HAMZA ENTERPRISES
Exporter & importer of textile, fabric, chemicals & Minerals

2025

# COMPANY PROFILE

HAMZA ENTERPRISES
Exporter & importer of textile, fabric, chemicals & Minerals

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# WE KNOW THE ART OF TRADING

# ABOUT US

**A Brief elaboration About The Company**

Hamza Enterprises is a premier supplier of high-quality minerals and industrial raw materials from Pakistan, with a dedicated division focused on serving the global metals and recycling industry.

We have built a robust network of mining partnerships and logistics expertise, enabling us to source and deliver a consistent supply of essential minerals. Our core commitment is to provide reliable, high-grade materials that meet the stringent specifications of international industrial clients.

We specialize in the export of minerals crucial for chemical processes, metallurgy, and recycling applications, ensuring traceability, quality assurance, and competitive pricing.

# PRODUCTS

**Our Core Product Portfolio**

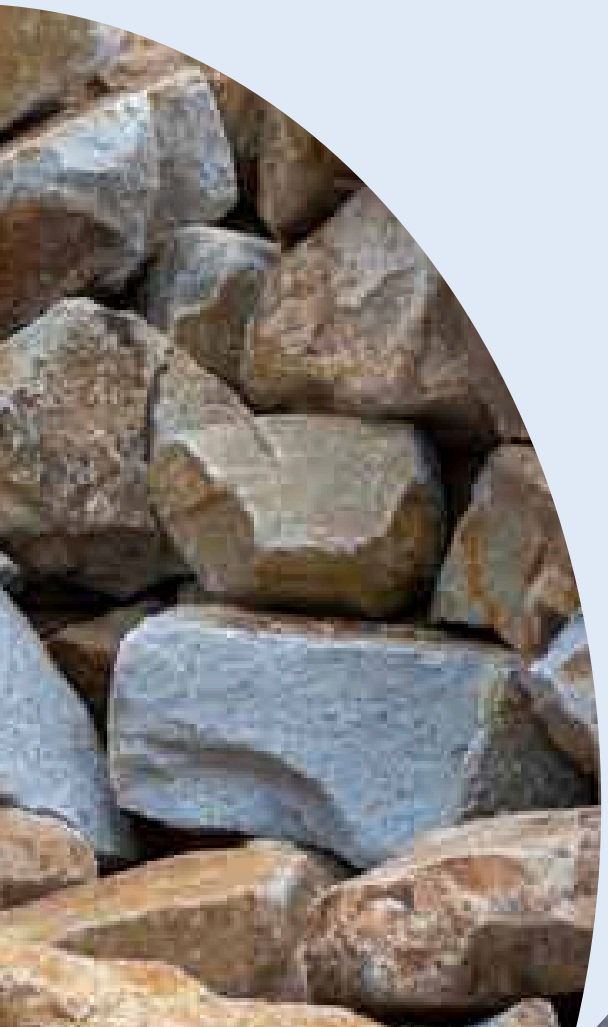
We supply a comprehensive range of minerals and chemicals, including:

## PRODUCTS LIST

- Bauxite Ore
- Iron Ore
- Copper Ore
- Zinc Oxide
- Zinc Sulphate
- Limestone
- Dolomite
- Drilling and Paint Grade Barite
- Bantonite
- Drilling Bantonite
- Silica Sand
- Salt
- Rock Phosphate
- Siica Quartz
- Nephrite (Jade)
- Antimony Ore
- Magnesite

GIVE US

A TRY.



