

CONFIDENTIAL

ANALYTICAL RESEARCH DEPARTMENT REPORT

ADP 8435

Subject Examination of Asbestos in Talcs (064-107)

Manufacturer Various Customer

Department Analytical Research

Requested by R. W. Scott Date Completed 8/17/72

ABSTRACT

The Illinois Pollution Control Board has adopted regulations restricting asbestos emission. In order to establish S-W compliance it was necessary to determine the presence or absence of fibrous asbestos in talcs used in Chicago production.

Microscopic and X-ray diffraction examination of the four talcs used in Chicago production indicates that 62 20 26 and 62 30 21, both Entals, are clean talcs; the former is of finer and more uniform particle size. The 62 20 21 (Nytal) and 62 20 24 (Mistron) talcs are contaminated with tremolite which is a mineral classified as asbestos; the former contains more tremolite.

PLAINTIFF'S
EXHIBIT
CAM-372

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DISCUSSION

Talc and asbestos are often intermixed in the same ore deposits. Both are different crystal forms of hydrated magnesium silicate minerals. There are two classes of asbestos, chrysotile and amphibole. Most of the materials commercially known as 'asbestos' are chrysotile; all varieties other than chrysotile are called amphibole. The fundamental differences between them are:

Chrysotile

Very small cross-section
Tabular
Soft and flexible

Amphibole

Large cross-section
Flat narrow sheets
Hard and brittle

Tremolite is an amphibole present in two of the talcs, Nytal and Mistron, used in Chicago production. It is noteworthy that no tremolite was observed in the two Emtals by either microscopic or X-ray diffraction methods.

The asbestos regulations are concerned with air-borne asbestos, which might cause lung cancer or skin tumors, but not the asbestos in the paint as such. Normal weathering of a paint film should not yield enough asbestos to be of concern. Therefore, our attentions should be directed to the factory operations of introducing the talcs into the reactors.