



# **FIVE STAR MATERIAL**

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[www.fivestar-material.com](http://www.fivestar-material.com)





# OUR STORY

Five Star Material was founded by a team of materials experts who recognized the critical importance of reliable, high-performance refractory raw materials in the success of industrial processes. From the smelting of metals to the production of cement, glass, and ceramics, refractory materials play a vital role in ensuring the efficiency, safety, and sustainability of these industries.

Driven by a passion for innovation, we have dedicated ourselves to sourcing, processing, and supplying the finest refractory raw materials available, constantly exploring new methods and technologies to enhance the quality, consistency, and performance of our products.





# PRODUCT CATALOG

At Five Star Material, we offer a comprehensive portfolio of high-performance refractory raw material to meet the diverse needs of various application. Our range of product consist of mainly 3 broad categories such as synthetic minerals, natural minerals and binders & additives.

## Synthetic Minerals

- Fused Alumina
- Fused Mullite
- Fused Zirconia
- Spinel
- Silicon Carbide

## Natural Minerals

- Andalusite
- Chamotte / No Cristobalite Chamotte
- Sintered Mullite
- Calcined Bauxite

## Binders & Additives

- Calcium Aluminate Cement
- Accelerator
- Silica Fume

# SYNTHETIC



Product	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	Na <sub>2</sub> O	CaO	B.D
Tabular Alumina	99.7	0.1	0.1	0.1	Tr	3.6
White Fused Alumina	99.5	0.1	0.1	0.25	-	3.6
Bubble Alumina	99	0.15	0.15	0.3	-	PD 0.85~0.95

Product	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	Na <sub>2</sub> O	CaO + MgO	B.D
Dense Fused	99	0.5	0.15	0.1	0.1	0.1	3.9
Grey Fused	97/98	0.5	0.3	1	0.1	0.5	3.9
Brown Fused 95	95/97	0.8/1.5	0.3/0.5	3.2	0.1	0.8	3.85
Brown Fused 92	92/97	1/4	0.5	2/5	0.1	0.8	3.75

# SYNTHETIC

Product	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	Na <sub>2</sub> O	CaO	MgO	B.D
Fused Mullite +	70/77	22/29	0.1	-	0.3	-	3.03
Fused Mullite	68/70	22/29	0.5	-	0.5	-	3.0
Spinel A90F	88/92	0.2	0.3	0.4	0.3	7/11	3.55
Spinel A85F	82/87	0.4	0.4	0.4	0.5	12/17	3.55
Spinel A76F	74/78	0.4	0.4	0.4	0.5	20/24	3.5
Spinel M66F	64/70	0.4	0.4	0.4	0.5	28/34	3.4

Product	SiC	Fe <sub>2</sub> O <sub>3</sub>	F.C	Si + SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	B.D
SiC98	98.5	0.25	0.25	0.7	0.2	3.2
SiC95	95.5	0.5	0.5	1	0.3	3.2
SiC98 V	98	0.3	0.25	0.7	0.1	3.2
SiC97 V	97.2	0.45	0.35	0.7	0.1	3.2
SiC96 V	96.3	0.6	0.5	0.7	0.1	3.2
SiC95 V	95.3	0.7	0.8	0.7	0.1	3.2





# NATURAL

Product	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	K <sub>2</sub> O + Na <sub>2</sub> O	CaO + MgO	B.D
Flint Clay 45	44/47	51/54	0.5/1	1.5	0.5	0.5	2.6
Flint Clay 50	45/55	38/50	0.5/2.5	3	0.3	0.5	2.45 ~ 2.55
UNI-41	41	55	0.7	0.9	2	0.4	2.35
MX-45	44	54	0.8	1.2	0.4	0.4	2.5
Andalusite	57	38	0.7	0.1	0.5	0.1	3.1
Multron 47	47	50	0.9	1.5	0.3	0.4	2.55
Multron 60	60	36	1.4	2.5	0.5	0.7	2.65
Multron 70	69	26	1.3	2.8	0.5	0.7	2.75

# NATURAL

<b>Product</b>	<b>Al<sub>2</sub>O<sub>3</sub></b>	<b>SiO<sub>2</sub></b>	<b>Fe<sub>2</sub>O<sub>3</sub></b>	<b>TiO<sub>2</sub></b>	<b>K<sub>2</sub>O + Na<sub>2</sub>O</b>	<b>CaO + MgO</b>	<b>B.D</b>
Bauxite 70	65/75	19/29	1/3	3.5	0.25	0.5	2.6 ~ 2.8
Bauxite 75	75	19	2.2	4	0.4	0.8	2.85
Bauxite 78	78	16	2	4	0.25	0.5	2.95
Bauxite 80	80	14	2	4	0.25	0.5	3.0
Bauxite 86	86	8	2	4	0.25	0.5	3.1
Bauxite 89	88/90	3/6	2	4	0.2	0.4	3.38

# BINDERS & ADDITIVES



Product	X6	X7	X9
Al <sub>2</sub> O <sub>3</sub>	≥ 50	≥ 50	≥ 53
SiO <sub>2</sub>	≤ 9	≤ 8	≤ 6
Fe <sub>2</sub> O <sub>3</sub>	≤ 3	≤ 3	≤ 3
R <sub>2</sub> O	≤ 0.5	≤ 0.5	≤ 0.5
S-	≤ 0.2	≤ 0.2	≤ 0.2
Cl-	≤ 0.06	≤ 0.06	≤ 0.06
Initial Set (min)	≥ 30	≥ 30	≥ 150
Final Set (min)	≤ 360	≤ 360	≤ 360
Flexural Str - 1 Day (MPa)	≥ 5.5	≥ 6.5	≥ 8.5
Flexural Str - 3 Day (MPa)	≥ 6.5	≥ 7.5	≥ 9.5
Compressive Str - 1 Day (MPa)	≥ 40	≥ 50	≥ 70
Compressive Str - 3 Day (MPa)	≥ 50	≥ 60	≥ 80



# BINDERS & ADDITIVES

Product	Al <sub>2</sub> O <sub>3</sub>	CaO	SiO <sub>2</sub>	R <sub>2</sub> O	B.D
SpeedX	74.1	14.8	0.21	0	0.94

Product	SiF95	SiF98
SiO <sub>2</sub>	95	98
Fe <sub>2</sub> O <sub>3</sub>	0.05	0.05
K <sub>2</sub> O + Na <sub>2</sub> O	0.7	0.2
CaO + MgO	0.5	0.2
Surface Area (m <sup>2</sup> /g)	> 20	> 20
PSD (μm)		
D50	0.6	0.5
D90	6	6
pH	6.5 ~ 7.5	6.5 ~ 7.5

# OUR PROMISE

At Five Star Material, we are committed to providing exceptional customer service and support. When you reach out to us, you can expect

- A timely response, within 1 business day
- Knowledgeable and courteous assistance
- Personalized attention to your needs
- Transparent communication
- Reliable follow-up and ongoing support



## CONTACT US



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