# PRODUCTS DETAILS

## Preveiw of our Products

**Bauxite Ore & Processed Bauxite**

**Iron Ore & Iron-Based Raw Materials**

**Copper Ore & Concentrates**

**Zinc Oxide & Zinc Sulphate**

**Limestone**

**Dolomite**

**Drilling Barite API 13A**

**Bantonite**

**Drilling Bentonite**

# PRODUCTS DETAILS

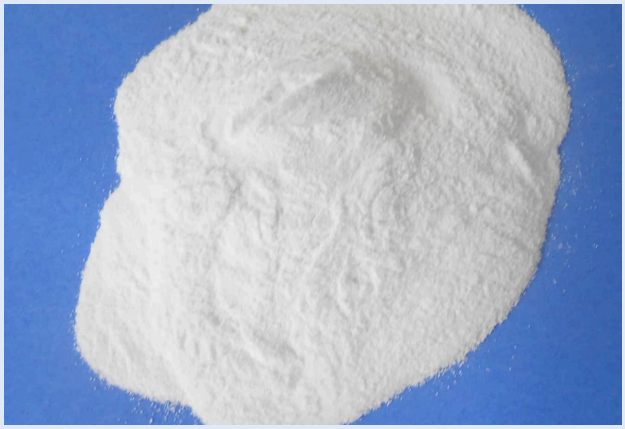
## Our Core Product Portfolio

silica Sand

Salt

Chromite

Rock Phosphate



Zinc Sulfate

# DRILLING & PAINT GRADE BARITE

*Barite increases the hydrostatic pressure of the drilling mud, allowing it to compensate for high-pressure zones experienced during drilling. Barite's added advantage is that its softness enables it to become a lubricant, which reduced the damage to drilling tools during drilling.*

## CHEMICAL ANALYSIS

| Element | $SiO_2$ | $Al_2O_3$ | BaO | CaO | $Fe_2O_3$ | $K_2O$ | MgO | MnO | $Na_2O$ | $P_2O_5$ | $TiO_2$ | L.O.I | $SO_3$ | SrO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| DL | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| CO | 0.22 | 63.44 | 0.15 | 0.05 | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.05 | 34.24 | 0.35 | 1.45 |

SG: 4.25 g/cm³

# BAUXITE ORE

Our raw bauxite ore is a naturally occurring, heterogeneous material, directly mined from our extensive deposits. It is the principal ore of aluminum, primarily composed of aluminum hydroxide minerals. We supply consistent, high-quality bauxite ore suitable for a wide range of industrial applications, most notably alumina refining for primary aluminum production. Our product is characterized by its favorable alumina content and manageable impurity levels.

## TYPICAL CHEMICAL SPECIFICATIONS

| Parameter | Grade A (Metallurgical) | Grade B (Abrasive/Refractor | Test Method |
|---|---|---|---|
| $Al_2O_3$ (Alumina) | 48 - 52% | 80 - 85% (Calcined) | XRF |
| $SiO_2$ (Silica) | ≤ 5% | ≤ 7% | XRF |
| $Fe_2O_3$ (Iron Oxide) | 18 - 22% | 3 - 6% | XRF |
| $TiO_2$ (Titanium Dioxide) | 2.5 - 3.5% | 3.0 - 4.0% | XRF |
| LOI (Loss on Ignition) | 24 - 26% | ≤ 1% (Post Calcination) | Gravimetric |
| Available Alumina | ≥ 40% | - | - |
| Silica Modulus (A/S Ratio) | ≥ 10 | - | - |

## TYPICAL PHYSICAL SPECIFICATIONS

| Physical Properties | Specification |
|---|---|
| Form | Run-of-Mine (ROM) or Sized Ore |
| Typical Size | 0 - 300mm (ROM), 0 - 25mm (Sized) |
| Moisture (as shipped) | 8 - 12% |
| Bulk Density | 1.2 - 1.4 t/m³ |
| Appearance | Reddish-brown, earthy, pisolithic |

### Physical Properties

Form: Run-of-Mine (ROM) or crushed to customer specification (e.g., 0-100mm)
Appearance: Rugged, earthy lumps; color varies from pinkish-brown to reddish-brown.
Moisture Content (as shipped): ~10 - 15% (manageable to reduce dust)

### Packaging & Shipping

Bulk Vessel: Shipped in loose bulk via ocean-going capesize or panamax vessels.
Bags: Available in 1-tonne jumbo bags upon request.

### Applications

Primary feedstock for the production of alumina ($Al_2O_3$) and subsequently aluminum metal (Al).
Raw material for synthetic aluminum abrasives.
Principal component in high-alumina refractory products. Proppant in oil and gas well fracking.
Flux in steel mills and cement plants.

