

FROM ROBERT P. CARTER

PITTSBURGH OFFICE - 7

TO MR. D. R. BARCH

PITTSBURGH OFFICE - 8 O.P. *RRC*

April 24, 1973



Sample on file
file
RE: H. K. PORTER "CLEANGARD"-TREATED ASBESTOS

The Thermoid Division of H. K. Porter Company is offering treated asbestos cloth products under the trade name "Cleangard" which, according to their advertisements, "meet OSHA regulations" and "eliminate the need for labeling as a possible health hazard". We have received samples of this material and copies of a sales bulletin describing some of the tests of Cleangard-treated material which have been conducted which I am sending to you. We believe that some observations concerning the material are appropriate to your considering whether it has any application in our operations.

- (1) From the appearances of the material and the description of the room temperature tests which have been conducted, we believe that it is very probable that the use of this material as a replacement for conventional asbestos cloth will result in a substantial reduction in the amount of airborne asbestos fibers in any room temperature application. Discussion with Porter has elicited the fact that the binder used in the Cleangard processing is organic in nature. How well this binder will stand up under intermittent elevated temperature service would have to be established by tests under conditions appropriate for a particular intended service. From the information which we have received from Porter, this bonding agent probably will continue to have some effect up to approximately 500-600°F. Porter has indicated a willingness to conduct elevated temperature tests if we will recommend the temperatures and number of cycles which should be employed.
- (2) With respect to Porter's claims of meeting OSHA's standards and not being required to identify the presence of asbestos as a health hazard on labeling, it does appear possible that under conditions of that room temperature test in which the cloth was subjected to considerable vibration, the airborne asbestos fiber count may have been well within the permitted time weighted average of five fibers longer than five micrometers in length per milliliter of air. However, while this would eliminate the necessity of the use of respirators for any workers exposed to such levels, it would not, in our opinion, eliminate the necessity for extensive fiber count testing nor the requirements for the extensive medical examinations prescribed in the standard. With respect to the elimination of the need for labeling the product as containing asbestos, this is a matter of judgment on the vendor's part because the "caution labels" requirement of the



ALCOA0000009497

SF-4563 (REV 11-68)

Mr. D. R. Barch
April 24, 1973
Page 2

standard does not require labeling where asbestos fiber has been modified by a binder so that no airborne concentration of asbestos fibers in excess of the prescribed limits will be released. Whether this will be true if the Cleangard-treated asbestos is subjected to significant thermal cycling, has not yet been clearly proven.

In the light of the above information, it is difficult for us to make a specific recommendation regarding possible use of Cleangard-treated asbestos. The fact that the asbestos in the treated product has been treated with the binder does not in our judgment eliminate the possibility under all possible conditions of use of asbestos fibers from the material becoming airborne, and therefore does not eliminate the need for monitoring the air in the work place or for medical examinations of workers using the material. If the characteristics of this material appear to be of significant interest to you, we will be glad to try and arrange with Porter for some additional testing, and also if it appears warranted, try to obtain an opinion from OSHA whether the use of such a bonded asbestos product would waive the medical and monitoring requirements of the standard.

ROBERT P. CARTER

RPC/map
Attachment

cc: Messrs. F. E. Mueller, Pittsburgh - 23
M. J. Caprio, Pittsburgh - 19
R. G. LaBar, ARL, ATC
V. W. Rieke, Pittsburgh - 2
J. Z. Nelson, Pittsburgh - 7 O.P.
R. C. Hinkle, Badin Works
G. R. Swany, Pittsburgh - 23
R. J. Getty, Pittsburgh - 24

ALCOA0000009498

Frank Williams - Porter

4/23/73
Treated Untreated.

Ran up to 350°F/hr Regular.

400 " Underwriters

700 " AAA

Looked good
Stable

~~Untreated~~
Fuzzy

SALES BULLETIN

PORTER

March 20, 1973

PROPERTIES OF CLEANGARD ASBESTOS CLOTH

Porter CLEANGARD Asbestos Cloth offers two primary advantages over a similar untreated fabric. These advantages are:

1. A significant reduction in the number of airborne Asbestos fibers.
2. An increase in the abrasion resistance of the fabric.

To determine the reduction in airborne Asbestos fibers, a laboratory testing device known as the "Vibrator Tester" was developed. This tester is a modification of the machine described for the vibration test in Military Specification MIL-I-15091C. A test specimen is mounted in an enclosed chamber and it is vibrated 700 times a minute, through a movement of one-half inch. The field monitor which contains the filter for collecting Asbestos fibers is also mounted inside the chamber. The monitor is attached by means of polyethylene tubing to the MSA sampling pump which is outside of the test chamber.

