

Muscovite

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General Mineral Formula: $KAl_2(AlSi_3O_{10})(OH, F, Cl)_2$

Mineral Chemical Class: Phyllosilicate

Specific Gravity: 2.7-3.0

Hardness: 2-2.5

Cleavage: 1,1 Perfect Cleavage. Also flexible and elastic pieces.

Luster: Pearly

Streak: Colorless

Characteristic Color(s): Colorless, white, beige, yellow

Crystal System: Monoclinic

Crystal Class: 2/m

Crystal Description (common forms, habit, etc.): Crystals are in thin flakes, micaceous masses and groupings. In tabular, foliated, flaky and scaly forms. May also be elongated with one dimension flat. Or, stubby triangular or hexagonally shaped crystals. Can form aggregates of dense bladed crystals with uniquely twinned star-shaped formations.

¹Pure muscovite: Perfect cleavage. Colorless

²Muscovite in a rock: present in all pelitic metamorphic rocks and s-types granites.

Environment (where you find the material): Very common rock forming mineral. Found in granite pegmatites and contact metamorphic rocks and metamorphic schists or hydrothermal veins.

Common Mineral Associations (in samples, also consult text, notes): Albite, quartz, mirocline

Scientific Usage/Significance: Heavily used in electric circuits. Treatment for colitis and digestive track problems.

Industrial or Social Use/Significance: Insulator for various electrical products and semiconductors. Also used to produce automotive tires and cosmetics. Large sheets once used for oven windows.

Environmental Significance: A constituent of drilling mud used in the drilling for oil and gas.