

Johns-Manville Research Center
Manville, New Jersey

DENSITY OF ASBESTOS FIBERS AND OTHER MATERIALS
USED IN THE MANUFACTURE OF TRANSITE PIPE.

-1-

Requested by: R. L. Barbehenn

I Summary:

In connection with the study of the operation of the Research machine for the manufacture of Transite pipe, and in the investigation of significant variables in the properties of the wall of the pipe, particularly as shown in Research Report No. 425-Tr-92, the densities of the dry ingredients of the furnish were determined as shown in the accompanying table.

The densities of the asbestos fibers are of particular interest to all who have to do with the compounding of such asbestos fibers into rigid products. These data permit computations to be made of probable weights per cubic foot of many products of known or assumed void space. In finished products these data are essential to the calculation of the compactness.

The determinations of the densities of asbestos fibers as used in manufacturing do not seem to have been made. The fibers used in manufacturing have been cleaned by the removal of more or less of dust and stones and have been subjected to willowing and other operations. The published values of the density of various asbestos fibers evidently refer to massive asbestos considered from a mineralogical point of view, and are rarely quoted beyond the first decimal place.

The determination of the density of the materials herein reported was made according to the Standard Methods of Test for Specific Gravity of Pigments of the American Society for Testing Materials, Serial Designation D 153 39, Method B for Tests Requiring Highest Accuracy. The Specific Gravity was calculated as referred to water at 4 degrees Centigrade, giving the density or weight per unit volume as required by this Method B, and not as referred to water at 15.6 degrees Centigrade as called for by the Routine Method A. The probable error of the determinations reported herein is less than 5 units in the third decimal place (plus or minus 0.005). The gravimetric method was used throughout and weighings made to the nearest milligram.

Johns-Manville Research Center
Manville, New Jersey

-2-

I Summary: (Cont'd.)

Material Tested: .

The following materials were those in use on or about April 15, 1949 for the manufacture of Transite pipe:

1. New Jersey Silux, sample taken by Mr. F. Wehrfritz.
2. Atlas Portland Cement, sample taken by Mr. F. Wehrfritz.
3. National Portland Cement, sample taken by Mr. F. Wehrfritz.
4. Chrysotile Asbestos Fiber, 4M28, sample taken by Mr. M. S. Badollet.
5. Chrysotile Asbestos Fiber, Vimy, sample taken by Mr. M. S. Badollet.
6. Chrysotile Asbestos Fiber, C & G #3, sample taken by Mr. M. S. Badollet.
7. Chrysotile Asbestos Fiber, C & G #4, sample taken by Mr. M. S. Badollet.
8. Chrysotile Asbestos Fiber, BC4T, sample taken by Mr. M. S. Badollet.
9. Crocidolite Asbestos Fiber, African Blue, sample taken by Mr. M. S. Badollet.
10. Crocidolite Asbestos Fiber, Australian Blue, sample taken by Mr. M. S. Badollet.

Approved by: _____

Frank M. Biffen

Reported by: 

Frank Gottsch

This report consists of Summary (1) and Results of Tests (2).

ej

cc: C. F. Rassweiler, GHQ
S. Collier, GHQ
E. R. Williams
R. T. Halstead
A. B. Cummins
M. S. Badollet
F. Wehrfritz
H. T. Coss
J. L. Tucker
R. Jacob, Manville Factory
J. S. Parkinson
G. B. Brown
R. L. Barbehenn

File-425

D. Sinclair 5/11/49

J. R. Robinson, Manville Factory 5/20/49 (Sum) ✓
J. L. Gottsch, Gabeston

[illegible]