



MINERAL GULF MINING PERLITE, SCORIA AND BLACK PIGMENT

ABOUT OUR COMPANY

Mineral Gulf Mining Company is a distinguished entity that was established in 2020 as a sister company of Khaled Al-Mutairi Establishment for Contracting, which has been operating since 2000. The company has made significant strides in exploring mineral deposits situated within the Kingdom of Saudi Arabia, and its unwavering focus is directed towards the extraction of these resources.

MGM is particularly interested in mineral deposits that bear gypsum, bauxite, bentonite, siliceous minerals, and perlite. Perlite, in particular, has garnered considerable attention due to its widespread use in various industries, including construction, horticulture, and agriculture. The company has successfully mined perlite from the Jable Shama Area in the Makkah Region and has since utilized the mineral in the production of Perlite Expansion Units designed and fabricated exclusively within the Kingdom.



SPECIFICATION OF EXPANDED PERLITE



US STANDARD SIEVE NO	PERCENTAGE RETAINED BY VOLUME	
	MAXIMUM	MINIMUM
ASTM SPECIFICATION C35, PLASTER AGGREGATE - PERCENTAGE RETAINED BY VOLUME		
4	0	-
8	5	0
16	60	10
30	95	45
50	98	75
100	100	88

ASTM SPECIFICATION C32, CONCRETE AGGREGATE - PERCENTAGE BY WEIGHT		
4	-	0
8	15	0
16	60	15
30	80	40
50	95	75
100	100	90

HORTICULTURAL AGGREGATE	TARGETAINED BY VOLUME
8	90
20	98

MANUFACTURING PROCESS

Perlite is a naturally occurring siliceous volcanic rock. The unique feature that sets perlite apart from other volcanic glasses is upon heating it to a suitable point in its softening range, and it expands four to twenty times its original volume.

This expansion is due to the presence of two to six percent combined water in the crude rock. This crude rock when quickly heated to above 850°C. The combined water vaporizes creating countless tiny bubbles in the softened glassy particles.

These tiny glass - sealed bubbles make perlite very light weight and gives the expanded perlite exceptional and incomparable physical properties. The colour of the expanded perlite is white although raw Perlite is light black to grayish white.

Expanded perlite can be manufactured to weight 32 to 240 kg/m³. Expanded Perlite has numerous uses in filtration process as filter, horticultural application, insulation in the construction industry, piping and equipment... as inner carriers, in multiple filler application and foundries, and as insulating material to avoid shrinkage.

The most common sizing of crude perlite for the production of plaster grades is -16 mesh size, and slightly coarser for concrete aggregate. Pre-heating is used below 850°C just prior to introducing on to the flame of the furnace.

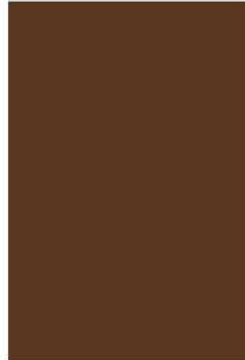
USES OF EXPANDED PERLITE

The greatest attribute of expanded perlite is its low thermal conductivity. This is the primary reasons for its application in construction and cryogenic engineering with different densities of expanded perlite's detrimental results in the conventional construction usages. The most common use of expanded perlite is insulating concrete roof deck construction, where the structural deck and insulation can be combined in one light weight slab by choosing from many structural forms.

Several companies manufacture compression molded insulation blocks and pipe covering composed of expanded perlite foundry application. Perlite is used in its in loose form as ladle cover for insulating the surface of the molten metal when delays in pouring occur, and as mold insulation for reducing shrinkage defects in the resulting casting.

Perlite has found a growing acceptance in industrial filtration because of its low specific gravity. Expanded perlite is being used as filter aids in various food products, brewages, chemicals, resins, pharmaceuticals, and many other industries.

Horticulturally, perlite has proven to be an ideal growing medium and soil conditioner. It is also being used as a carrier for herbicides and insecticides. Perlite is widely used in petroleum products dealing mostly with low temperature below -150°C . Expanded perlite is extensively used as filler, extenders, and carriers.



BLACK PIGMENT & GLITTER POWDER

Black pigment is a substance that is used to impart black color to various materials. It's typically made from carbon black, which is a form of elemental carbon produced by incomplete combustion of hydrocarbons. Carbon black particles are extremely small and have a high surface area, making them highly effective in absorbing light and producing a deep black color. The quality of black pigment depends on various factors such as particle size, purity, and dispersion. At our company, we provide high-quality black pigment that is carefully inspected and tested in our laboratory to ensure its quality and purity.

Glitter powder is another material that is commonly used in cosmetics, crafts, and decorations. Glitter powder is typically made from small particles of reflective material such as aluminum, plastic, or glass. The particles are coated with a layer of colored dye or metallic finish to give them a distinctive sparkle. The quality of glitter powder depends on factors such as particle size, shape, and reflectivity. At our company, we provide high-quality glitter powder that undergoes strict quality evaluation and testing to ensure it meets our customers' exacting standards.

Aside from providing high-quality products, we also offer our customers numerous benefits. Our lead time and shipment control are carefully managed to ensure timely delivery of our products. We also provide traceable quality evaluation, allowing our customers to verify the quality of the products they receive.



SCORIA ROCK

Scoria is a dark-colored volcanic rock with a vesicular texture, formed by the solidification of molten lava that contains a high concentration of gas bubbles. Due to its lightweight and porous nature, scoria has a variety of uses in construction, horticulture, and industry. Scoria is often mined from volcanic deposits and used in various applications.

One common use of scoria is as a lightweight aggregate in the production of concrete. Scoria's porous structure allows it to reduce the weight of concrete while maintaining its structural integrity. The use of scoria in concrete production also helps to reduce the environmental impact of concrete manufacturing by decreasing the amount of non-renewable resources needed to create concrete.

Scoria can be used as a filtration medium in water treatment processes. Scoria's porous structure makes it an effective material for filtering and purifying water. It can also be used as a lightweight filler in the production of insulation materials. Scoria's thermal insulation properties and its ability to reduce the weight of insulation materials make it an attractive option for a variety of industrial applications.



FILTER AID

Filter aid is a fine material which when added to a liquid that needs to be filtered help control flow and removal of solids. It does not interfere chemically with the liquid being filtered and is not readily compacted nor compressed by the exertion of pressures. Filter Aid filtration is a mechanical and not a chemical action. It strains on a micron scale the irregularly shaped particles interlace and overlay in a manner that leaves 80 to 90% voids or open spaces.

These voids form millions of microns especially the fine interstices between filter aid particles. The size of these openings is so minute that unwanted solids are strained from the liquids. The vast number of the openings compensates for their small size resulting in the fast flow rates and brilliant clarity.



MANAGEMENT STRUCTURE



**KHALED
ALMUTAIRI**
CHIEF EXECUTIVE OFFICER

Our team of highly skilled and dedicated professionals takes pride in ensuring the safe and efficient operation of our mining activities.

With our company's extensive experience in geology, engineering, equipment operation, and safety, we have managed to assemble an incredible team that brings a wealth of knowledge and expertise to our operations.

Under Khaled Almutairi's leadership, MGM has experienced unprecedented growth in the mining industry. His strategic vision, coupled with his ability to motivate and inspire his team, has resulted in a culture of excellence, innovation, and continuous improvement.

TECHNICAL ADVISOR



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Our Clients &
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