Normal sampling procedure is to test both treated and untreated fabrics of the same type with three different specimens tested from each sample. Each specimen is generally tested for thirty minutes and at the end of the specified time, the field monitor and the specimen are removed from the test chamber. The chamber is thoroughly cleaned and a new specimen and monitor installed. (1)

After all specimen have been tested the number of airborne Asbestos fibers emitted from each specimen can be determined. The procedure used is called the Membrane Filter Method and it is presently being used by the U. S. Public Health

PORTER

**THERMOID DIVISION
H. K. PORTER COMPANY, INC.**

Service and OSHA personnel to determine the concentration of airborne Asbestos fibers in a given location.

To prepare a sample for counting, a section is removed from the filter inside of the field monitor and it is mounted on a slide. Counting is done at 400 magnifications with phase contrast microscopy with twenty fields or one-hundred fibers being counted, whichever occurs first. After the slide has been counted, the number of airborne fibers per cubic centimeter can be calculated. Only fibers with a length greater than 5 microns are counted. A fiber is defined as any particle having a length to diameter ratio of 3 to 1 or greater. (2)

When CLEANGARD products were tested in this manner, fiber reductions of greater than 75% were recorded when compared to the similar untreated product. (3)

To determine the abrasion resistance of CLEANGARD Asbestos Cloth, samples of treated and untreated Cloth were tested in the manner described in ASTM Method D-1175. A Taber rotary platform double head abrader was used. When compared to a similar untreated product, CLEANGARD products gave an increase in abrasion resistance of as much as 79%. (4)

In addition to reducing the number of Asbestos fibers and giving greater abrasion resistance, CLEANGARD products also offer the following advantages:

1. Flame retardancy.
2. Improved cutting and sewing properties for ease of fabrication.
3. Improved tensile strength.
4. Softer and fuller hand.
5. Whiter, more closed, and better appearing fabric.

REFERENCES

1. "Test Procedure for Lint Free Products," Project No. 70-03-002, final report dated September 10, 1970.
2. "Measurement of Airborne Asbestos Fiber by the Membrane Filter Method" published by the Asbestos Textile Institute, 1971.
3. "Safety Cloth" Project No. 71-03-004, Report Issue #2, January 28, 1972.
4. "Safety Cloth" Project No. 71-03-004, Report Issue #1, January 13, 1972.

B31 L7-MA
Pls do as a draft
4/9/73

Alex Smith
Frank Williams 704-372-2880

Red'n in fiber depends on type and weight.

Highest count they made in test in bulletin 1.2 plies/mm

Make 4 grades

Comm

AA

600

AAA

700°F

Underwriters.

Rayon-Ast composites limit 350°F

Have aluminumized cloth for elev temp service, not
very flexible.

Cleargard for flexible applications.

FROM PITTSBURGH PURCHASING
INDUSTRIAL MATERIALS &
CHEMICALS - 19

R. P. CARTER - 7
MR. R. C. COOK

PITTSBURGH OFFICE - 2

March 21, 1973

RECEIVED

MAR 22 1973

ENVIRON. ENG.

RE: CLEANGARD TREATED ASBESTOS

Attached are brochures and samples of H. K. Porter's No. 8225 Commercial Grade Cleangard Treated Asbestos for distribution by your office to the interested plant personnel. Mr. R. P. Carter has been obtaining additional information on this product and I suggest that you contact him before distribution is made to the plants.

The Cleangard material is priced at approximately \$1.70 per pound. This material is suitable for temperature applications in the range of 300°-400°F and, according to Mr. Alex Smith of H. K. Porter, the major applications to date have been in safety blankets, maintenance cloths for hot application and miscellaneous requirements associated with welding practices. I see no apparent application for this material in molten metal operations.

M. J. CAPRIO
mjc
MJC:cak

cc: R. P. Carter - Pittsburgh (7)
A. J. Sartschev - Pittsburgh (7 OP)

*Bob Carter to
See Smith today
to check test results &
interpret what test
results 22 March 1973. RCC*

Dist.

*Pat - JOHN HATCH - 1 SET - 26 Mar 73
Rock Hill - Stan Spaul - 1 SET - 30 April 73*

*Bob,
Pls. send me a
set also.
RCC
10 April 1973*



ALCOA0000009503

TELEGRAM

This Copy for ☐ TELEGRAPH OFFICE ☒ FILE ☐ CONFIRMATION ☐

POINT OF ORIGIN & DATE: PITTSBURGH, PA. MARCH 7, 1972

TO: **E. B. PARKER, ROCKDALE WORKS**

CC: **B. H. STARKER, ROCKDALE**
D. D. MC GREGOR, ROCKDALE
E. C. KENALEY, ROCKDALE
E. H. WATSON, PITTSBURGH (MAILED)
T. B. BONNEY, PITTSBURGH (MAILED)
C. G. SHIRING, ROCKDALE

REURLET 2/22 ASBESTOS CLEANGARD CLOTH. WE ARE OBTAINING INFORMATION FROM
H. K. PORTER ABOUT HOW CLEANGARD WAS TESTED TO CONFIRM THAT IT CAN BE
SAFELY USED WITHOUT NECESSITY OF OBSERVING ASBESTOS HANDLING PRACTICES.
WILL ADVISE YOU OF OUR JUDGMENT.

