GAEN

INDUSTRIAL MINERALS

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Gaen Industrial Minerals was established in 2016 to supply raw materials, machinery and other auxiliary raw materials for ceramic, glass, porcelain, insulator and white goods industry.

It ensures that the companies it represents work harmoniously and efficiently with the sector companies at locally and abroad.

With its rising trend since its establishment, it continues to be solution partner of the sector companies in both domestic and export markets.

Kaolins

		Kaolin GK-1	Kaolin GK-2	Kaolin GK-4	Kaolin GK-7	Kaolin GK-8	Kaolin GK-9	Kaolin GK-10	Kaolin GK-11	Kaolin GK-12
SiO_2	%	66,43	61,78	51,73	51,20	63,15	45±1	67±1	68±1	68±1
Al_2O_3	%	20,68	25,47	34,07	34,46	25,11	39±1	25±1	25±1	24±1
Fe_2O_3	%	0,45	0,70	0,65	0,44	0,63	0,2-0,4	0,20	0,19	0,39
TiO_2	%	0,75	0,52	0,44	0,30	0,37	0,5-0,9	0,32	0,30	0,36
CaO	%	0,24	0,02	0,11	0,12	0,02	0,01	0,11	0,08	0,17
MgO	%	0,11	0,01	0,09	0,01	0,05	0,10	0,05	0,02	0,11
Na_2O	%	1,65	0,12	0,17	0,01	0,01	0,05	0,14	0,12	0,11
K_2O	%	3,25	0,21	0,19	0,13	0,24	0,05	1,30	0,98	1,80
SO_3	%	0,41	0,50	0,38	0,50	0,45	0,10	Trace	Trace	Trace
L.O.I.	%	5,73	10,32	12,41	13,11	10,28	13-15	5,50	5,20	4,90
1210 °C (Sanitary Ware)										
Water Absorption	%			16,05	20,29					
Total Shrinkage	%			7,32	8,31					
Color L				96,94	97,54					
Color +a				0,18	0,21					
Color +b				2,25	1,68					
1220 °C 60'										
Water Absorption	%						15,56	12,80	12,7	9,3
Total Shrinkage	%						5,5±0,5	2,60	2,4	4,5
Color L							95±0,5	95,00	95,5	91
Color +a							0,52	0,10	0,1	1,1
Color +b							4±0,5	3,20	2,5	5,7
Density	gr/lt			1705	1700					
Viscosity (Gallencamp)	cps			344	330					
Thickness 60'	mm			13,02	15					
Na_2SiO_3	%			0,32	0,23					
Moisture										
Particle Size	%	Max 12	Max 12	Max 14	Max 14	Max 0,5	Max 14	Max 14	Max 14	Max 14
Package	%	-10 mm	-10 mm	-63 µ	-63 µ	-45 µ	-45 µ	-45 µ	-45 µ	-45 µ
		In Bulk	In Bulk	In Big Bag	In Big Bag	In Big Bag	In Big Bag	In Big Bag	In Big Bag	In Big Bag

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Clays

		Clay GC-6	Clay GC-8	Clay GC-5
L.O.I.	%	7,81	8,37	7,50
SiO_2	%	59,87	61,43	56,98
Al_2O_3	%	24,7	23,31	26,19
TiO_2	%	1,06	1,08	0,86
Fe_2O_3	%	2,47	2,17	3,19
CaO	%	0,14	0,16	0,21
MgO	%	0,72	0,52	0,94
Na_2O	%	0,38	0,18	0,29
K_2O	%	2,48	2,27	3,72
Temperature (C)	°C	1205	1205	1185
Fired Color L		62,97	65,75	73,1
Fired Color +a		6,28	5,18	5,8
Fired Color +b		17,44	17,16	23,33
Water Abs.	%	0,09	0,03	1,42
Total Shrinkage	%	10,84	10,91	9,89
Dried Shrinkage	%	4,45	4,5	
Dried Strength	kg/cm²	50	45	
Viscosity (Gallencamp)	cps	341	344	
Density (g/l)	g/l	1698	1700	
Thixotrophy 1'		5	6	
Thixotrophy 6'		31	32	
Thickness 60'	mm	3,6	3,8	
Na_2SiO_2 (Sodium Silicate)	%	0,7	0,6	
+ 63 Micron	%	2,3	2,6	1,45
+ 150 Micron	%	1,11	1,22	1,23
Package		In Big Bag	In Bulk	In Bulk

