



An ISO 9001:2008 Certified Company

# AKJ MINCHEM PRIVATE LIMITED

**WE EMPOWER YOUR GROWTH**

Inspiring quality & performance for satisfying our customer needs is the #1 and only aim of our management team.



AKJ MINCHEM PVT LTD is a part of nearly 22 years old AKJ Group of companies.

We are engaged in processing & distribution of industrial minerals like **Talc, Garnet, Quartz, Soda Feldspar, Potash Feldspar, Mica, Calcite, Dolomite, China Clay, Red Ocher, Pyrophyllite, Barites** etc. and, Specialty chemicals like **Zinc Stearate, Calcium Stearate, Calcium Oxide** and **Zinc Oxide** etc.

We have an in-house developed processing system with a capacity of processing 12,000 MT of material per annum.

### Advantages to our Clients:

- ✚ Mining Advantages.
- ✚ Processing Advantages.
- ✚ Price Advantages.

Quality Assurance with Time Bound Delivery.

## GARNET / ABRASIVE SAND

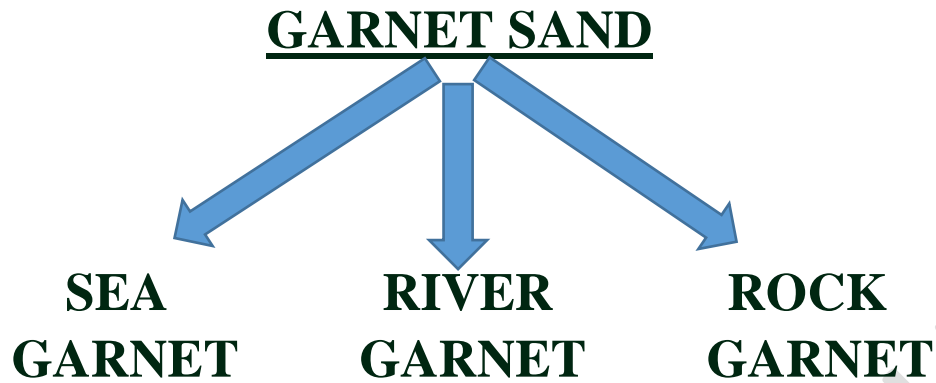
Garnet is the name used for a large group of rock-forming minerals. These minerals share a common crystal structure and a generalized chemical composition of  $X_3Y_2(SiO_4)_3$ . In that composition, "X" can be Ca, Mg,  $Fe^{2+}$  or  $Mn^{2+}$ , and "Y" can be Al,  $Fe^{3+}$ ,  $Mn^{3+}$ ,  $V^{3+}$  or  $Cr^{3+}$ .

These minerals are found throughout the world in sea, river, metamorphic, igneous, and sedimentary rocks. Most garnet found near Earth's surface forms when a sedimentary rock with a high aluminum content, such as shale, is subjected to heat and pressure intense enough to produce schist or gneiss. Garnet is also found in the rocks of contact metamorphism, subsurface magma chambers, lava flows, deep-source volcanic eruptions, and the soils and sediments formed when garnet-bearing rocks are weathered and eroded.

Most people associate the word "garnet" with a red gemstone; however, they are often surprised to learn that garnet occurs in many other colors and has many other uses. In the United States, the major industrial uses of garnet in 2012 were waterjet cutting (35%), abrasive blasting media (30%), water filtration granules (20%), and abrasive powders (10%).

<b>CHEMICAL ANALYSIS</b>	
AL <sub>2</sub> O <sub>3</sub>	25±2%
FE <sub>2</sub> O <sub>3</sub>	35±2 %
SiO <sub>2</sub>	40±2%
MGO	1±.05%
CAO	0.1%
NA <sub>2</sub> O	0.1%
K <sub>2</sub> O	0.1%
LOI	0.2%

<b>PHYSICAL ANALYSIS</b>	
Specific gravity	4.1
Bulk density. gm/cm <sup>3</sup>	2.40
Hardness (Moh's scale)	7.5-8.00
Conductivity	<25 ms/m



Following are the general Washed Garnet Sand Grades :

