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PROCESS OF MAKING GREEN CHROME OXIDE.

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To all whom it may concern:

Be it known that I, ALEXANDER L. DUVAL D'ADRIAN, a citizen of the Republic of France, residing at Washington, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Processes of Making Green Chrome Oxide, of which the following is a specification.

My invention relates to a process of producing green chromium oxide.

An important object of the invention is to provide a process of the above mentioned character, which is inexpensive and easy to practice.

The process consists generally in mixing a chromate or bichromate, such as potassium chromate or sodium bichromate with ammonium sulphate, and in heating the mixture until all (or substantially all) the chromium in the chromate or bichromate is converted into chromium oxide.

Any other chromate or bichromate may be used instead of the alkali metal chromate, or sodium chromate, but it is preferred to use a chromate or bichromate, the metallic part of which forms a sulphate which is soluble in water.

In the practice of my process, I prefer to use a mixture of sodium bichromate and ammonium sulphate, in the proportions of 100 parts by weight of chemically pure sodium bichromate, and 50 parts by weight of chemically pure ammonium sulphate. These proportions can, however, be varied according to the purity of the materials used, and according to the character of the chromium oxide desired to be obtained.

The sodium bichromate and ammonium sulphate are either mixed dry, or to obtain a more intimate mixture, are mixed with a relatively small amount of water. The mixture is then heated to a temperature which need not exceed 400° C., and satisfactory results are obtained by heating the same to approximately 400° C. for from 15 minutes to two hours, depending upon the depth of color desired in the chromium oxide.

As a result of this treatment, there is obtained a mixture of chromium oxide and a sulphate of the metal part of the chromium compound, to wit, in this case sodium sulphate. This sodium sulphate is soluble in water, and is separated out from the chromium oxide by washing and filtering.

It is to be understood that the form of my invention herewith described is to be taken as a preferred example of the same, and that various changes may be resorted to in the order of the steps of the process and that known chemical equivalents may be employed without departing from the spirit of the invention of the scope of the subjoined claims.

Having thus described my invention, I claim:

1. The process of producing a green chrome oxide, which consists in mixing substantially 100 parts by weight of sodium bichromate with substantially 50 parts by weight of ammonium sulphate, subjecting this mixture to the action of heat of approximately 400° C. for from 15 minutes to two hours, subjecting the product obtained to the action of water to dissolve the soluble sodium sulphate, and separating out the insoluble chromium oxide.

2. The process of producing a green chrome oxide, which consists in mixing substantially 100 parts by weight of an alkali metal chromate with substantially 50 parts by weight of ammonium sulphate, subjecting this mixture to the action of heat of approximately 400 degrees C. for from 15 minutes to 2 hours, subjecting the product thus obtained to the action of water to dissolve the soluble constituents, and separating out the insoluble chromium oxide.

In testimony whereof I affix my signature.

ALEXANDER L. DUVAL D'ADRIAN.