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Bentonites

		Bentonite GB-1	Bentonite GB-2	Bentonite GB-3
SiO_2	%	71	71	71
Al_2O_3	%	12,5	12,5	12,50
Fe_2O_3	%	0,75	0,95	1,25
TiO_2	%	0,07	0,25	0,20
CaO	%	1,12	1,12	1,30
MgO	%	1,25	1,25	1,40
Na_2O	%	0,04	0,04	0,05
K_2O	%	0,25	0,25	0,25
L.O.I.	%	13	12,63	12,03
Montmorillonite	%	Min. 85	Min. 85	Min. 85
Cristobalite/Opal	%	Max. 15	Max. 15	Max. 15
Plagioclase	%	Trace	Trace	Trace
Cation Exchange Capacity	meq/100 gr	86 ± 5	86 ± 5	86 ± 5
Swelling	ml/2 gr	30 ± 2	30 ± 2	20 ± 2
pH (%8 solid)	(-)	8,5 ± 5	8,5 ± 5	8,5 ± 5
Raw Color	L	93 ± 2	93 ± 2	92 ± 2
Raw Color	a	0,5 ± 0,2	0,5 ± 0,2	0,5 ± 0,2
Raw Color	b	3,4 ± 0,5	3,4 ± 0,5	3,4 ± 0,5
1220 °C	L	90 ± 2	86,5 ± 2	76,3 ± 2
1220 °C	a	0,04 ± 0,01	0,50 ± 0,1	0,85 ± 0,1
1220 °C	b	6,85 ± 1	9,5 ± 1	11,5 ± 2
Moisture	%	Max 12	Max 12	Max 12
Particle Size	%	-20 mm/-63 µ	-20 mm/-63 µ	-20 mm/-63 µ
Package		In Big Bag	In Big Bag	In Big Bag

		Bentonie GB-4
SiO_2	%	75,00
Al_2O_3	%	13,99
Fe_2O_3	%	1,10
TiO_2	%	0,11
CaO	%	1,33
MgO	%	1,55
Na_2O	%	0,72
K_2O	%	1,23
L.O.I.	%	4,95
Sedimantation (ml)		
24 h		(-)
48 h		(-)
72 h		(-)
Cation Exchange Capacity	meq/100 gr	66,77
Swelling/Inflation	ml/2 gr	7,5
Raw Color	L	94,66
Raw Color	a	0,02
Raw Color	b	3,01
1200 °C 45 min	L	77,75
1200 °C 45 min	a	-0,81
1200 °C 45 min	b	9,5
Moisture	%	26-32
Particle Size	%	-20 mm
Package		In Bulk/In Big Bag

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Feldspars

		Na-Feldspar GNaF-2	Na-Feldspar GNaF-3	Na-Feldspar GNaF-4	Na-Feldspar GNaF-7	Na-Feldspar GNaF-8	Na-Feldspar GNaF-9	Na-Feldspar GNaF-10
SiO_2	%	70,59	69,13	69,79	69,80	70,65	68,90	72,60
Al_2O_3	%	18,32	18,21	18,25	18,35	18,25	17,50	16,85
TiO_2	%	0,03	0,45	0,14	0,02	0,02	0,22	0,10
Fe_2O_3	%	0,05	0,82	0,12	0,03	0,03	0,71	0,08
CaO	%	0,32	0,90	0,77	0,33	0,32	0,58	0,35
MgO	%	0,21	0,25	0,24	0,21	0,20	1,26	0,21
Na_2O	%	10,23	9,34	9,68	10,23	10,20	8,57	9,35
K_2O	%	0,25	0,90	0,33	0,21	0,18	1,20	0,32
Moisture	%	Max 8	9,00	Max 0,5	Max 0,20	Max 0,50	Max 5	Max 0,50
Particle Size	%	-300 µ	-1 mm	-63 µ	-500 µ	-300 µ	-10 mm	-800 µ
Package		In Bulk/In Big Bag	In Bulk/In Big Bag	In Big Bag	In Big Bag	In Big Bag	In Bulk	In Big Bag