Item / Parameter	AMPL-G1	AMPL-G2	AMPL-G3	AMPL-G4	AMPL-G5	AMPL-G6	AMPL -G7	AMPL -G8
Garnet Grades / Model no.	GRANO W3060	GRANO W2040	GRANO W1020	GRANO W80	GRANO W120	GRANO S80	GRANO S120	GRANO S3060
Product Name	Washed River Garnet Grains	Washed River Garnet Grains	Washed River Garnet Grains	Washed River Garnet Grains	Washed River Garnet Grains	Washed Sea Garnet Grains	Washed Sea Garnet Grains	Washed Sea Garnet Grains
Color	Pink+Red	Pink+Red	Pink+Red	Pink+Red	Pink+Red	Pink	Pink	Pink
Purity	97%+	97%+	97%+	93±1%	90±2%	93±1%	90±2%	95%±2%
SiO <sub>2</sub> (%)	40±2%	40±2%	40±2%	40±2%	40±2%	40±2%	40±2%	40±2%
Al <sub>2</sub> O <sub>3</sub> (%)	25±2%	25±2%	25±2%	25±2%	25±2%	25±2%	25±2%	25±2%
Fe <sub>2</sub> O <sub>3</sub> (%)	35±2 %	35±2 %	35±2 %	35±2 %	35±2 %	35±2 %	35±2 %	35±2 %
CaO (%)	0.02	0.02	0.02	0.02	0.2	0.2	0.2	0.2
MgO (%)	1±.05%	1±.05%	1±.05%	1±.05%	1±.05%	1±.05%	1±.05%	1±.05%
PARTICLE SIZE	30/60 MESH	20/40 MESH	10/20 MESH	80 MESH	120 MESH	80 MESH	120 MESH	30/60 MESH
Applications	Export Quality; Sand Blasting; Water Jet Cutting; Abrasive Blasting; Polishing; Water treatment	Export Quality; Sand Blasting; Water Jet Cutting; Abrasive Blasting; Polishing; Water treatment	Export Quality; Sand Blasting; Water Jet Cutting; Abrasive Blasting; Polishing; Water treatment	Export Quality; Sand Blasting; Water Jet Cutting; Abrasive Blasting; Polishing; Water treatment	Export Quality; Sand Blasting; Water Jet Cutting; Abrasive Blasting; Polishing; Water treatment	Export Quality; Sand Blasting; Water Jet Cutting; Abrasive Blasting; Polishing; Water treatment	Export Quality; Sand Blasting; Water Jet Cutting; Abrasive Blasting; Polishing; Water treatment	Export Quality; Sand Blasting; Water Jet Cutting; Abrasive Blasting; Polishing; Water treatment

\* **Tailor Made** : Apart from the above grades, we do manufacture tailor made **Garnet Sand** based upon clients

\* **Packaging** : 25/50 kgs pp bag; 1ton/bag; 1\*20 fcl can load 28±1 MT or upon clients' requirement.

## Application of Garnet :

They are used in waterjet cutting, "sand" blasting, sandpaper, water filtration, and a number of other uses. Almandine is the hardest garnet and also the most abundant. It is the garnet of choice for most abrasive applications.

- **Garnet Sand For Sand Blasting :** In the process of surface preparation, Super Garnet is blasted on to the surface of the steel with the use of high pressure compressed air. This process creates a profile, which in turn helps in extending the life of the coating. Super Garnet is the prescribed abrasive for oil companies, petrochemical tankworks, offshore platforms, pipelines, heavy equipment repair, industrial parts cleaning and ship building companies.
- **Garnet Sand For Water Jet Cutting :** It is one of the latest and fast growing cutting technologies employed by steel companies to cut metals accurately and precisely. Owing to its faster productivity, non-heat generating advantages and lower cost, it is popular in the USA and Europe. Super Garnet is the only abrasive that can be used in waterjet cutting machines, widely used in cutting of marble, granite, artificial stones, concrete, aluminum, titanium, high strength steel and steel bridge decking, automotive glass, textiles, corrugated box board, plastic laminates, aerospace composites, etc.,
- **Garnet For Abrasive :** Garnet granules are also used in abrasive blasting (commonly known as "sand blasting"). In these processes, a tool propels a stream of abrasive granules (also known as "media") against a surface using a highly pressurized fluid (usually air or water) as a propellant. Abrasive blasting is done in order to smooth, clean, or remove oxidation products from metals, brick, stone, and other materials. It is usually much faster than sanding by hand or with a sanding machine. It can clean small and intricate surfaces that other cleaning methods would miss. Abrasives of various hardnesses can be used to clean a surface of greater hardness, without damaging the surface. it is used in high-quality coated and bonded abrasives such as abrasive papers, clothes, wheels, etc.,
- **Garnet Powder For Polish :** Garnet should be used to Coarse polishing. Micronised form of Super Garnet is used for polishing glass face plates of televisions, computer monitors and optical glasses. Polishing and Precision Finishing of high pressure valves and for artistic engraving or matting of surfaces such as glass, marble, granite, etc.
- **Garnet Sand For Water Treatment/water Filtration :** Because Of Its Unique Grain Structure, Our Product Is Also Used As A Filtering Media In Water Treatment Facilities.

- **Garnet As Gemstone** : Garnet has been used as a gemstone for over 5000 years. It has been found in the jewelry of many Egyptian burials and was the most popular gemstone of Ancient Rome. It is a beautiful gem that is usually sold without treatment of any kind. It is also durable and common enough that it can be used in jewelry at a relatively low cost.
- For stone washing of denim fabrics, Super Garnet provides only fading of dye without damaging the cloth or stitching.
- Used in Industrial Flooring for its anti-skid properties.

Super Garnet also finds wide-ranging applications in several industries which has a preferential acceptance.



For more information please visit us @ [www.akjminchem.co.in](http://www.akjminchem.co.in)

**ADDRESS: C/O SHREE BALAJI MARBLES & MINERALS, NH-8, SUKHER, UDAIPUR -313001**

Call +91 9509806461 · E-Mail: [akjminchem@gmail.com](mailto:akjminchem@gmail.com)/[info@akjminchem.com](mailto:info@akjminchem.com)

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