	<0.5	35±2	35±2	35±2
	<20 µ	99±1	99±1	99±1	99±1	98±1	98±1	98±1	96±1	95±2	98±1	98±1	98±1	53±2	53±2	53±2
	<2 µ	49±3	47±3	47±3	47±3	35±2	32±2	32±2	25±2	30±2	35±2	35±2	32±2	20±2	20±2	20±2
Technical Properties	M.O.R(Kgf/cm^2)	30±5	25±5	18±2	30±5	27±5	12±2	10±2	18±3	12±2	35±5	27±5	12±2	10±2	4±1	15±3
	Peff.Plasticity	32±1	31±1	31±1	31±1	31±1	31.5±1	31.5±1	27±1	27±2	30±1	31±1	31.5±1	_	_	_
	Brightness(1180°C)	95±2	95±2	97±2	92±2	92±2	90±2	85±2	90±2	91±2	75±2	92±2	90±2	90±2	90±2	84±2
	%Drying Contraction(110°C)	5±0.5	5±0.5	4.5±0.5	5±0.5	5±0.5	4±0.5	4±0.5	4±0.5	4±0.5	5.5±0.5	5±0.5	4±0.5	4±0.5	3.5±0.5	3±0.5
	%Firing Contraction (1180°C)	3.5±0.5	3.5±0.5	3.5±0.5	3.5±0.5	3.5±0.5	3.5±0.5	3.5±0.5	2.5±0.5	2.5±0.5	3.5±0.5	3.5±0.5	3.5±0.5	3±0.5	3±0.5	2±0.5
	Physical Form	Noodled	Noodled	Noodled	Noodled	Noodled	Noodled	Noodled	Noodled	Noodled	Noodled	Micronized	Micronized	Micronized	Micronized	Micronized
	Moisture%	10±2	10±2	10±2	10±2	10±2	10±2	10±2	10±2	10±2	10±2	1±0.5	1±0.5	1±0.5	1±0.5	1±0.5
	Packaging	Big Bag	Big Bag	Big Bag	Big Bag	Big Bag	Big Bag	Big Bag	Big Bag	Big Bag	Big Bag	Big Bag	Big Bag	Big Bag	Big Bag	Big Bag
Applications	TableWare-Body	*	*	*	*	*	*		*	*		*	*	*	*	*
	TableWare-Glaze	*	*	*	*	*	*		*	*		*	*	*	*	*
	Tile-Body													*	*	*
	Tile-Glaze&Engobe	*	*	*	*	*	*	*	*	*		*	*	*	*	*
	Sanitary Ware-Body		*	*			*	*	*	*	*		*	*	*	*
	Sanitary Ware-Glaze	*	*	*	*	*	*	*	*	*		*	*	*	*	*
	Electro Porcelain		*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Porcelain Tile-Body								*	*	*			*	*	*
	White Cement															
	Filler															
	AAC															
	Face Brick													*	*	*

Aluminum Silicate-P120

Special grade for paint and coating, textile and casting industries

Product description:

P120 is formulated to be used in paint and coating industries.

The chemical composition of the materials of this grade is adjusted to show special physical and chemical functions and properties. One of the important features of this grade is the balanced combination of oil absorption along with the low and controlled particle size.

Balanced oil absorption of this grade which is higher than the usual level of oil absorption of other pigments, causes the Paint formula to reach its proper state sooner and reach the standard quality level by consuming less pigment. The sum of these properties also controls the rheological state and paint suspension.

P120 is the Best Alternative to Titanium (TiO2):

The higher brightness and whiteness of P120 compared to similar products, as well as the appropriate particle size of it among other features, make it easily placed among the particles of Titan pigment and improve the properties of that. This feature helps the paint manufacturer to easily replace P120 instead of titanium in the formula and reduce the final price of the product without reducing the quality. P120 can replace titanium by about 20% in the formula of matte and semi-gloss paints.

Important Note: To achieve the desired result, P120 must first be thoroughly mixed with Titan in powder form and then the resulting mixture is added to the production process to disperse P120 with Titan.

In other industries where titanium (TiO2 - titanium dioxide) is consumed, such as rubber and plastic industries, mastic, textile and dyeing industries, P120 sometimes has the ability to replace titanium up to 40% without reducing the quality of the final product.

Major applications:

Paint and coating, textile and casting industries

Packing:

25 kg bags – 1 ton jumbo bags

Specifications:

Content	Test method	Unit	Result
Particle Size	Laser diffraction	Microns	2-5
Density	ISO-787-11	Kg/m^3	200
PH (5%)	ISO787-9		10.5
Oil Absorption	DBP – Absorption internal method	Gr/100gr	170
Moisture	2 hours in 105° C	%	Less than 5
SiO2 Content		%	82 ± 2
Al2O3 Content		%	10.5 ± 2
Na2O3 content		%	8
Fe2O3 content		%	0.1
So3 content		%	0.8

Aluminum Silicate-P130

Special for agricultural industries (fertilizers and pesticides) and printing inks

Product description:

P130 is formulated to be used in paint and coating industries.

