# Ilmenite

## Processing and consumption

Most ilmenite is mined for titanium dioxide production.[6] In 2011, about 47% of the titanium dioxide produced worldwide were based on this material.[7] Titanium dioxide is a very good white pigment and is also used in the production of Titanium metal.

Ilmenite can be converted into pigment grade titanium dioxide via either the sulfate process or the chloride process. Sulfate process plants must utilise low-vanadium ilmenite, as vanadium is a penalty element. Ilmenite can also be imnproved and purified to Rutile using the Becher process.

Ilmenite ores can also be converted to liquid iron and a titanium rich slag using a smelting process.[9]

Ilmenite ore is used as a flux by steelmakers to line blast furnace hearth refractory.[10]

Ilmenite sand is also used as a sandblasting agent in the cleaning of diecasting dies.

Ilmenite can be used to produce ferrotitanium via an aluminothermic reduction.[11]