



## Fluorite from Coahuila México Mineral Specifications

Torre San Pedro, Av. Jiménez Oficina 301, SPGG, N.L., 66230

### Fluorite (CaF<sub>2</sub>)



#### What is?

Fluorite is an important industrial mineral composed of calcium and fluorine (CaF<sub>2</sub>). It is used in a wide variety of chemical, metallurgical, and ceramic processes.

#### **Physical properties**

Physical Properties of Fluorite	
Chemical Classification	Halide
Color	Typically purple, green, and yellow. Also colorless, blue, red, and black.
Streak	White
Luster	Vitreous
Diaphaneity	Transparent to translucent
Cleavage	Four directions of perfect cleavage
Mohs Hardness	4
Specific Gravity	3.2
Diagnostic Properties	Cleavage, hardness, specific gravity, color
Chemical Composition	CaF <sub>2</sub>
Crystal System	Isometric
Uses	Numerous uses in the metallurgical, ceramics, and chemical industries. A source of fluorine, hydrofluoric acid, metallurgical flux. High-clarity pieces are used to make lenses for microscopes, telescopes, and cameras.

#### **World Ocurrence**

Most fluorite occurs as vein fillings in rocks that have been subjected to hydrothermal activity. These veins often contain metallic ores which can include sulfides of tin, silver, lead, zinc, copper, and other metals.

Fluorite is also found in the fractures and vugs of some limestones and dolomites. Fluorite can be massive, granular, or euhedral as octahedral or cubic crystals. Fluorite is a common mineral in hydrothermal and carbonate rocks worldwide.

## Fluorite (CaF<sub>2</sub>)



#### **Uses of Fluorite**

Fluorite has a wide variety of uses. The primary uses are in the metallurgical, ceramics, and chemical industries; is sold in three different grades (acid, ceramic, and metallurgical).

#### **Acid Grade:**

Is a high-purity material used by the chemical industry. It contains over 97% CaF<sub>2</sub>. It is used mainly in the chemical industry to manufacture hydrofluoric acid (HF). The HF is then used to manufacture a variety of products which include: fluorocarbon chemicals, foam blowing agents, refrigerants, and a variety of fluoride chemicals and in medical uses.

#### **Ceramic Grade:**

Contains between 85% and 96% CaF<sub>2</sub>. Much of this material is used in the manufacture of specialty glass, ceramics, and enamelware. Fluorspar is used to make glazes and surface treatments that produce hard glossy surfaces, opalescent surfaces, and a number of other appearances that make consumer glass objects more attractive or more durable. The non-stick cooking surface known as Teflon is made using fluorine derived from fluorite.

#### **Metallurgical Grade:**

Contains between 60 and 85% CaF<sub>2</sub>. Much of this material is used in the production of iron, steel, and other metals. Fluorspar can serve as a flux that removes impurities such as sulfur and phosphorous from molten metal and improves the fluidity of slag. Between 20 and 60 pounds of fluorspar is used for every ton of metal produced. In the United States many metal producers use fluorite that exceeds metallurgical grade.







#### Location

The Fluorite that we produce comes from an Ore in the Northeastern State of Coahuila México, in the Muzquiz municipality, a place whit a large tradition of mining ores of Metallics an Non-Metallics minerals included The Fluorite.

The mine are at 182 miles away from Piedras Negras city in the USA/MEX border.

This relative short distance to the USA/MEX border is a plus that our product have.







#### **Our Product**

The ore of our Fluorite is an hydrothermal vein emplaced on Carbonate rocks that occurs in a hill slope, producing a Fluorspar with 60% of CaF<sub>2</sub> in Weight.

#### **Product Specifications**

Fluorspar Specs.		
Fluorite contain	60% in Weight	
Impurities	Carbonate Rocks (CaCO <sub>2</sub> )	
Iron sulphur	minor of 1.0% in Weight normaly as trazes	
lead sulphur	minor of 1.0% in Weight normaly as trazes	
Quartz	minor of 5% in Weight	
Granulometry	minor of 2 inches	
Color	White to Traslucid	



Fluorite vein ocurrence in the ore

Up today, we are selling fluorite at metallurgical grade, but with everything ready to process it and to obtain a more refinated product in weight.





#### Mine Infrastructures

The mine has infrastructure to beneficate the Fluorspar that we produce looking for a monthly production of 5000 tons.

Our company is closing for an incremental production by collecting the fluorite to other local producers allowing us to improve quality and CaF<sub>2</sub> Contain by Ton. Additionally incrementing the monthly production.



Entrance to the Fluorite mine

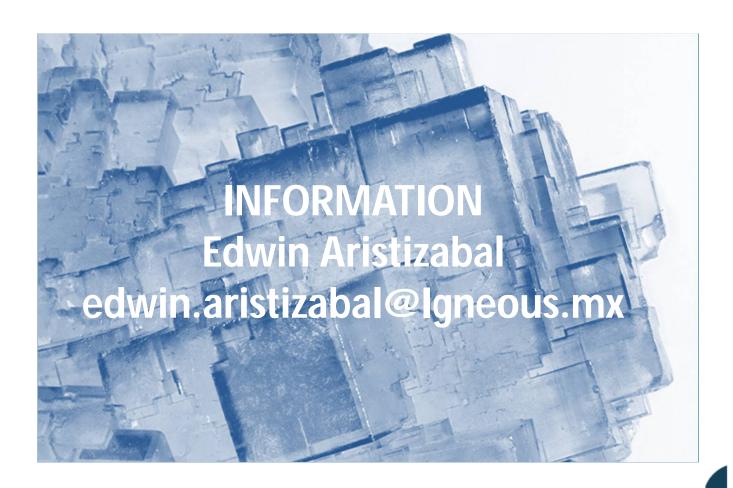


Mineral benefication plant



Fluorspar final product





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