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REPORT
 UNITED STATES GYPSUM
 RESEARCH CENTER

Wallboard Finishes LABORATORY

PROGRESS REPORT

FILE NO. J-15
 3-22
 REPORT NO. 1919
 DATE TYPED 3-6-72
 REFERENCES K.B.
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PLAINTIFF'S
 EXHIBIT
 USG-507

TITLE:

Asbestos Free Ready Mixed Joint Compounds

SUMMARY:

During this report period work was continued on the project to eliminate asbestos from Ready Mixed Joint Compounds. Most of the work was with kraft gel as the asbestos replacement in combination with Attagel 40 or Kocel 10,000 CPS. Attempts were made to alter the kraft gel to make it more suitable for joint compounds. CMC-2 was also tried as an asbestos replacement because of the properties it displayed when evaluated in the dry powder joint compounds.

Tests showed that by freezing or ball milling the kraft gel improved application properties were obtained. The ball milling with steel ball broke the paper fibers down enough to give the compound a relatively smooth surface. The presence of Attagel 40 while improving the application properties caused a large drop in viscosity thru three freeze/thaw cycles. Adding Kocel 10,000 CPS makes the compounds much more freeze/thaw stable. With the CMC-2, between 1.5% and 2.0% was required to obtain good application properties thus the water requirement was high. However there was not loss in bond and the shrinkage was normal. Testing will continue with these raw materials as well as evaluating new materials or approaches for eliminating asbestos.

kck

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UNITED STATES GYPSUM COMPANY

RESEARCH CENTER

PROGRESS REPORT

File 3-2202
Report 19193
Date 3-6-72

Project: 3-2202 - Asbestos Free Ready Mixed Joint Compounds

JE-991 series, pages 24 & 25, Notebook 3619

In this series kraft gel and Perf-A-Tape gel were evaluated as asbestos replacements. These formulas also contained Kocel 10,000 CPS and Attagel 40. Tests showed that the kraft gel had better application properties than the Perf-A-Tape gel. The compounds with the lower amount of Kocel 10,000 CPS and increased Attagel 40 showed a drop in viscosity thru the freeze/thaw cycles.

JE-992 series, pages 26 & 27, Notebook 3619

In this series different thickeners were evaluated with kraft gel. The best application properties were obtained with Methocel and Natrosol 250 ECF. The WPA-31 and Cellosize QP-100M were very heavy applying while the WPA-31 was also dry and gummy. Since all of these compounds contained Attagel 40 a big drop in viscosity was noted thru the three freeze/thaw cycles.

JE-995 series, pages 30 & 31, Notebook 3619

Two different asbestos replacements were evaluated in this series. One was wood flour and the other was Perf-A-Tape sanding dust. The Perf-A-Tape sanding dust was evaluated as received and after grinding with the lab Raymond Mill. None of these compounds applied well and the water requirements were low.

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