

DATE: May 4, 1987
TO: Linda Loreth
FROM: L.B. Maglin
SUBJECT: ASBESTOS TESTING ON PACKING PRODUCTS

☐ A. W. Chesterton Co.
☐ Chesterton International, Inc.

Summary

As you are aware, on June 20, 1986 The Occupational Health & Safety Administration (OSHA) published its final rule on Occupational Exposure to Asbestos. This revised standard dropped the Permissible Exposure Limit (PEL) for 8-hour employee exposure for asbestos, tremilite, anthrophyllite, and actinolite to a level of 0.2 fiber/cc, (with 0.1 fiber/cc as the new action limit).

This required product retesting on our part for our products, because of the disclaimer we make on our Material Safety Data Sheets.

The purpose of this evaluation was to monitor the cutting, installation, and removal of asbestos containing packing materials.

Discussion

1. All the samples tested were well below the OSHA PEL. The samples obtained for 9 styles of packing indicates levels of <0.04-<0.06 fibers/cc of asbestos.
2. It should be noted that these tests were done under ideal conditions, with packing being installed according to Chesterton procedures, (packing done by Steve Flanagan), which may not be the case in the field. Also, the material which was used was relatively new and intact; thus, the likelihood of generating airborne fibers of asbestos was low.
3. As the results clearly show, our disclaimer is a true statement as far as our testing demonstrates.

Test Conditions

1. Samples were tested by NIOSH Method #239, using Millipore MAWPO37AO, pore size 0.8u, with DuPont Alpha-1 pumps set at flow rates of - 1850 cc/min or Niosh 7400, using Millipore MRWFO25AC, pore size 1.2u using same pumps.
2. Samples were taken for 60 min., and approximately 1-6 installations and removals were done in that time for each style.
3. Engineering Samples were run approximately 6" away from the valve being packed. Personnel samples were run in conjunction with the engineering samples.

4. Each packing material was cut to length, installed in the appropriate equipment, brought up to normal operating conditions, and then removed.
5. Analysis of samples was done by Galson Technical Services, Inc. by phase contrast microscopy.

Test Results

<u>NIOSH No.</u>	<u>Sample No.</u>	<u>Style Pking</u>	<u>Personnel/ Engineering</u>	<u>Fibers/ cc</u>	<u>Sampling Time</u>	<u>Int/ Remov</u>
239	T-1	1715	P	<0.06	60 min.	1
239	T-2	1715	E	<0.06	60 min.	1
239	T-3	322	P	<0.06	60 min.	1
239	T-4	322	E	<0.06	60 min.	1
239	T-5	320	P	<0.06	60 min.	3
239	T-6	320	E	<0.06	60 min.	3
239	T-7	1000	P	<0.06	60 min.	3
239	T-8	1000	E	<0.06	60 min.	3
7400	T-12	1500	P	<0.04	60 min.	6
7400	T-13	1500	E	<0.18*	15 min.	2
7400	T-14	326	P	<0.04	60 min.	5
7400	T-15	326	E	<0.04	60 min.	5
7400	T-17	Ambient Air	E	<0.03	90 min.	-
7400	T-18	5010	P	<0.04	60 min.	7
7400	T-19	5010	E	<0.04	60 min.	7
7400	T-20	330	P	<0.04	60 min.	6
7400	T-21	330	E	<0.04	60 min.	6

OSHA PEL (Legal Limit) 0.2

ACGIH (American Conference of
Governmental Industrial Hygienists

Chrysotile	2
Crocidolite	0.2
Amosite	0.5

* Due to low sampling time.

References

Threshold Limit Values and Biological Exposure Indices for 1986-1987
American Conference of Governmental Industrial Hygienists

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NIOSH MANUAL of Analytical Methods, Method 7400, Issued 2/15/84,
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Chesterton Environmental Log #1, Winchester 1,2

LBM/das

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