

28.24 - Lead oxides; red lead and orange lead.

2824.10 - Lead monoxide (litharge, massicot)

2824.90 - Other

- (1) **Lead oxide** (Lead monoxide, litharge, massicot) (PbO). Lead or cerussite (lead hydrocarbonate) oxidised by heating in air produces first unmelted lead oxide or massicot, in the form of a pale yellow powder, and then, when the temperature passes the blood-red heat point, the fused oxide, in orange-yellow or reddish powder or scales. The term "litharge" covers both these products, but is applied more particularly to the latter. They are also obtained as by-products of the extraction of silver from argentiferous lead. Lead oxide is used in the glass industry (manufacture of lead and crystal glass), in the enamel industry, and in the manufacture of matches, colours, driers, etc.
- (2) **Trilead tetraoxide** (Lead saline oxide, red lead, minium) (approximate formula Pb_3O_4). Obtained from unmelted lead monoxide (massicot). A toxic, orange-red powder (specific gravity 8 to 9). The term **orange lead** is applied either to a very pure saline oxide, more highly coloured and less dense than the common variety, or to lead oxides still containing lead carbonate from the cerussite used in their preparation. **Red lead** is used for extending other colours (Saturn red), for preparing anti-rust paints or mastics and for colouring sealing-wax. It is also used as a pottery glaze. It is employed in the manufacture of crystal glass and optical glass even more widely than the monoxide, because it gives a fusible glass of remarkable brilliance arising from a high refractive index.
- (3) **Lead dioxide** (puce oxide, plumbic anhydride) (PbO_2). Prepared by treating the lead saline oxide with nitric acid or by electrolysing lead nitrate. A brown powder, insoluble in water, capable of igniting organic matter on contact. It is an oxidising agent used in pyrotechnics; also for manufacturing matches or accumulator plates, and as a mordant in the textile industry.

This amphoteric oxide gives the plumbates of heading 28.41.