# IRON ORE

*Iron ore is a mineral substance which, when heated in the presence of a reductant (like coke), yields metallic iron (Fe). It is the primary raw material for iron and steel production, making it one of the most critical commodities globally.*

*Iron ores are not a single mineral but are rocks and minerals from which iron can be economically extracted. The most common iron-bearing minerals are:*

## CHEMICAL ANALYSIS

| Component | Symbol | Importance & Typical Range |
|---|---|---|
| **Iron (Total)** | **Fe (Total)** | The primary value |
| **Silica** | **$SiO_2$** | The most important |
| **Alumina** | **$Al_2O_3$** | Undesirable impurity. |
| **Phosphorus** | **P** | Highly detrimental. |
| **Sulfur** | **S** | Highly detrimental. |
| **Moisture** | **$H_2O$** | Affects weight during |
| **Loss on Ignition (LOI)** | **LOI** | Measures the weight loss due |

## PHYSICAL PROPERTIES

| Property | Description & Importance |
|---|---|
| **Color** | Varies widely: Hematite (steel-gray to black, reddish-brown in soil); Magnetite (black); Goethite/Limonite (yellowish-brown to dark brown). |
| **Luster** | Can be metallic (e.g., specular hematite), submetallic, or earthy. |
| **Specific Gravity** | Very high (4.5 - 5.3): This is a key identifying feature. It feels noticeably heavy for its size. This property is also used in beneficiation (density separation). |
| **Streak** | The color of the powdered mineral. Hematite has a reddish-brown streak, which is a definitive test. Magnetite has a black streak. |
| **Hardness** | Varies by type: Hematite (~5.5-6.5 on Mohs scale); Magnetite (~5.5-6.5); Goethite (~5.0-5.5). |
| **Porosity** | Affects the crushing strength and behavior in the blast furnace. Highly porous ores are more reducible. |
| **Lump Size & Fines Generation** | Crucial for shipping and processing. Ideally, ore is shipped in a specific size range to ensure permeability of the blast furnace burden. Fines must be agglomerated into sinter or pellets. |
| **Abrasion Index & Tumbler Index** | Measures the physical strength of the ore lumps and their resistance to degradation during handling and shipping. High strength is desired to minimize fines generation. |

# COPPER ORE

*Copper ore is a natural mineral aggregate containing a sufficient concentration of copper to make its extraction economically viable. Copper rarely appears in its native (metallic) form. Instead, it is found in a variety of minerals, each with different chemical compositions and processing requirements.*

## CHEMICAL ANALYSIS

| Component | Symbol | Importance & Impact |
|---|---|---|
| **Copper (Total)** | **Cu** | **The primary value component.** Reported as a percentage (e.g., 0.8% Cu, 2.1% Cu). |
| **Sulfur** | **S** | **Crucial for mineral identification.** High S indicates **sulfide ore** (e.g., chalcopyrite), which is processed by smelting. Low S suggests **oxide ore**, processed by leaching (SX-EW). |
| **Iron** | **Fe** | The most common gangue element. Major component of chalcopyrite ($CuFeS_2$). Reports to slag during smelting. High Fe can indicate a more refractory (harder to process) ore. |
| **Silica** | **$SiO_2$** | The main component of the host rock (gangue). It is acid-consuming. In smelting, it acts as a flux to form slag. In leaching, high $SiO_2$ is generally neutral but can cause operational issues. |
| **Alumina** | **$Al_2O_3$** | A gangue component. In smelting, it affects slag viscosity and can make slag handling difficult if too high. |
| **Arsenic** | **As** | **A major penalty element.** Highly toxic. Causes problems in smelting and must be removed. Contaminates cathodes and makes copper brittle, severely reducing its market value. |
| **Antimony** | **Sb** | **Penalty element.** Similar negative effects to arsenic, causing brittleness in final copper products. |
| **Bismuth** | **Bi** | **Penalty element.** Even small amounts can severely degrade the electrical conductivity and workability of copper. |

## PHYSICAL PROPERTIES

| Property | Description & Importance |
|---|---|
| **Color** | Extremely variable. Depends entirely on the dominant minerals. Can be yellow (chalcopyrite), iridescent purple/blue (bornite), bright green/blue (malachite/azurite), or the color of the host rock (often gray). |
| **Hardness** | Varies widely based on the host rock (gangue minerals). The gangue is often silicate minerals like quartz, which are very hard. This determines the energy required for crushing and grinding. |
| **Specific Gravity** | Moderately high. Copper minerals are dense (e.g., chalcopyrite SG ~4.2, bornite SG ~5.1). The overall ore rock will be denser than average rock due to the presence of these heavy metals. This property is used in gravity separation during |
| **Fracture & Tenacity** | The ore's tendency to break apart (brittle vs. malleable) affects crushing and grinding efficiency. |
| **Grade & Distribution** | How the copper minerals are distributed within the rock (e.g., finely disseminated vs. in large veins) determines the grind size needed to "liberate" the copper particles for concentration. |

