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MICA

Mica is a generic term applied to a group of complex aluminosilicate minerals having a sheet or plate-like structure with different composition and physical properties. All mica form flat six-sided monoclinical crystals. When split into thin films, they remain tough and elastic even at high temperatures. It possesses a good combination of chemical, physical, electrical, thermal and mechanical properties and is optically flat, and colourless in thin sheets

Mica is stable and completely inert to the action of water, most acids (except hydrofluoric and concentrated sulphuric), alkalis, conventional solvents and oil. These properties make it ideal for use as a protective shield for gauge glasses and sight glasses used in boilers and other applications with high alkaline level

TYPICAL PROPERTIES

Being a naturally occurring material, mica properties and grades are subject to variation	
Density	2.6 – 3.2 gm/cm3
Specific Heat	0.21
Coefficient of expansion	9x10-6 – 36x10-6 per °C
Max Operating Temp	500 – 600°C
MOH Hardness	2.8 – 3.2
Optic Axial Angle	55 – 75
Tensile Strength	~ 1750 Kgf/cm2 ~ 25000 lb/in2
Shear Strength	2200 – 2700 Kgf/cm231000 – 38000 lb/in2
Compression Strength	1900 – 2850 Kgf/cm227000 – 32000 lb/in2
Modulus of Elasticity	1400 – 2100 Kgf/cm
Colour	Ruby / Green
Thermal Conductivity	~ 0.0013 Gm.cal/sec/cm2
Perpendicular to cleavage plane	~ 0.31 BTU/hr/ft2/0f/ft
Water of constitution	4.5%
Moisture Absorption	Very Low
Permittivity @ 15 °C	6-7
Power Factor (loss tangent)	0.0001 - 0.0004 @ 15°C
Reacts with Hydrofluoric Acid	

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