



MINERALS & THEIR PHYSICAL PROPERTIES



ROCK FORMING MINERALS



FELDSPA

PINK FELDSPAR



WHITE FELDSPAR



GREY FELDSPAR



BROWN FELDSPAR



- ❖ **FORM** : Tabular.
- ❖ **COLOUR** : white/pale colour.
- ❖ **STREAK** : white.
- ❖ **LUSTRE** : Vitreous, pearly.
- ❖ **CLEAVAGE** : **2** sets, at right angles.
- ❖ **FRACTURE** : Even to Uneven.
- ❖ **HARDNESS** : **6**
- ❖ **SPECIFIC GRAVITY** : Medium.
- ❖ **DEGREE OF TRANSPARENCY** : Translucent along thin edges.



QUARTZ

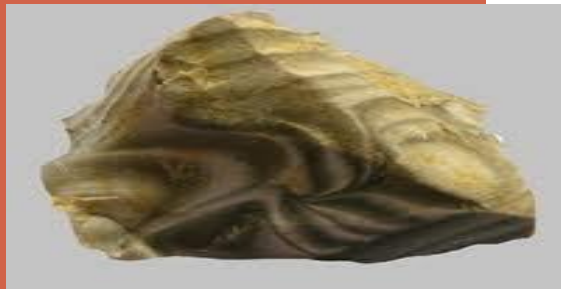
PHYSICAL PROPERTIES



- ❖ **FORM** : massive.
- ❖ **COLOUR** : colourless/anyother colour.
- ❖ **LUSTRE** : vitreous.
- ❖ **CLEAVAGE** : absent
- ❖ **FRACTURE** : uneven to conchoidal.
- ❖ **HARDNESS** : 6.
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : transparent to translucent.



FLINT



PHYSICAL PROPERTIES

- ❖ **FORM** : nodular.
- ❖ **COLOUR** : yellowish brown.
- ❖ **LUSTRE** : vitreous.
- ❖ **CLEAVAGE** : absent.
- ❖ **FRACTURE** : sub conchoidal.
- ❖ **HARDNESS** : 7.
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : transparent.



JASPER



PHYSICAL PROPERTIES

- ❖ **FORM** : massive.
- ❖ **COLOUR** : red colour.
- ❖ **LUSTRE** : resinous.
- ❖ **CLEAVAGE** : absent.
- ❖ **FRACTURE** : conchoidal.
- ❖ **HARDNESS** : nearly 7.
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : nearly opaque.



OLIVINE

PHYSICAL PROPERTIES



- ❖ **FORM** : massive.
- ❖ **COLOUR** : olive green.
- ❖ **LUSTRE** : dull.
- ❖ **CLEAVAGE** : uneven.
- ❖ **FRACTURE** : absent.
- ❖ **HARDNESS** : 6-7.
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : nearly opaque.



AUGITE



Augite



PHYSICAL PROPERTIES

- ❖ **FORM** : massive.
- ❖ **COLOUR** : black.
- ❖ **LUSTRE** : vitreous to sub vitreous.
- ❖ **CLEAVAGE** : uneven.
- ❖ **FRACTURE** : **2** sets.
- ❖ **HARDNESS** : **5-6**
- ❖ **SPECIFIC GRAVITY** : medium
- ❖ **DEGREE OF TRANSPARENCY** : nearly opaque.



HORNBLLENDE



PHYSICAL PROPERTIES

- ❖ **FORM** : granular.
- ❖ **COLOUR** : dark greenish black.
- ❖ **LUSTRE** : vitreous to subvitreous.
- ❖ **CLEAVAGE** : uneven.
- ❖ **FRACTURE** : 2 sets prismatic.
- ❖ **HARDNESS** : 5-6
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : nearly opaque.



MUSCOVITE



PHYSICAL PROPERTIES

- ❖ **FORM** : lamellar.
- ❖ **COLOUR** : silverly white colourless in thin layers.
- ❖ **LUSTRE** : pearly.
- ❖ **CLEAVAGE** : uneven to hackly.
- ❖ **FRACTURE** : 1 set .
- ❖ **HARDNESS** : 2-3
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : thin layers completely transparent.



BIOTITE

PHYSICAL PROPERTIES



- ❖ **FORM** : lamellar.
- ❖ **COLOUR** : dark greenish black or less black.
- ❖ **LUSTRE** : pearly.
- ❖ **CLEAVAGE** : uneven to hackly.
- ❖ **FRACTURE** : 1 set perfect.
- ❖ **HARDNESS** : **2-3**
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : only very thin layers are
transparent.



ASBESTOS

PHYSICAL PROPERTIES



- ❖ **FORM** : fibrous.
- ❖ **COLOUR** : white and pale colour.
- ❖ **LUSTRE** : silky.
- ❖ **CLEAVAGE** : uneven to hackly.
- ❖ **FRACTURE** : present.
- ❖ **HARDNESS** : -
- ❖ **SPECIFIC GRAVITY** : medium
- ❖ **DEGREE OF TRANSPARENCY** : thin fibres are translucent.



CHLORITE



PHYSICAL PROPERTIES

- ❖ **FORM** : foliated.
- ❖ **COLOUR** : green.
- ❖ **LUSTRE** : pearly.
- ❖ **CLEAVAGE** : uneven.
- ❖ **FRACTURE** : present.
- ❖ **HARDNESS** : **1.5-2.5**
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : nearly opaque.