# SILICA QUARTZ

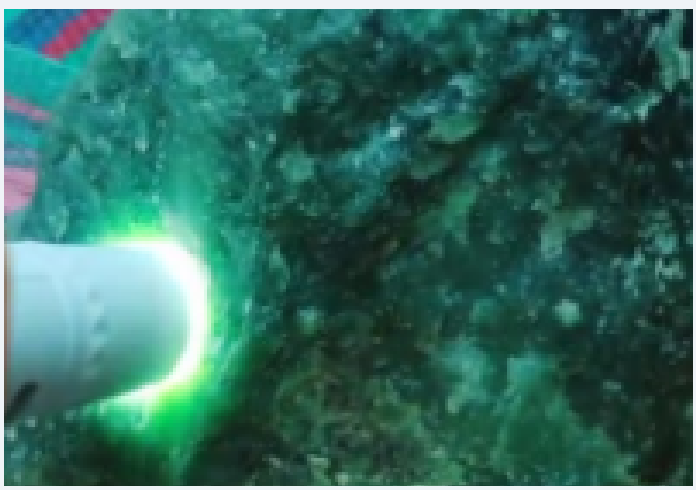
*Silica Quartz is a hard, crystalline mineral composed of silicon and oxygen atoms ($SiO_2$). It is one of the hardest and most abundant minerals on Earth. The value of silica quartz is determined by its incredibly high silica content and low levels of impurities, making it a critical raw material for numerous high-tech and industrial applications.*

| Key Applications | Description & Industry Usage |
|---|---|
| **Glass Manufacturing** | The primary use. Essential for producing all types of glass, including container glass (bottles), flat glass (windows, mirrors), fiberglass, and specialty glass |
| **Metallurgy** | Used as a flux in smelting operations to separate impurities from metals. A key raw material in producing ferrosilicon alloys. |
| **Foundry & Casting** | High-quality silica sand is used to create molds and cores for metal casting in automotive and aerospace industries due to its thermal stability |
| **Chemicals** | he base material for producing sodium silicate, silicon carbide, and other silicon-based compounds.<br>·Construction: A fundamental component in ceramics, tiles, industrial ceramics, and |
| **Oil & Gas** | Used as a proppant in hydraulic fracturing ("fracking") to hold open fissures in underground rock formations.<br>Other Uses: Abrasives, filtration systems, paints & coatings, and even in electronics |

**Our Supply from Pakistan:**
Hamza Enterprises sources high-grade Silica Quartz from premium deposits in Pakistan. Our product is known for its:
·High Purity: Consistently high $SiO_2$ content.
·**Optimal Grain Size**: Customizable crushing and screening to meet specific customer specifications.
·**Low Impurities:** Controlled levels of iron, aluminum, and other oxides.
·Reliable Supply: Consistent quality and volume from our robust mining and ---**Logistics network.**
We are ready to supply both lump and processed sand forms to meet your industrial needs.

# NEPHRITE

Nephrite is one of the two distinct minerals commonly known as jade (the other being Jadeite). It is a calcium and magnesium-rich amphibole mineral, renowned for its **toughness** (resistance to breakage), not just its hardness. Its colors range from subtle and soothing shades of spinach-green, celadon, and creamy white to deep greens and even black.



# BENTONITE

*Bentonite is a clay generated frequently from the alteration of volcanic ash,consisting predominantly of smectite minerals, usually montmorillonite.*
*Applications: Ceramic Tile, Papermaking, Cat litter, Casting, Drilling, Detergent additive, Paint and varnish.*
*Bentonite is known for its very high water absorption, most of the island builders use bentonite for the sea drying process to build the island.*
*Bentonite is used as a bonding material in the preparation of molding sand for the production of iron, steel and non-ferrous casting. The unique properties of bentonite yield green sand moulds with good flowability, compactability and thermal stability for the production of high quality castings.*

## BENTONITE OCMA ANALYSIS

| Requirements | Unit | Result |
|---|---|---|
| Viscometer dial at 600 rpm | – | 30 – 66 |
| Water loss | ml | 13 – 15 |
| Moisture | % | 8 – 10 |
| Residue on ASTM Sieve No:100 | Wt.% | Max 2 |
| Residue on ASTM Sieve No:200 | Wt.% | Max 2.5 |
| Ratio | – | Max 6 |