ROBERT P. CARTER

RPC/map
10:30 A.M.

FROM E. B. Parker
Rockdale Works

TO Mr. C. G. Shiring
Rockdale Works

~~File~~
~~TRG~~
RPC

February 22, 1973

*Bob, Rockdale is
Cap will send letter to place with the mat'l?
for on order before sending anything
to pits.*

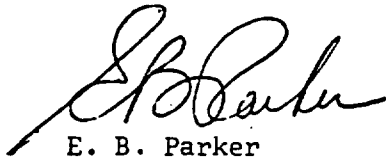
ASBESTOS CLEANGARD CLOTH

Thanks, T.

Mr. E. C. Remaley recently ran across an advertisement for asbestos cloth treated with a material called Cleangard. Asbestos products treated with Cleangard are reported to be safe and meet OSHA standards.

We would like to order some material for a trial and have attached a requisition reflecting what we need. We would also like to have more information about Cleangard in order to spot other possible applications in our plant.

I have attached a copy of the advertisement for your information. If you need anything else, please let me know. We'd appreciate getting the material and information as soon as possible.


E. B. Parker

EBP:ak
Attachment
Copies:

B. M. Starner - Rockdale
D. D. McGregor - Rockdale
E. C. Remaley - Rockdale
R. H. Watson - Pittsburgh
T. B. Bonney - Pittsburgh



ALCOA

10-2-72

SA No

50 pcs

CL NO - 505340

Cutler

210-310-214

Look for this emblem...
your assurance of clean,
safe, asbestos products.

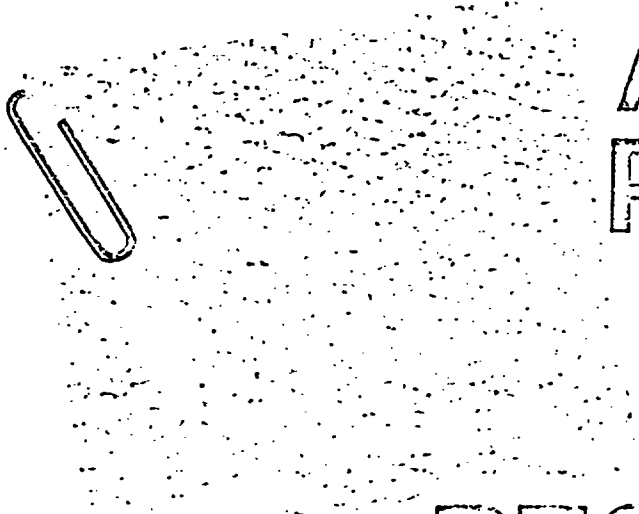
Commercial tape - asbestos woven

Commercial grade UNARCO 201

JM-1062 or equiv.

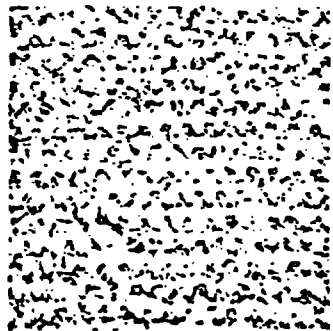


CLEANGARDTM



ASBESTOS
CLEANGARD CLOTH

ASBESTOS PRODUCTS MEET OSHA REGULATIONS



CONVENTIONAL
ASBESTOS CLOTH

Developed to meet the Occupational Safety and Health Act, Porter Cleangard process eliminates the need for labeling as a possible health hazard.

Cleangard total impregnation also increases abrasion resistance up to 50%. Asbestos products with Cleangard provide a safe, clean product for further fabrication in your plant, and are well within OSHA requirements for most of your end products.

Write for full information and a sample of asbestos cloth with Cleangard to Thermoid Division, H. K. Porter Company, Inc., Porter Building, Pittsburgh, Pa. 15219.

Thermoid... consistently dependable.