KYANITE

PHYSICAL PROPERTIES



DiegoDCvids
Digital Jewelry & Arts

- ❖ **FORM** : bladed.
- ❖ **COLOUR** : blue with dark patches.
- ❖ **LUSTRE** : vitreous to subvitreous.
- ❖ **CLEAVAGE** : **uneven.**
- ❖ **FRACTURE** : present.
- ❖ **HARDNESS** : 4-5
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : translucent along thin edges.



GARNET



PHYSICAL PROPERTIES

- ❖ **FORM** : granular.
- ❖ **COLOUR** : red.
- ❖ **LUSTRE** : vitreous to resinous.
- ❖ **CLEAVAGE** : absent
- ❖ **FRACTURE** : uneven.
- ❖ **HARDNESS** : 6.5-7.5
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : translucent along thin edges.



TALC



PHYSICAL PROPERTIES

- ❖ **FORM** : foliated or massive
- ❖ **COLOUR** : white, yellow, pale green.
- ❖ **LUSTRE** : pearly.
- ❖ **CLEAVAGE** : uneven.
- ❖ **FRACTURE** : **1 set.**
- ❖ **HARDNESS** : **1**
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : translucent along thin edges.



CALCITE



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PHYSICAL PROPERTIES

- ❖ **FORM** : rhombic .
- ❖ **COLOUR** : colourless.
- ❖ **LUSTRE** : vitreous.
- ❖ **CLEAVAGE** : pearly.
- ❖ **FRACTURE** : **3 sets.**
- ❖ **HARDNESS** : **3**
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : transparent to translucent.



ECONOMIC MINERALS



PYRITE

PHYSICAL PROPERTIES



- ❖ **FORM** : granular.
- ❖ **COLOUR** : brass yellow.
- ❖ **LUSTRE** : shining metallic.
- ❖ **CLEAVAGE** : uneven.
- ❖ **FRACTURE** : **3-sets.**
- ❖ **HARDNESS** : **6-7**
- ❖ **SPECIFIC GRAVITY** : high
- ❖ **DEGREE OF TRANSPARENCY** : opaque.



HEMATITE



PHYSICAL PROPERTIES

- ❖ **FORM** : massive.
- ❖ **COLOUR** : grey.
- ❖ **LUSTRE** : metallic to sub metallic.
- ❖ **CLEAVAGE** : uneven.
- ❖ **FRACTURE** : absent.
- ❖ **HARDNESS** : 5-6
- ❖ **SPECIFIC GRAVITY** : high.
- ❖ **DEGREE OF TRANSPARENCY** : opaque.



MAGNETITE



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PHYSICAL PROPERTIES

- ❖ **FORM** : granular.
- ❖ **COLOUR** : black.
- ❖ **LUSTRE** : metallic to submetallic.
- ❖ **CLEAVAGE** : uneven.
- ❖ **FRACTURE** : absent.
- ❖ **HARDNESS** : 5-6
- ❖ **SPECIFIC GRAVITY** : high.
- ❖ **DEGREE OF TRANSPARENCY** : opaque.



GALENA

PHYSICAL PROPERTIES



- ❖ **FORM** : granular.
- ❖ **COLOUR** : leadgrey.
- ❖ **LUSTRE** : splendent(shining brightly).
- ❖ **CLEAVAGE** : rarely found.
- ❖ **FRACTURE** : 3 sets.
- ❖ **HARDNESS** : 2-3
- ❖ **SPECIFIC GRAVITY** : **high.**
- ❖ **DEGREE OF TRANSPARENCY** : opaque.



PYROLUSITE

PHYSICAL PROPERTIES



- ❖ **FORM** : massive,spongy.
- ❖ **COLOUR** : dark brownish black.
- ❖ **LUSTRE** : dull.
- ❖ **CLEAVAGE** : un even.
- ❖ **FRACTURE** : indistinct(not clear).
- ❖ **HARDNESS** : variable.
- ❖ **SPECIFIC GRAVITY** : 4.5-5
- ❖ **DEGREE OF TRANSPARENCY** : opaque.



GRAPHITE

PHYSICAL PROPERTIES



- ❖ **FORM** : massive, granular.
- ❖ **COLOUR** : black.
- ❖ **LUSTRE** : shining greasy.
- ❖ **CLEAVAGE** : uneven.
- ❖ **FRACTURE** : present but not distinct.
- ❖ **HARDNESS** : 1-2
- ❖ **SPECIFIC GRAVITY** : low.
- ❖ **DEGREE OF TRANSPARENCY** : opaque.



MAGNESITE

PHYSICAL PROPERTIES



- ❖ **FORM** : massive.
- ❖ **COLOUR** : white.
- ❖ **LUSTRE** : dull.
- ❖ **CLEAVAGE** : even to uneven.
- ❖ **FRACTURE** : absent.
- ❖ **HARDNESS** : 4-5
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : opaque.



BAUXITE

PHYSICAL PROPERTIES



- ❖ **FORM** : pisolitic, spongy or massive.
- ❖ **COLOUR** : dirty white with patches of different colours.
- ❖ **LUSTRE** : dull.
- ❖ **CLEAVAGE** : uneven.
- ❖ **FRACTURE** : absent.
- ❖ **HARDNESS** : 4
- ❖ **SPECIFIC GRAVITY** : medium.
- ❖ **DEGREE OF TRANSPARENCY** : opaque.



any queries?