## PHYSICAL PROPERTIES

| Description | Ind | Max |
|---|---|---|
| Water of Plasticity % | 68.9 | – |
| Dry MOR (Kg/Cm²) | 48.5 | – |
| Shrinkage % | 10.42 | 7.5 |
| Loss on Ignition % | 7.04 | 2.68 |
| Fired MOR (Kg/Cm²) | 430 | – |
| Water Absorption % | 1.96 | – |
| L* | 81.08 | 76.47 |
| a* | -0.07 | 1.08 |
| b* | 9.24 | 9.6 |
| Temperature (°C) | 1206/1216 | – |
| Cycle (min) | 49 | – |

## CHEMICAL ANALYSIS

| Parameter | % |
|---|---|
| $SiO_2$ | 69.14 |
| $Al_2O_3$ | 13.41 |
| $Fe_2O_3$ ($Fe_t$) | 0.91 |
| CaO | 0.97 |
| MgO | 2.13 |
| $Na_2O$ | 2.51 |
| $K_2O$ | 0.05 |
| Loss on ignition | 10.42 |
| $SiO_2$ | 75.5 |
| $Al_2O_3$ | 13.6 |
| $Fe_2O_3$ | 0.95 |
| CaO | 0.48 |
| MgO | 0.41 |
| $Na_2O$ | 2.36 |

# DRILLING BENTONITE

*The most common use of bentonite is in drilling fluids. The bentonite in the flush fluid lubricates and cools the cutting tools whilst protecting against corrosion. As the drilling fluid generates hydrostatic pressure in the borehole, it hinders fluid and gas penetration.*

## CHEMICAL ANALYSIS

| $SiO_2$ | $Al_2O_3$ | $Na_2O$ | MgO | $K_2O$ | $TiO_2$ | MnO | CaO | $P_2O_5$ | $Fe_2O_3$ | $SO_3$ | LOI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.7 | 14.34 | 3.28 | 4.04 | 0.56 | 0.66 | 0.02 | 0.8 | 0.08 | 2.56 | 0.07 | 12.1 |

## PHYSICAL ANALYSIS (OCMA)

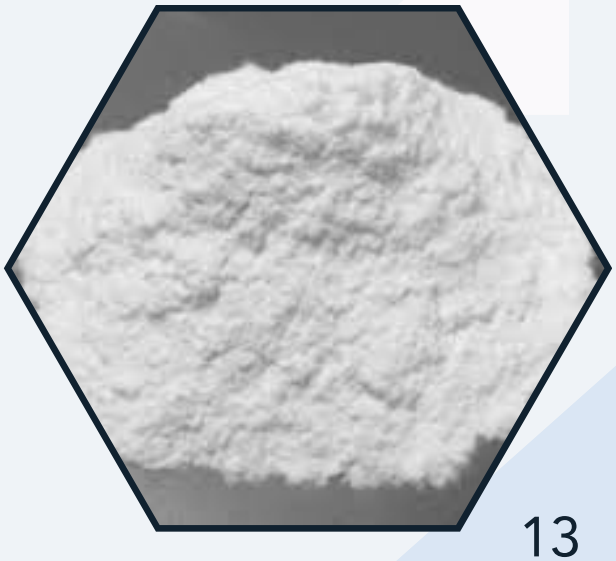
| Parameters | Unit | Result |
|---|---|---|
| Viscometer dial reading at 600 | r/min | 43 |
| Viscometer dial reading at 300 | r/min | 37 |
| Plastic viscosity (PV) = R600- | CP | 6 |
| Yield point (YP) = R300-PV | lb/100ft² | 31 |
| YP / PV Ratio | lb/100ft²/cp | 5.16 |
| Fluid Loss | ml | 13.2 |
| Moisture Content | % | 8.5 |
| Residue > 75 micrometers | wt.% | 2.5 |

## CHEMICAL ANALYSIS

| $SiO_2$ | $Al_2O_3$ | $Na_2O$ | MgO | $K_2O$ | $TiO_2$ | MnO | CaO | $P_2O_5$ | $Fe_2O_3$ | $SO_3$ | LOI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 60.7 | 14.34 | 3.28 | 4.04 | 0.56 | 0.66 | 0.02 | 0.8 | 0.08 | 2.56 | 0.07 | 12.1 |

