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JOHNS-MANVILLE RESEARCH CENTER

Memorandum MA12-38

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MICROSCOPIC EXAMINATION OF TALC FROM EASTERN MAGNESIA TALC CO., BURLINGTON, VERMONT

An examination was made of powdered talc, supplied by Eastern Magnesia Talc Company and used by Johns-Manville Corporation. This material was compared with the three following commercial talcum powders.

Johnson and Johnson Baby Powder
Cashmere Bouquet
Mennen

The results of the examination are as follows:

A. Eastern Magnesia Talc Company — Over 95% of the sample was talc, $Mg_3Si_4O_{10}(OH)_2$. Of this amount, less than 10% could be considered elongated or fibrous appearing, the balance consisting essentially of platey talc particles that ranged in particle size from 125μ to <5μ. Total impurities were estimated microscopically to be less than 5% of the sample as follows:

Chlorite, $(Mg, Fe)_5(Al, Fe'')_2 Si_3O_{10}(OH)_8$	- Major Impurity
Dolomite, $Ca, Mg (CO_3)_2$	- Minor Impurity
Pyrrhotite (?), $Fe_{1-x}S$	- Trace Impurity
Tremolite, $Ca_2Mg_5Si_8O_{22}(OH)_2$	- Minor Trace Impurity

B. Johnson and Johnson Baby Powder — The sample consisted essentially of talc over 90% of which was platey (particles 125μ to <5μ) and less than 10% of which were elongated particles. The principal impurity was dolomite present in trace amounts.

C. Cashmere Bouquet — The sample was essentially platey particles of talc ranging in size from 100μ to less than 5μ. Less than 10% of the talc was elongated particles. The sample also contained traces of dolomite and magnesite, $MgCO_3$.

D. Mennen Talc — The sample consisted essentially of talc over 90% of which were platey particles ranging in size from 175μ down to <5μ. Less than 10% of the talc particles had a fibrous or elongated appearance. Trace amounts of magnesite were present.

In my opinion, with the exception of the slightly higher impurity content, the talcum powder used by Johns-Manville is similar in mineralogical composition, particle size distribution, and shape to that of the three representative and commonly used talcum powders that were submitted for comparison.

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