

ALIEN PROPERTY CUSTODIAN

CERAMIC COLORING MATERIALS AND PROCESS OF PREPARING THEM

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Object of the co-pending application S. Nr. 130,217 of March 10th, 1937, is a process for the preparation of chromium-containing ceramic coloring materials by reacting solutions containing chromates, especially alkali chromates, with solutions of heavy metals and subsequent ignition of the resulting precipitates. The precipitation from the alkaline, mostly strong ammoniacal chromium containing solutions by means of nickel-, cobalt-, iron- or manganese-sulfate solutions is most suitably carried out at elevated temperature, for instance, 40 to 60° C. The resulting precipitates are filtered off, washed if preferred or necessary, dried and then subjected to calcination at a temperature of about 500 to 700° C., especially about 550 to 650° C.

It has proved advantageous to utilize chromate solutions which at least contain the quantities of ammonia which are necessary to bind the anions of the heavy metal salts with formation of ammonium salts and to precipitate the basic heavy metal chromates.

Further investigations have shown that the precipitates separate in such a finely dispersed state that no calcination is necessary.

In consequence thereof, the object of my new invention is a simplified modification of the co-pending application S. Nr. 130,217 of March 10th, 1937 in so far as the step of ignition is omitted and the precipitates only filtered off, washed and dried.

This process has proved to be most advantageous in the preparation of black ceramic coloring materials.

Example

To an aqueous solution of 11 kgrs. of manganese sulfate, 10 kgrs. copper sulfate, 2 kgrs. cobalt sulfate and 0.5 kgrs. nickel sulfate a solution of 6.8 kgrs. potassiumbichromate is added and the whole mixture heated to about 80 to 90° C. To this last solution about 4 kgrs. ammonia are added, either in gaseous form or in aqueous solution; the mixture is then cooled down under stirring. The precipitate which is at first dark brown becomes then nearly black. After cooling the precipitate is filtered off and rigorously dried, for instance at temperatures above 100° C.

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