

PROPERTIES AND USES OF RED LEAD

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Red Lead, plumbic tetroxide, Pb_3O_4 . It is also known as: minium, orange mineral, mineralorange, Paris red, Saturn cinnabar, in German as: Bleiricht, Bleizinnober, Goldsatin-ober, Mennige, Mennie and turckisches Mennige.

Varieties There are several varieties depending on the color, fineness and raw material used in the manufacture of the material. The ordinary red lead is made from litharge, while the orange mineral is made from white lead with finer control of temperatures. It is the better product, having a fine color, and is more expensive.

Properties It is a heavy crystalline granular powder; specific gravity 8.62 to 9.19. The color varies from a brilliant scarlet red to orange red due to impurities introduced through the raw material. It fuses at a slightly lower temperature than white lead. The value depends on the color and fineness of the particles.

Impurities Commercial red lead may contain metallic lead, lead sulfate, litharge and also oxides of antimony, tin, copper and iron. The material is sometimes adulterated with oxides of iron, red bole, powdered heavy spar and brick dust.

Uses

Cements

Enamels - in art enamels which are chiefly mixtures of red lead, nitre and flint.

Glass - one of the chief constituents of flint glass where it also acts as a decolorant of iron compounds.

Glazes - in pottery and earthenware manufacture as a flux giving a yellowish tinge to the glaze.

Lead peroxide - which is used in the manufacture of storage batteries.

Lute - in pipe fitting.

Medicinal-for lead salves.

Paints - for preservative paints, for structural steel and iron, occasionally in artists paints.

Rubber - in the manufacture of rubber.

Sealing wax -

Varnish - as a drier.

Consumption The production of red lead has steadily increased in the United States amounting to 23,035 short tons of red lead and orange mineral valued at \$3,933,566 in 1916.

Consumption (Cont.)

In 1918 and 1919 it amounted to about 30,000 tons valued at more than \$5,000,000, in 1920 34,431 tons valued at \$7,523,689.

Imports			
Year	pounds	value	unit value
1910-17 (av)	370,351	\$16,075	-----
1918	5	1	0.20
1919	7,199	1,136	0.16
1920	23,076	1,789	0.08
1921 (9 mos)	6,176	339	0.05

Exports			
1918	5,739,819	662,584	
1919	6,227,797	735,177	
1920	3,063,030	365,575	
1921 (9 mos)	949,290	101,628	

Prior to 1915 the production of orange mineral amounted to about 600 short tons.

Imports			
Year	pounds	value	unit value
1910-17 (av)	317,205	\$20,098	
1919	39,781	5,082	0.13
1920	52,094	5,352	0.10
1921 (9 mos)	72,232	7,386	0.10

These figures are from the Summary of Tariff Information 1921.

Respectfully submitted,

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