



**Luoyang Derui Import & Export Co., Ltd.**  
**洛阳德瑞进出口贸易有限公司**

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### **Company Profile**

Luoyang Derui Import & Export Co., Ltd was established in June 2011, formerly well-known as the factory of Luoyang Yichuan Tianyuan Corundum Co., Ltd. founded in 1996. It has developed into a modern corundum company, integrating production, research, marketing and technical provider.



**Factory**



**Inside Scenery of Factory**

We specialize in refractory and abrasive materials, which include Brown fused alumina, Sub-white fused alumina, White fused alumina, mullite, magnesia etc. Every year, approximately 20, 000MT is exported to the world market.

With better quality, competitive price and full-around service, our products are selling to Southeast Asia, USA, German, France, Korea, Japan, Russia and Italy etc.



**Laboratory**

**Our mission is to meet and exceed your highest expectations with:**

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➤ **EXPERIENCE**

Excellence in manufacturing capabilities, skills and technology

➤ **PERFORMANCE**

High performance products, engineered specials for your application

➤ **SERVICE**

State-of-the-art computers, quick responses, superior communications



**Package**



**BFA 1-0 #**

Our company is always ready to cooperate with the friends both home and abroad in the market for refractory and abrasives industry and to create a more bright future all over the world with you.

**Creating customer's benefit is our competitive advantage.**

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## **Brown Fused Alumina (BFA)**

Brown fused Alumina known as “artificial corundum” or “alumina grit”. Brown fused alumina is produced from bauxite, charcoal, iron chip by being fused under high temperature in an electric arc furnace. It is characterized by high toughness and has a micro hardness of 2000-2200kg/mm<sup>2</sup>. The abrasive tools made by brown fused alumina are suitable for grinding carbon steel, normal alloy steel, malleable cast iron and hard bronze, etc. Brown fused alumina can also be used for making fine quality refractory etc.

### **Product Advantages:**

1. Professional manufacturer for 15 years;
2. Barmac grains with high bulk density;
3. Reliable supplies and enjoy a good reputation;
4. Prompt delivery (7 days for 1000MT).

**Size:** as customer's special requirement

**Packing:** 1MT/bag,1.25MT/bag or as required by customer

**Delivery:** 7 days after confirmation of order or as required by customer

### **Brown Fused Alumina (refractory)**

Grain size	Chemical Composition%(by Weight)			
	AL <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>
12-8mm	≥ 95.00	1.50-3.80	≤ 1.50	≤ 0.50
8-5mm	≥ 95.00	1.50-3.80	≤ 1.50	≤ 0.50
5-3mm	≥ 95.00	1.50-3.80	≤ 1.50	≤ 0.50
3-1mm	≥ 95.00	1.50-3.80	≤ 1.50	≤ 0.50
1-0mm	≥ 95.00	1.50-3.80	≤ 1.50	≤ 0.50



**BFA 3-1#**



**BFA 5-3#**

**Brown Fused Alumina (abrasives)**

Grain Size	AL <sub>2</sub> O <sub>3</sub> Min	SiO <sub>2</sub> Max	TiO <sub>2</sub> Max	Fe <sub>2</sub> O <sub>3</sub> Max
<b>12#-80#</b>	94.5-97%	0.6-0.8%	1.5-3%	0.12-0.2%
<b>100#-180#</b>	93.5%	0.7-1%	1.5-3.8%	0.15-0.25%
<b>240#-280#</b>	92%	0.85-1.1%	1.5-3.8%	0.18-0.35%



**BFA 14#**



**BFA36#**

**Physical Performance Index**

Item	Index
Color	Brown
Crystal shape	Trigonal
Hardness(mohs)	≥9.0
Melting Point (°C)	2250
True density (g/cm <sup>3</sup> )	≥3.90
Linear Expansion Coefficient(0—1600°C)	7—9



## White Fused Alumina (WFA)

White fused alumina is fused by alumina powder by electric arc furnace under high temperature. It has white color and little higher hardness and lower toughness comparing with brown fused alumina. The micro hardness of the product is 2200-2300kg/mm<sup>2</sup>. It has higher hardness and slight lower toughness comparing with brown fused alumina. It is also characterized by its high purity, acid and alkali resistance, good thermal stability. It's the high grade refractory materials.