## PHYSICAL ANALYSIS (API)

| Parameters | Unit | Result |
|---|---|---|
| Viscometer dial reading at 600 | r/min | 43 |
| Viscometer dial reading at 300 | r/min | 37 |
| Plastic viscosity (PV) = R600- | CP | 6 |
| Yield point (YP) = R300-PV | lb/100ft² | 31 |
| YP / PV Ratio | lb/100ft²/cp | 5.16 |
| Fluid Loss | ml | 13.2 |
| Moisture Content | % | 8.5 |
| Residue > 75 micrometers | wt.% | 2.5 |

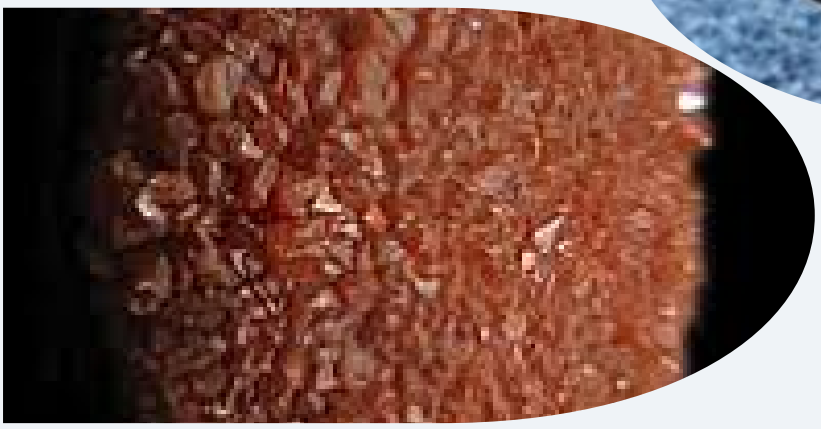


# SALT

*Salt is another mineral which we are able to supply diferent types with various purity in to category: 1: edible salt 2: industrial salt: it can be used as a raw material when manufacturing chemicals such as chlorine, soda ash, and caustic soda. In addition, industrial salt can be used to manufacture products such as sodium nitrate, sodium bicarbonate, liquid sodium, metallic sodium, sodium sulfate, and more.*

## SALT ANALYSIS

| Component | Limit / Approx. Value |
|---|---|
| Sodium Chloride (NaCl) | 98–99.5% (approx.) |
| Potassium ($K^+$) | ~100 ppm (approx.) |
| Calcium (Ca) | ~30–40 ppm (approx.) |
| Magnesium (Mg) | ~30–40 ppm (approx.) |
| Iron (Fe) | ~10–15 ppm (approx.) |
| Copper (Cu) | Max. 2 ppm |
| Cadmium (Cd) | Max. 0.2 ppm |
| Insoluble Matter | Max. 0.01% |
| Lead (Pb) | Max. 0.005 ppm |
| Mercury (Hg) | Max. 0.001 ppm |
| Arsenic (As) | Max. 0.0002 ppm |



# SILICA SAND

This material is used in the industries of glass and ceramics, fillers, electronics, optics and semi-media, lighting and infrared, and optical fibers and computers. It is used in porcelain, concrete, grass, rice paddies, ferrosilicon production, ceramics, lime sand brick production, casting, and sodium silicate production. In general, this material is the main constituent of many ceramics and glass. This material also has many uses in technical applications.

Glass silica: Silica is the main element in all types of glass. The main glass products include utensils such as glass bottles and crystalcups and flat glass such windows and mirrors and vehicle glass and light ing glass and tableware are used and silica is cast. It is widely used in casting metal parts. Molten metal is poured into molds made of silica sand. Fine-grained silica is also a component of most clay bodies and a major component of ceramic glaze. Everyday products include tableware,sanita ry wa re,jewel ry,and walland tile. Home Jacuzzis usually use diferent grades of premium silica. Silica is also used in sports venues, for example for the floors of equestrian clubs, in the production of artificial turf, golf and football fields, and in parks as a playground. In general, this useful substance is used in the production of chemicals and metals, filters in some industries, and in the production of plastics and agri-cultural products.

