

FLUORSPAR.

Fluorspar or *fluorite* is a mineral consisting of calcium fluoride. It varies from colourless to dark purple, often blue, yellow, green, or rose. It usually occurs in veins, often intermingled with other minerals, such as galena, sphalerite, quartz, and calcite. Fluorite is frequently spoken of as *spar*, *fluor* or when clear and colourless as *glass spar*.

PREPARATION.

In some cases fluorite is sold in the crude form as it comes from the pit, but more often it is crushed or ground. Where the deposits contain other minerals and a pure product is required, the material is crushed and jigged to remove the impurities.

According to F. J. Fohs,¹ fluorspar is classed as lump, gravel, and ground, and graded according to purity as given below. The term *gravel* is applied to the granular material resulting from natural disintegration and to the product of crushing.

Commercial fluorspar is divided into three main grades known as "No. 1," "No. 2," and "No. 3," according to purity.

No. 1 contains at least 96 per cent of calcium fluoride. It is usually white or only slightly coloured.

No. 2 contains from 90 per cent to 96 per cent of calcium fluoride, with less than 4 per cent silica, the remainder being chiefly calcite. The colour is usually darker than that of No. 1 grade.

No. 3 contains from 60 per cent to 90 per cent of calcium fluoride.

No. 1 grade, when ground, is further subdivided as follows: "Extra No. 1 Ground," "No. 1 Ground," and "No. 2 Ground."

Extra No. 1 Ground contains less than 1 per cent of impurities.

No. 1 Ground contains at least 98 per cent of calcium fluoride and not over 1 per cent of silica.

¹ "Fluorspar Grades and Markets," page 720, Mining and Scientific Press, Nov. 27, 1909.