### Products Advantages:

1. Professional manufacturer for 15 years;
2. High bulk density;
3. Reliable supplies and enjoy a good reputation;
4. Prompt delivery (7 days for 1000MT);

**Size:** as customer's special requirement

**Packing:** 1MT/bag,1.25MT/bag or as required by customer

**Delivery:** 7 days after confirmation of order or as required by customer

Purpose	Specification		Chemical Composition%			
			Al <sub>2</sub> O <sub>3</sub>	Na <sub>2</sub> O	SiO <sub>2</sub>	CaO
For Abrasives	F	12#—80#	≥99.0	≤0.5	—	≤0.4
		90#—150#	≥98.5	≤0.6	—	≤0.4
		180#—240#	≥98.2	≤0.7	—	≤0.4
	W	1#-63#	≥97.5	≤0.8	≤1.0	≤0.5
For Refractory	-	0-1mm 1-3mm 3-5mm 5-8mm 8-12mm	≥99.0	≤0.5	—	≤0.4
	Micro-powder	180#—0 200#-0 320#-0	≥98.5		≤0.3	≤0.5



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**WFA 5-3#**



**WFA 3-1#**

**Physical Performance Index**

<b>Item</b>	<b>Index</b>
Color	White
Crystal shape	Trigonal
Hardness(mohs)	≥9.0
Melting Point (°C)	2250
True density (g/cm <sup>3</sup> )	≥3.90
Linear Expansion Coefficient(0—1600°C)	7—9



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### **NATURAL SINTERED MULLITE**

Natural sintered mullite is manufactured directly from raw bauxite, fired in a rotary kiln with heavy oil as fuel at temperatures exceeding 1750°C.

#### **Products Advantages:**

1. Professional manufacturer for 15 years;
2. Enjoy a good reputation;
3. Reliable supplies;
4. Prompt delivery (7 days for 1000MT);

**Size:** 1-0, 3-1, 5-3mm or as customer's special requirement

**Packing:** 1MT/bag, 1.25MT/bag or as required by customer

**Delivery:** 7 days after confirmation of order or as required by customer



**Sintered Mullite 3-1mm**



**Sintered Mullite 5-3mm**



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**CHEMICAL PERFORMANCE INDEX**

<b>Chemicals</b>	<b>M70</b>	<b>M60</b>
<b>Al<sub>2</sub>O<sub>3</sub> %</b>	70-73	60-63
<b>Fe<sub>2</sub>O<sub>3</sub> %</b>	1.1max (1.2%max for fine)	1.2max (1.3%max for fine)
<b>TiO<sub>2</sub> %</b>	2.50max	2.50max
<b>CaO %</b>	0.25max	0.25max
<b>MgO %</b>	0.55max	0.55max
<b>Na<sub>2</sub>O %</b>	0.20max	0.20max
<b>K<sub>2</sub>O%</b>	0.20max	0.20max

**PHYSICAL PERFORMANCE INDEX**

<b>Properties</b>	<b>M70</b>	<b>M60</b>
<b>B.D. g/cm<sup>3</sup></b>	2.78min	2.65min
<b>Apparent Porosity%</b>	4.0min	4.0min
<b>Water Absorption %</b>	1.5max	1.5max
<b>Refractoriness °C</b>	1830min	1750min
<b>Mullite Phases%</b>	90min	80min





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## **NATURAL FUSED MULLITE**

Natural fused mullite is manufactured directly from raw bauxite, fused in an electric arc melting furnace.

### **Products Advantages:**

1. Professional manufacturer for 15 years;
2. Enjoy a good reputation;
3. Reliable supplies;
4. Prompt delivery (7 days for 1000MT);

**Size:** 1-0, 3-1, 5-3mm or as customer's special requirement

**Packing:** 1MT/bag, 1.25MT/bag or as required by customer

**Delivery:** 7 days after confirmation of order or as required by customer



**Fused Mullite 5-3mm**



**Fused Mullite 3-1mm**



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**CHEMICAL PERFORMANCE INDEX**

<b>Chemicals</b>	<b>DM70</b>
Al <sub>2</sub> O <sub>3</sub> %	70-73
Fe <sub>2</sub> O <sub>3</sub> %	0.3max
TiO <sub>2</sub> %	1.80max
CaO %	0.2max
MgO %	0.55max
Na <sub>2</sub> O %	0.20max
K <sub>2</sub> O %	0.20max

**PHYSICAL PERFORMANCE INDEX**

<b>Properties</b>	<b>DM70</b>
B.D. g/cm <sup>3</sup>	2.90min
Apparent Porosity%	2.0max
Water Absorption %	0.8max
Refractoriness °C	1850min
Mullite Phases%	90min



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## Dense Corundum

Dense corundum is the preferred material for producing high performance monolithic and shaped refractories, which is used in iron & steel, cement, ceramic, petrochemical industries, etc. Dense corundum is the main starting material for monolithic refractories, such as typing trough of blast furnace, castables, castables for ladle, ramming mix, fabricated part, etc; it is also the ideal material for shaped refractories, such as nozzle, submerged entry nozzle, stopper, porous brick and nozzle seating brick, etc.