| Property | Composition (%) |
|---|---|
| Silicon Dioxide ($SiO_2$) | > 85% |
| Free Carbon (C) | < 4% |
| Sulfur (S) | < 1% |
| Ferric Oxide ($Fe_2O_3$) | < 2.5% |
| Aluminum Oxide ($Al_2O_3$) | < 1% |
| Calcium Oxide (CaO) | < 1% |
| Potassium Oxide + Sodium Oxide ($K_2O$ + | < 3% |
| Chloride (Cl) | < 0.2% |
| Loss on Ignition (L.O.I) | < 6% |
| Moisture | < 2% |
| Specific Surface Area | ~20 $m^2/g$ |

# LIMESTONE

Limestone is a sedimentary rock composed principally of calcium carbonate (calcite) or the double carbonate of calcium and magnesium (dolomite). It is commonly composed of tiny fossils, shell fragments and other fossilized debris.

In the production of steel, a large amount of limestone and crude lime is used, which can be said to be one of the applications of lime in this field. Also, some insulating materials that are molded as units are silica and lime. Lime as a factor The bond reacts with the silica in a mixture of its own, and as a result the reaction of silicate and lime is used in the manufacture of insulation.

One of the applications of lime is in the preparation of cement, in which about 60 to 70% of lime is used, and after heating it, carbon dioxide is released.

| Chemical Component | Percentage (%) |
|---|---|
| Calcium Oxide (CaO) | 54.77% |
| Calcium Carbonate ($CaCO_3$) | 97.80% |
| Silica ($SiO_2$) | 0.48% |
| Sulfur Trioxide ($SO_3$) | 0.20% |
| Chloride (Cl) | 0.03% |
| Moisture ($H_2O$) | 0.49% |

| Particle Size (mm) | Unit |
|---|---|
| Below 1 mm | 2.87% |
| 1 mm – 10 mm | 9.74% |
| 10 mm – 20 mm | 17.72% |
| 20 mm – 30 mm | 35.12% |
| 30 mm – 40 mm | 25.72% |
| 40 mm – 50 mm | 8.83% |
| Above 50 mm | 0.00% |

# DOLOMITE

Dolomite long has been used as a source of calcium and magnesium for animal feeds. It is now available in a number of dosage forms including tablets and chewable wafers, to be taken as dietary supplements. Dolomite is used as a source of magnesia (MgO), a feed additive for livestock,a sintering agent and flux in metal processing as an ingredient in the production o glass, brickes and ceramics. Dolomite is used as a source of magnesium meta land of magnesia (MgO), which is a constituent of refractory bricks. Dolomite serves as the host rock for many lead, zinc, and copper deposits. Dolomite also serves as an oil and gas reservoir rock. This can produce pore spaces in the rock that can be filled with oil or natural gas that migrate in as they are released from other rock units. This makes the dolomite a reservoir rock and a target of oil and gas drilling. Agriculture grade dolomite used for soil neutralization and conditioner to correct acidity. It also finds use as filler in fertilizers. The main ingredient is calcium carbonate, it helps to increase the pH of acidic soils and it provides a good source of calcium for plant. It improves the water penetration for acidic soil.

## APPLICATIONS

**1-Steel of iron and steel and metal industries**
**2-Petrochemical industry**
**3-Glass industriy**
**4-Painng industries**
**5-Consumption in refractory products**

## TYPICAL CHEMICAL PROPERTIES

| | |
|---|---|
| Calcium Oxide (CaO) | 30 – 32% |
| Magnesium Oxide (MgO) | 20 – 21% |
| Silica ($SiO_2$) | 0.2 – 0.5% |
| Ferric Oxide ($Fe_2O_3$) | 0.1 – 0.3% |
| Aluminum Oxide ($Al_2O_3$) | 0.05 – 0.07% |
| Loss on Ignition (L.O.I) | 45 – 47% |

# MAJOR PROJECTS & WORK ORDERS

## Proven Excellence in Global Supply Chains

Hamza Enterprises has a established history of executing large-scale supply contracts for a diverse international clientele. Our operational expertise ensures timely delivery, consistent quality, and seamless logistics from mine to port to destination.

