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JET MASSTONE CPC GREENS

We summarize herewith a brief review of the art relating to the combination of Al phthalocyanines with poly chloro CPC.

U.S. 2,192,704 - Du Pont

This shows co-acid pasting of metal phthalocyanines to obtain jet masstones. CPC plus about 5% Al-PC is the preferred combination. One example shows the combination of poly chloro CPC with 5% of Al-PC to give a jet MT but bluer shade. Claim 1 specifies dissolving the mixture in an acid solvent and precipitating by diluting with water.

U.S. 2,276,860 - General Aniline

This is the basic patent for high chlorination of CPC and shows a variety of chlorinating conditions including the  $AlCl_3$ -NaCl eutectic melt. There is a definite disclosure of the conversion of one metal PC to another metal PC when a halogen salt of the second metal is used as the halogenation carrier. Al is mentioned as a metal which will function in this way.

U.S. 2,377,685 - Du Pont

This covers the  $S_2Cl_2$  chlorination procedure. The best catalyst is said to be  $FeCl_3$  but usable catalysts include  $CuCl_2$ ,  $ZnCl_2$ ,  $AlCl_3$ ,  $HgCl_2$  and  $SbCl_3$ .

It is our conclusion, in the light of this art, that it would be very difficult to obtain patent coverage on the method of obtaining jet MT CPC greens by chlorinating in the presence of a large excess of  $AlCl_3$  thereby introducing some Al into the molecule. Both the use of Al PC to give jet MT and the introduction of Al during a chlorination reaction are shown. The only thing not shown is that the Al can be introduced in the  $S_2Cl_2$  chlorination process. It seems doubtful if this would be an acceptable basis for a patent.

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