

SPHALERITE

(Zn.Fe)S Zinc Iron Sulphide

Also known as Zinc Blende, or Black-jack, Sphalerite is frequently associated with Galena deposits in hydrothermal veins. It is also found in areas of contact metamorphism where an igneous intrusion has introduced Sulphides into the surrounding rock. Because it is variable in form and colour it can easily be wrongly identified. In fact the name Sphalerite is derived from a Greek word which means treacherous. It's colour varies from yellow-brown to red-black, most commonly the latter. Although usually found in massive form, it can sometimes be found in crystal form. It's crystal habit is cubic resulting in tetrahedral, dodecahedral, and cubic crystals. Individual crystals are most often found as single crystals on the surface of Quartz.

Zinc, which is refined from Sphalerite is widely used in the sheet metal industry, where it is thinly applied to the surface of the metal to prohibit rusting. This treated metal is commonly used in the manufacture of body pressings for the motor vehicle industry. A thicker coating which is known as galvanising can also be applied to individually manufactured items of steel for the same reason. This process is mostly applied to items for outside use, particularly farm implements and gates. It is also used in alloys such as zinc-aluminium castings. Other uses include voltaic battery cells, and zinc based ointments. Sphalerite crystals of worthwhile size and quality are sometimes faceted or fashioned into cabochons for use as jewellery.

VARIETIES OF SPHALERITE

- Wurtzite** A polymorph of Sphalerite which is stable at higher temperatures, i.e. Above 1000° C.
- Marmatite** Contains up to 20% Iron.
- Pribramite** Contains some Cadmium.



Sphalerite crystal