



Jalan Mica Exports



An ISO 9000:2015 Certified Company

MUSCOVITE MICA BLOCKS



RUBY MICA BLOCKS



GREEN MICA BLOCKS



SPOTTED MICA BLOCKS



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Muscovite is a phyllosilicate mineral of aluminum - $KAl_2(OH, F)_2AlSi_3O_{10}$. Is a flexible and elastic mineral, transparent to translucent, with a glassy, silky or pearl (cleavage planes surfaces) gloss. Perfect cleavage to produce thin sheets or flakes. This cleavage allows mica minerals to be easily split into thin parallel sheets.

Muscovite, often called '**white mica**', is the lightest colored mica mineral. Usually colorless, white or silver, occasionally yellow or brown.

Muscovite, is found in igneous, metamorphic and sedimentary rocks. In igneous rocks it is a primary mineral that is especially common in granitic rocks. In granite pegmatites muscovite is often found in large crystals with a pseudo-hexagonal outline. These crystals are called "books" because they can be split into paper-thin sheets. Muscovite rarely occurs in igneous rocks of intermediate, mafic and ultramafic composition.

Muscovite, can form during the regional metamorphism of argillaceous rocks. The heat and pressure of metamorphism transforms clay minerals into tiny grains of mica which enlarge as metamorphism progresses. Muscovite can occur as isolated grains in schist and gneiss or it can be abundant enough that the rocks are called "**mica schist**" or "**micaceous gneiss**".

Muscovite is a very common mineral and particularly widespread.

Is used as an excellent electrical and thermal insulator. Often used in the manufacture of rubber, wallpaper, plastics, paints, ceramics, in paper industry, for production of plasters and roof coverings.



TYPICAL APPLICATIONS OF MUSCOVITE

- **Gypsum wallboard joint cements**

Ground mica is used as a filler and extender in gypsum wallboard joint compounds to fill the joints between panels of wallboards, as well as in the finished coating of ceilings. In this particular application, mica contributes to make a non-absorbing smooth surface that reduces shrinkage and eliminates cracks. Mica further provides a pervasive reinforcing matrix form of network of interlocking thin flakes on to which cement particles bond. Ground mica is also used in all types of sealers for porous surfaces, such as, wallboard masonry and concrete slabs to



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reduce penetration and improve holdout. It permits a thicker film to be applied and at the same time reduces sagging. Cracking is reduced by the reinforcing action of the mica flakes and gaps and holes in rough masonry are bridged by mica mixed compound applied.

- **Gypsum wall boards slabs panels**

Ground mica is used in lightweight fire-resistant prefabricated gypsum wallboard slabs and panels in replacement of asbestos where thermal insulation and acoustic qualities are of particular importance. These slabs manufactured from mixture of ground mica, gypsum and cement compounded in different proportion after suitable curing by means of a number of formulations are fitted to individual sections of steel work according to suitability in building constructions. They could be self finished and could be plastered or otherwise treated to provide a decorative finish. They possess excellent characteristics of high heat conductivity, super tensile strength, as well as, low bulk density. The compounds are non-combustible, free flowing, chemically inert, resilient and non-abrasive. They have good thermal insulation properties and an excellent characteristic for sound absorption. Low shrinkage and coefficient of expansion, good dimensional stability, extremely low water absorption are some of its additional outstanding features which make mica an ideal product for use in the above applications.

OTHER APPLICATIONS

Mica is also used as:

- covering the surface to prevent sticking to the asphalt roofing felts and roofing tiles
- ingredient in special lubricants to the axis of railway wagons
- in boilers and steam pipes as a buffer zone with insulating properties
- absorber explosive substances
- heat insulator for refractory bricks, tiles and tiles in cosmetic products for the effect of pearl and shiny
- stiffener paper for magazines
- as a softener in the porcelain and earthenware to add plasticity clay
- the addition of special inks to obtain the right consistency
- wallpaper decorative layer which allows to receive excellent shine effect and so on.



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TECHNICAL DATA SHEET

ANALYSIS OF MUSCOVITE MICA

CHEMICAL COMPOSITION		PHYSICAL COMPOSITION	Approx
Silica (SiO ₂)	48.65% to 51.50	Specific Gravity	2.82
Alumina (Al ₂ O ₃)	33.10%	Refraction Index	1.58
Potassium Oxide (K ₂ O)	9.87%	Hardness (Moh's Scale)	2.5
Ferric Oxide (Fe ₂ O ₃)	2.48%	pH Value (B.S. 3483)	7.7
Sodium Oxide (Na ₂ O)	0.80%	pH for Distilled Water	4.2
Titanium Di-Oxide (TiO ₂)	0.20%	Effect by Common Acids	Slight
Calcium Oxide (CaO)	0.21%	Phericity Factor	0.01
Magnesium Oxide (MgO)	0.38%	Bulk Density (Gms/CC)	0.17 - 0.29
Phosphorous (P)	0.03%		
Sulphur (S)	0.01%		
Graphitic Carbon (C)	0.44%		
Ignition Loss (LOI)	3.50%		
Moisture @ 105°C (H ₂ o)	0.25%		