FOR MR. R. P. CARTER - AB 7

R. C. COOK
ENVIRONMENTAL ENGINEERING DIV.
PITTSBURGH OFFICE - AB 2

MR. M. J. CAPRIO

PITTSBURGH OFFICE - AB 19

*Bob,
I would think in
we'd want something in
writing from the people.
Tom*

February 14, 1973

RE: CLEANGARD ASBESTOS PRODUCTS MEET OSHA REGULATIONS
Ref: Phone conversation February 12, 1973

I contacted Mr. Alex Smith of the H. K. Porter Company in Charlotte, North Carolina, for an explanation as to how this material meets OSHA Regulations. (For your reference his phone number is 704-372-2880.) He explained that in the asbestos products which are treated with the Cleangard Process the asbestos fibers are locked in. As a result the material does not require labeling as a possible health hazard. Their testing indicates that there are emission levels of less than one fiber per ml over an 8-hour period when the material is used in a subsequent process.

The Cleangard treatment is currently available for both the cloth and tape products. Eventually they hope to have it developed for the majority of their asbestos products. Mr. Smith indicated a desire to visit you and discuss applications of these products in Alcoa. He indicated that they are willing to work with us on testing and evaluation of the materials for our different applications. This would include supplying some of the material and, if the situation warranted it, supplying engineering assistance.

I discussed this briefly with Mr. R. W. Stewart in Purchasing in your absence, Mr. R. P. Carter of E & E, and Mr. A. J. Sartschev in Engineering. The consensus appears to be that we should talk to Mr. Smith and obtain details of material performance, testing to date, and the steps we would need to take to evaluate the material for Alcoa applications.

Attached is my file on this product containing the advertisement, the catalogues, and a sample of asbestos cloth.

R. C. COOK

RC:es

Attachments

note to Hatch

cc: Messrs. R. W. Stewart - AB 19
R. P. Carter - AB 7
A. J. Sartschev - OP 7
R. L. Guilloud - AB 2

J E Hatch - AB23 2/24/73



ALCOA

ALCOA0000009507

Look for this emblem . .
your assurance of clean,
safe, asbestos products.

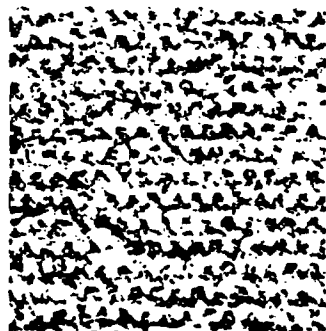


CLEANGARDTM

ASBESTOS PRODUCTS MEET OSHA REGULATIONS



ASBESTOS
CLEANGARD CLOTH



CONVENTIONAL
ASBESTOS CLOTH

Developed to meet the Occupational Safety and Health Act, Porter Cleangard process eliminates the need for labeling as a possible health hazard.

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Write for full information and a sample of asbestos cloth with Cleangard to Thermoid Division, H. K. Porter Company, Inc., Porter Building, Pittsburgh, Pa. 15219. 391-1800

Thermoid . . . consistently dependable.



ALCOA0000009508

ALEX SMITH
704-372-2890
FRANK WILLIAMS

**This is why
Porter asbestos
makes the difference...**



ALCOA0000009509

Southern

ASBESTOS COMPANY

P.O. BOX 10516 • CHARLOTTE, NORTH CAROLINA 28237 • (704) 372-2880

The following reprint of article printed in Asbestos Information Association circular to the industry:

OSHA Asbestos Standard Interpretations -- In two separate actions OSHA has responded to interpretive inquiries in regard to monitoring and medical examination requirements of the asbestos standard. Bell Laboratories posed inquiry to OSHA concerning medical surveillance program appropriate for employees in work area where typical concentrations of asbestos fibers average 0.06 f/cc. OSHA response dated Jan. 10 called attention to standard (29 CFR 1910.1001 (f) (1)) which requires initial monitoring of "every place of employment where asbestos fibers are released." As to continuous monitoring, OSHA said standard (29 CFR 1910.1001 (f) (2) and (3)) requires that after initial determination, sampling "... shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of employees. In no case shall sampling be at intervals greater than 6 months for employees whose exposure to asbestos may reasonably be foreseen to exceed ... (2 f/cc greater than 5 microns on an 8-hour TWA basis). Where the initial measurements show asbestos concentration to be far below this level, then further sampling normally need not be performed until there is reasonable cause to believe that the airborne asbestos concentrations revealed by the initial measurements have changed." Further, OSHA's letter to Bell stated that although by its express terms as well as the developing case law, standard would require medical examinations where employees are exposed to any concentration of asbestos asbestos fibers, "it is current OSHA policy to require medical examinations only when employee exposures exceed 0.1 fibers greater than 5 microns in length per cubic centimeter (f/cc greater than 5 microns) on an 8-hour time weighted average (TWA) basis. It is significant to note than NIOSH's December recommendation to OSHA for 0.1 f/cc standard for occupational exposure to asbestos was cited as support for foregoing policy.

ALCOA0000009511