**Size:** as customer's special requirement

**Packing:** 1MT/bag, 1.25MT/bag or as required by customer

**Delivery:** 7 days after confirmation of order or as required by customer



Dense Corundum 5-3mm



Dense Corundum 8-5mm

### Chemical composition:

Chemical Composition	Grit >0.1mm	Typical Value	Fine Powder ≤0.11mm	Typical Value
AL <sub>2</sub> O <sub>3</sub> %≥	99	99.2	98.6	99.0
SiO <sub>2</sub> %≤	1.0	0.4	1.0	0.45
Fe <sub>2</sub> O <sub>3</sub> %≤	0.15	0.1	0.3	0.2
TiO <sub>2</sub> %≤	0.1	0.05	0.1	0.05
CaO%≤	0.1	0.05	0.1	0.05
MgO%≤	0.1	0.05	0.1	0.05
NaO <sub>2</sub> %≤	0.1	0.05	0.1	0.08
C%≤	0.1	0.08	0.12	0.1



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**Physical Properties:**

Chemical Composition	Grit >0.1mm	Typical Value	Fine Powder ≤0.11mm	Typical Value
Apparent Porosity%≤	2.0	0.8	2	0.8
Bulk density (g/cm <sup>3</sup> )%≥	3.90	3.93	/	/
True density (g/cm <sup>3</sup> )%≥	3.96	3.99	3.96	3.98



## Magnesia-Alumina Spinel

Sintered bauxite-based magnesia-alumina spinel chooses the high-quality bauxite and high-grade light burned magnesia. It's sintered in high-temperature after complicated homogenized processes. With the features of good erosion, abrasion, spalling and slagging resistance, perfect thermal shock resistance and high heat-resistance, it is the optimal material in producing magnesia-alumina spinel brick, ladle brick, ladle castable, etc.

### Products Advantages:

1. Professional manufacturer for 15 years;
2. Enjoy a good reputation;
3. Reliable supplies;
4. Prompt delivery.

**XDR result shows that:** The sample mainly contains MA spinel ( $\geq 90\%$ ) and a little amount of forsterite and magnesia.

### Technical data of MA Spinel

Specification/Performance		MA-70		MA-65	
		Sand 0.1mm	Powder $\leq 0.1\text{mm}$	Sand 0.1mm	Powder $\leq 0.1\text{mm}$
Chemical Compositions	$\text{Al}_2\text{O}_3\% \geq$	67-75	67-75	64-68	64-68
	$\text{SiO}_2\% \leq$	0.4	0.4	0.6	0.6
	$\text{Fe}_2\text{O}_3\% \leq$	0.5	0.5	0.25	0.3
	$\text{MgO}\% \leq$	23-31	23-31	31-35	31-35
Physical Performance	magnetic material% $\leq$	0.05	0.1	0.05	0.1
	porosity % $\leq$	5.0		3.0	
	volume density $\text{g/cm}^3 \geq$	3.30		3.30	





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## Tabular Corundum

Tabular alumina is made by adopting the imported industrial alumina as starting material, without any additives, fast sintered at super-high temperature (>1900 °C).

The product has a close packing structure of corundum grain size in the range from 1-2um to 100-200um with cross bonding and homogenized distribution, resulting in maximum packing density.

Tabular Alumina is characterized by high refractoriness, high bulk density, High thermal shock resistance, High wear-resistance, high purity and High chemical resistance, complete crystal tabularization and low porosity.



**Application:** Tabular Alumina has been widely used as the material of choice in unshaped and shaped high performance refractories used in a variety of industries (steel, foundry, cement, glass, petrochemical, ceramic and waste incineration). Other common non-refractory applications include its use in kiln furniture and for metal filtration.

**Available Sizes:** 0-1/1-3/3-5mm 2-1mm, 1-0.5mm, 0.6-0.2mm, 0.5-0mm, 220 and 325 mesh

### Chemical Composition:

Item	Chemicals	Index	Typical Value
1	Al <sub>2</sub> O <sub>3</sub>	99% Min.	99.5%
2	Na <sub>2</sub> O	0.3% Max.	0.20%
3	SiO <sub>2</sub>	0.2% Max.	0.09%
4	Fe <sub>2</sub> O <sub>3</sub>	0.1% Max.	0.07%
5	Fe	0.02% Max.	0.01%

### Physical Properties:



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Item	Chemicals	Index	Typical Value
1	Apparent Porosity	4% Max.	3.0 %
2	Water Absorption	1.0% Max.	0.7%
3	Specific Gravity	3.50g/cm <sup>3</sup> Min.	3.59 g/cm <sup>3</sup>