Anticaking and anti-clogging properties:
One of the special features of P130 product is its anti-cake property, so that when it is placed in the formula of fertilizer or powder poison, it prevents the particles of that substance from sticking together and makes a fine powder. Also, due to moisture absorption and high oil absorption of P130, the shelf life and storage time of the final product increases significantly. Because against humidity, P130 absorbs moisture and neutralizes the negative effect of humidity on the product.

Liquid-to-solid function:
Another application of P130 is to use this material to convert liquid and oily products into a powder product for easier use. This grade with its high absorption property can act as a carrier for liquid products turning them into a smooth powder that is much easier and less expensive to transport and store. The point is that when used, P130 also acts as an ineffective carrier and leaves the adsorbed substance preparing it for action.

In this grade, the pH is in the neutral range and has no negative effect on soil, plants or fertilizer or toxin composition. Other desirable effects include improving the powder flow, packaging quality, reducing the blockage of the material due to pressure and moisture during transportation or storage, and increasing the quality and effectiveness of the materials used in them.

Application of P130 grade aluminum silicate in the printing industry:

One of the special features of P130 is the concentration and adjustment of the print sharpness. Using P130 the concentration of the compound can be adjusted, as well as its gloss and opacity. These properties can be achieved by consuming a small amount of P130 in the composite printing formulation, and this is one of the special advantages of aluminum silicate.

Major applications:

agricultural industries (fertilizers and pesticides) and printing inks

Packing:

25 kg bags – 1 ton jumbo bags

Specifications:

Content	Test method	Unit	Result
Particle Size	Laser diffraction	Microns	2-5
Density	ISO-787-11	Kg/m^3	200
PH (5%)	ISO787-9		6-7
Oil Absorption	DBP – Absorption internal method	Gr/100gr	200
Moisture	2 hours in 105° C	%	Less than 5
SiO2 Content		%	82 ± 2
Al2O3 Content		%	10.5 ± 2
Na2O3 content		%	8
Fe2O3 content		%	0.1
So3 content		%	0.8

Aluminum Silicate-P200

Special grade for food industry (food powders)

Product description:

In the food industry, sodium aluminum silicate is an additive used to prevent food products from clotting and massing, so that food is much easier to pulverize and flow. Sodium aluminum silicate is a natural acidic salt and is made from a combination of silicon, sodium, aluminum and oxygen. In the food industry, it is synthesized using different chemical compounds depending on the specific application and is usually produced as amorphous, colorless, odorless and with neutral PH.

P200 Sodium aluminum silicate product is used as a very effective and anti-lump material that dows not change the food and only reduces the stickiness - which is often caused by water absorption. As a result, edible powder always remains a smooth powder and its quality remains stable. In addition to make it easier to use, it also significantly increases storage time.

According to the information obtained so far, no active substances have been recorded in the pollution caused by the production of sodium aluminum silicate, and there are no environmental problems and concerns about the toxicity of these materials. Therefore, according to the reference standard 98/72 / EC this material is considered as a permitted food material.

It should be noted that all the mentioned properties can be obtained only by using a very small percentage of this substance (10g / kg - one percent).

Special features of sodium aluminum silicate:

In the production of food materials and powders in the process of which there is a dryer, one of the most important problems is the sticking of materials to the wall of the dryer, which has several problems such as: loss of a significant percentage of production material, interruption in production and As a result of reduced efficiency, the creation of excess costs for successive cleaning of the dryer, resulting in an increase in the cost of the product and even a decrease in the quality of the final product.

To prevent the above problems, sodium aluminum silicate, in addition to being used in food as an anticake, should be sprayed separately and directly on the walls of the dryer so that the surface of the dryer is completely covered with sodium aluminum silicate. This layer of aluminum silicate significantly prevents the product of food factories from sticking, thus resulting in economical savings, preventing wastage.

Major applications:

Food grade (Salt, Sugar, Prepared soups, Cream powder, Milk powder, Spices, Whey powder, Vegetable powder, Chocolate powder

Packing:

25 kg bags – 1 ton jumbo bags

Specifications:

Content	Test method	Unit	Result
Particle Size	Laser diffraction	Microns	1-5
Density	ISO-787-11	Kg/m^3	200
PH (5%)	ISO787-9		6.2 – 7.2
Oil Absorption	DBP – Absorption internal method	Gr/100gr	200
Moisture	2 hours in 105° C	%	Less than 5
SiO2 Content		%	82 ± 2
Al2O3 Content		%	10.5 ± 2
Na2O3 content		%	8
Fe2O3 content		%	0.1
So3 content		%	0.8

Contact Details

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