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MICA BLOCKS QUALITY ARE CLASSIFIED IN 16 TYPES OF SPECIFICATIONS AS MENTIONED BELOW

V-1 Ruby Clear - Hard, of uniform colour, flat, free all stains and foreign inclusions, waves, cracks, buckles and other similar defects. Crystallographic discolouration is permitted to a limited extent.

V-2 Ruby Clear and Slightly Stained - Hard, of uniform colour, fairly flat, free from all vegetable and mineral stains, buckles and other similar defects, and foreign inclusions except for a few tiny air inclusions in not more than one-fourth of the usable area. Crystallographic discolouration permitted to a limited extent.

V-3 Ruby Fair Stained - Hard, of uniform colour, free from all vegetable and mineral stains, cracks, buckles and other similar defects and foreign inclusions, except that may be slightly wavy and may contain slight air inclusions in not more than one-half of the usable area. Crystallographic discolouration is permitted to a limited extent.

V-4 Ruby Gold Stained - Hard, free from vegetable and mineral stains, cracks, buckles and other similar defects, and foreign inclusions, except that may be somewhat wavy but not rippled and may contain medium air inclusions in not more than two-thirds of the usable are, but may not have heavily concentrated air inclusions in any of the usable area. Crystallographic discolouration is permitted.

V-5 Ruby Stained A Quality - Hard, free from cracks and other similar defects and foreign inclusions, except that may be wavy with slight buckles and may contain slight vegetable stains, slight minerals stains not exceeding two specks within the usable area, and the entire area may have air inclusions if not heavily concentrated over more than 1/16 sq. inch for grade 5 and up, and over more than 1/64 sq. inch for grade 5.1/2 and below. Crystallographic discolouration is permitted.

V-6 Ruby A Q - Hard, free from cracks and other similar defects and foreign inclusions, except that may be wavy with slight buckles and may contain medium vegetable stains which are usually brown diffused stains, and the entire area may have air inclusions if not heavily concentrated. Occasional black dots are allowed. Crystallographic discolouration is permitted.

V-7 Ruby Stained B quality - Hard, free from cracks and other similar defects and foreign inclusions, except that may be wavy and slightly buckled and may contain heavy air inclusions medium vegetable, clay and mineral stains. Crystallographic discolouration is permitted.



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V-8 Ruby B Q - Hard, free from cracks and other similar defects and foreign inclusions, except that may be wavy and slightly buckled and may contain heavy air inclusions, heavy vegetable stains and medium mineral stains. Crystallographic discolouration is permitted.

V-9 Ruby Heavy Stained - Hard, free from cracks and other similar defects and foreign inclusions, except that may be wavy and buckled and may contain heavy air inclusions, heavy vegetable stains and medium mineral stains. Crystallographic discolouration is permitted.

V-10 Ruby Densely Stained - May be soft and may contain heavy stains and inclusions, waves, cracks, buckles and other similar defects. Crystallographic discolouration is permitted.

V-11 Black Dotted - Hard, free from cracks and other similar defects, but may contain medium waves, heavy air inclusions, vegetables stains and dispersed black dots. Crystallographic discoloration is permitted.

V-12 Black Spotted(or Spotted 1st Quality) - Hard, free from cracks, and other similar defects and foreign inclusions, except that may be medium wavy and may contain slight buckles and vegetables stains, black or red spotted mineral stains, end heavy air inclusions, Crystallographic discoloration is permitted.

V-13 Black / Red Stained (or Spotted 2nd Quality) - same as V-12 Quality except that it may be soft and may have black lines and/or short red bars or connected stains.

V-14, Green/Brown First Quality - Flat, hard, of uniform colour free from all vegetables and mineral stains, cracks, buckles, and other similar defects and foreign inclusions, but may contain slight air inclusions in not more than one-half of the usable area.

V-15 Green / Brown 2nd Quality - Hard, free from cracks and other similar defects and foreign Inclusions, but may be wavy with slight buckles and may contain medium vegetables stains, and the entire area may have air inclusions if not heavily concentrated Crystallographic discoloration is permitted.

V-16 Green / Brown Stained or BQ - Free from cracks and other similar defects and foreign inclusions, but may be wavy and may contain heavy air inclusions, heavy vegetable stains and medium mineral stains. Crystallographic discoloration is permitted.



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