		Na-Feldspar GNaF-11	Na-Feldspar GNaF-12	Na-Feldspar GNaF-13	Na-Feldspar GNaF-15	K-Feldspar GKF-1	K-Feldspar GKF-2
SiO_2	%	71,98	72,40	71,38	71,51	66,31	67,12
Al_2O_3	%	16,65	16,72	17,19	16,19	16,19	18,24
TiO_2	%	0,32	0,35	0,15	0,30	0,01	0,01
Fe_2O_3	%	0,39	0,44	0,08	0,80	0,05	0,07
CaO	%	0,61	0,63	0,98	0,55	0,12	0,09
MgO	%	0,32	0,34	0,20	0,22	0,01	0,01
Na_2O	%	9,15	8,60	9,60	8,03	2,60	2,12
K_2O	%	0,56	0,49	0,28	2,03	11,00	11,42
Moisture	%	Max 5	Max 5	Max 0,50	Max 5	Max 0,5	Max 5
Particle Size	%	-10 mm	-10 mm	-500 µ	-10 mm	-63 µ	-10 mm
Package		In Bulk	In Bulk	In Big Bag	In Bulk	In Big Bag	In Bulk

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Other Raw Materials

		Nepheline GNS-1	Nepheline GNS-3	Magnesite GM-1	Quartz GQ-3	Calcite GCLS-1	Dolomite GD-1
SiO_2	%	58,43	59,46	3,23	98,92	0,35	0,78
Al_2O_3	%	23,48	22,58	0,12	0,22	0,14	0,30
Fe_2O_3	%	0,22	0,11	0,07	0,03	0,01	0,06
TiO_2	%	0,01	0,18	0,36	0,07	0,07	0,01
CaO	%	1,11	0,58	2,54	0,05	55,36	32,67
MgO	%	0,04	0,04	44,95	0,04	0,82	19,93
Na_2O	%	9,58	9,35	0,01	0,03	0,04	0,01
K_2O	%	6,25	5,46	0,01	0,06	0,01	0,01
L.O.I.	%	0,75	2,10	44,95	0,31	43,08	46,20
Moisture	%	Max 7	Max 0,20	Max 0,5	Max 0,5	Max 1	Max 1
Particle Size	%	-400 µ	-45 µ	-100 µ	-75 µ	-45 µ	-63 µ
Package		In Big Bag	In Big Bag	In Big Bag	In Big Bag	In Big Bag	In Big Bag

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Flint Pebbles
Slex Mill Linings

		Flint Pebbles
SiO2	%	99,2
Al2O3	%	0,4
Fe2O3	%	0,2
CaO	%	0,1
MgO	%	0,05
Density	gr/cm³	2,65
Hardness	Mohs	7-8
Porosity		≤ 0,4
Natural Color		Grey, Light Grey
Acid Test		"No Frothing, Reliable, Surface not Affected"
Package		In Bulk/In Big Bag
Product Sizes	cm	0-2
	cm	2-4
	cm	4-6
	cm	6-8
	cm	8-10
	cm	10-12
	cm	12-14
		14-16

		Slex Mill Linings
SiO2	%	99,2
Al2O3	%	0,4
Fe2O3	%	0,2
CaO	%	0,1
MgO	%	0,05
Density	gr/cm³	2,65
Hardness	Mohs	7-8
Porosity		≤ 0,4
Natural Color		Grey, Light Grey
Acid Test		"No Frothing, Reliable, Surface not Affected"
Package		On Pallet
Thickness	cm	8
	cm	10
	cm	12
	cm	14
	cm	16

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