

Basic Lead Sulfate

I-A-c

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Pigment White 2
Colour Index Number 77633
Sublimed White Lead
Basic Sulfate, White Lead
Super Sublimed White Lead
Barlet White Lead
Lewis White Lead
Chemical Formula (mixture)
Normal Lead Sulfate PbSO_4 (MW 303.27)
Monobasic Lead Sulfate $\text{PbSO}_4 \cdot \text{PbO}$
(MW 526.48)

Public Law 91-695 enacted by the Congress and signed by the President in January 1971, effectively eliminated the use of lead pigments in paints for residential structures in the United States. Subsequent legislation and regulations have progressively reduced

the permissible lead content of residential paints to a maximum of 0.06%.

Several basic lead sulfate compounds were used as paint pigments. These are called sublimed, or supersublimed white lead ($\text{PbSO}_4 \cdot \text{PbO}$), and precipitated basic lead sulfate ($\text{PbSO}_4 \cdot \text{Pb(OH)}_2$).

Tetrabasic lead sulfate ($\text{PbSO}_4 \cdot 4\text{Pb(OH)}_2$) has had little if any use in paints or plastics. It does have a substantial and continuing use, however, in storage batteries used by telephone companies for emergency power purposes. It is used in the positive plates only. Batteries in which tetrabasic lead sulfate is used as the active positive material have a life expectancy of up to 30 years. Those using conventional lead oxide as the active positive material have shorter life expectancy. Tribasic lead sulfate ($3\text{PbO} \cdot \text{PbSO}_4 \cdot \text{X(OH)}_n$) is the most widely used of all vinyl stabilizers, both in the United States and abroad. These two are the most widely used of the basic lead sulfate pigments.