Below is a snapshot of recent major shipments, demonstrating our capacity and reliability:

**RECENT SHIPMENTS & ORDERS**

| Product | Volume | Destination | Key Specifications | Year |
|---|---|---|---|---|
| **Drilling Barite (API 13A)** | 5,000 MT | Middle East | SG: 4.20+ g/cm³, Residue >75µm: <2.5% | 2025 |
| **Bauxite Ore (Metallurgical)** | 15,000 MT | China | $Al_2O_3$: 50-52%, $SiO_2$: <10%, A/S Ratio: ≥10 | 2025 |
| **Bentonite (OCMA/API Grade)** | 10,000 MT | South East Asia | Yield Point: 30+ lb/100ft², Fluid Loss: <15 ml | 2024 |
| **Silica Quartz** | 5,000 MT | Local Exporter | 200 Mesh & Lumps | 2024 |
| **Bauxite Ore (Metallurgical)** | 59917 MT | Turkey to China | $Al_2O_3$: 47.11%, $SiO_2$: <11.96%, A/S Ratio: ≥10 | 2025 |

**Our Commitment:**

- Quality Assurance: Every shipment is backed by pre-shipment inspection and certified lab reports.
- Logistics Mastery: Expertise in handling bulk vessel chartering, container stuffing, and all export documentation.
- Consistent Supply: Strong relationships with mines and quarries guarantee a non-interrupted supply chain.

We are ready to become your trusted and reliable partner for minerals from Pakistan.

# ROCK PHOSPHATE

Rock Phosphate is a naturally occurring, unrefined sedimentary mineral and the fundamental global source of phosphorus (P). It is a critical raw material of strategic importance, forming the essential foundation for global food security. As a non-renewable resource, its primary role is to supply phosphorus—a macronutrient indispensable for all plant life—to the agricultural sector, either through direct application to soils or as the key feedstock for the manufacture of soluble phosphate fertilizers and industrial phosphorus compounds.

## CHROMITE GRADES & SPECIFICATIONS

| Parameter | Specification / Description |
|---|---|
| **Form** | Powder, granules, or crushed ore |
| **Primary Composition** | Fluorapatite / Carbonate-Fluorapatite |
| **$P_2O_5$ (Phosphate)** | 26% – 34% (varies by deposit) |
| **CaO (Calcium Oxide)** | 40% – 56% |
| **F (Fluorine)** | 2% – 4% |
| **Solubility** | Largely insoluble in water; soluble in citric acid |
| **Origin** | Sedimentary marine deposits |

## Why Choose Our Rock Phosphate?

We supply high-grade sedimentary rock phosphate sourced from reliable deposits, ensuring consistent quality and composition. Our product is expertly beneficiated to optimize particle size and minimize impurities, making it an ideal and cost-effective raw material for fertilizer manufacturers and a trusted soil nutrient builder for sustainable agriculture. By securing a supply of rock phosphate, you invest in the foundational element of the global food production chain.

# CHROMITE

Chromite is the sole commercially viable ore of chromium (Cr), a transition metal critical to modern industry. It is a naturally occurring oxide mineral belonging to the spinel group, with the chemical composition $FeCr_2O_4$. Chromite's unparalleled value lies in its exceptional properties—when processed, it provides chromium's unique characteristics: corrosion resistance, high strength at elevated temperatures, and hardness. This makes it an indispensable, non-substitutable raw material for metallurgical, refractory, and chemical applications, forming the backbone of stainless steel production and other high-performance materials.

## CHROMITE GRADES & SPECIFICATIONS

| Grade | $Cr_2O_3$ Content (%) | Cr:Fe Ratio | Key Characteristics | Primary Use |
|---|---|---|---|---|
| **Metallurgical Grade** | 48% – 54% | 2.8:1 – 3.5:1 | High $Cr_2O_3$ (>46%), low $SiO_2$ (<3.5%), | Production of ferrochrome for |
| **Refractory Grade** | Moderate | Lower than metallurgical | High $Al_2O_3$ content, good thermal | Manufacturing refractory bricks |
| **Chemical Grade** | High | Varies | High $Cr_2O_3$ with higher $SiO_2$, | Chemical processing and |

## Why Choose Our Chromite?

We source chromite from strategically selected deposits to meet specific industrial requirements. Our focus is on providing consistent, high-quality ore with tightly controlled chemistry—whether for high-ratio metallurgical feed, stable refractory material, or specialized chemical grade. We ensure reliable supply chain logistics for this critical industrial mineral, supporting your production of durable, high-performance materials that define modern infrastructure, manufacturing, and technology. Partner with us for a secure foundation in chrome supply.

# WE ARE BETTER THAN OUR COMPETITOR

# HAMZA ENTERPRISES

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