UC 149-2

VI, E.

UNION CARBIDE INTERNAL CORRESPONDENCE

METALS DIVISION

P. O. BOX 579 - 4625 ROYAL AVE., NIAGARA FALLS, NEW YORK 14

To (Name) Messrs.
Division R. E. Byrne, Jr. T. P. Norris
Location G. L. Dickson H. B. Rhodes
B. L. Ingalls J. E. Walsh
E. J. Kleber

Date June 4, 1979

Originating Dept. "Calidria" Asbestos

Answering letter date

Copy to Dr. C. R. Allenbach
File

Subject Carriage of Hazardous Materials Aboard Aircraft

PLAINTIFF'S EXHIBIT
UC-723

On 5/31/79 I sent you a copy of Dr. Allenbach's letter concerning the Subject and a card issued by the UCC Distribution Department.

Mr. Alexander has confirmed to me that asbestos is not covered by the restrictions listed on the card.

John L. Myers

JLM:dal

AUC252

BCC: R. E. Byrne, Jr.
J. F. Collins
W. C. Thurber
file

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UNION CARBIDE

Caldiron ASBESTOS

UNION CARBIDE CORPORATION • METALS DIVISION • P. O. BOX 579 • NIAGARA FALLS, N.Y. 14302 • TEL: 716-278-3376

August 31, 1977

Ms. Linda Chaput
Emissions Standards and Engineering Div. (MD13)
Environmental Protection Agency
Research Triangle Park, NC 27711

Dear Ms. Chaput:

This letter is to confirm our telephone conversation on August 30 concerning the proposed wording of an exemption from the spraying prohibition.

It is my understanding that your current wording is something like the following:

> "The following materials are exempt from this paragraph (e): spray-on materials in which the asbestos fiber is encapsulated and/or impregnated with a bituminous or resinous binder during spraying and which are not friable after drying."

If the above is correct, we support such wording to prevent the prohibition of such products as auto undercoating and sealers, roofing compounds, etc. If "encapsulated and/or impregnated" is not acceptable, we think the word "encapsulated" is the more accurate and descriptive.

Dr. Rhodes will return to the office on September 12th, and I will check with him on the spraying information he has already supplied. If we have additional data or can provide more "justification" language, he will be in touch with you.

It was a pleasure talking to you and we appreciate the opportunity to express our comments. Don't hesitate to contact me before September 12, if you think I can be of any assistance.

Very truly yours,

John L. Myers

John L. Myers
Marketing Manager

JLM:dal

CC: R. H. Mereness
H. B. Rhodes

A 10800

III.E.8

cc: ~~HBR~~ 1/22
Comments
#111

SEP 12 1977

Mr. John L. Myers
Marketing Manager
Union Carbide Corporation
Metals Division
P.O. Box 579
Niagara Falls, New York 14302

Dear Mr. Myers:

Enclosed is a copy of the record of my recent telephone conversations with you and several other persons regarding the March 2, 1977, proposed amendments to the national emission standard for asbestos. I would appreciate your reviewing it and commenting on any inaccuracies you may find. Please feel free also to add any information you believe to be pertinent which is not included in the memo.

The memo will be placed in the file as part of the supporting documentation for the promulgated amendments to the asbestos standard. Therefore, it is important that it accurately reflects the information I obtained from you. Please let me know if you have any questions.

Sincerely yours,

Linda S. Chaput
Environmental Protection Specialist
Standards Development Branch

Enclosure

RECEIVED
SEP - 9 1977
UCC-CALIDRIA

A 16601

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: SEP 12 1977

SUBJECT: Asbestos-Containing Spray-On Materials

FROM: Linda S. Chaput LSC
Standards Development Branch

TO: The Files

From August 24 to 30, 1977, I contacted by telephone several persons to obtain information on the properties of various asbestos-containing spray-on materials. It was necessary to request this information because of several comments submitted on the March 2, 1977, proposed amendments to the asbestos standard. The commenters stated that a non-friable material would not release asbestos fibers during spray application and that any material with a bituminous or resinous binder would not be friable and should, therefore, be exempted from the standard. Very little information was provided by commenters to support these statements, however. Therefore, the following persons were contacted to obtain the information discussed in the remainder of this memorandum.

Robert Mereness, Executive Director
Asbestos Information Association (8/24 & 25/77)

Richard Carter
Johns-Manville, Denver (8/24/77)

Dick Fricklas
Johns-Manville, Denver (8/24/77)

Ed Fenner
Johns-Manville, Denver (8/29/77)

Dick Alexander
Monsey Products (8/25/77)

John Myers
Union Carbide (8/30/77)

Questions and Responses

1. Does it necessarily follow that if a sprayed-on material is not friable, then it will not release asbestos fibers during spraying, and if so, why?

To be non-friable after drying, a sprayed material would require a type of binder that would have a "sticky" consistency. Such a binder would so thoroughly coat the asbestos fibers that they could not be separated from the binder. During spraying, the binder takes on an

EPA Form 1320-6 (Rev. 3-76)

A 10302

oily form as a result of the solvents and acts in the same manner as a dust suppressant, completely saturating the asbestos fibers. The spraying action causes the material to be broken down into droplets which are actually small replicas of the total mass. If the total mass would not release fibers, then neither would the smaller replicas of it. Also, each droplet is many times larger than each asbestos fiber so that the fibers are surrounded by the binder. There was some disagreement among all the parties contacted as to whether the fibers are "encapsulated" or "impregnated" by the binder. "Encapsulated" implies surrounded while "impregnated" implies encapsulated as well as wetted through. Actually, the fibers are not completely encapsulated nor completely impregnated; there is generally a combination of the two mechanisms. Thus, encapsulation and/or impregnation may be total or partial for any one fiber.

2. What is the difference between the terms "bituminous" and "resinous"? Does "resinous" include "bituminous"?

The general consensus was that "resinous" may include "bituminous," but usually the terms are used to mean different things. "Bituminous" refers to asphalt- or coal tar-based materials while "resinous" refers to other natural or synthetic binder materials. Bitumens are normally soft and semi-elastic; resins may be either hard or soft, brittle or pliable, depending on their composition.

3. Are all resinous materials non-friable after drying?

Some resinous materials may be friable after drying or after aging. Such resins as epoxies and acrylics may be somewhat brittle. Bitumens normally are not friable and retain their soft, elastic quality.

4. Is there a minimum amount of binder necessary to bind the asbestos fibers during spraying and after application?

There is not an exact minimum percentage that should be used in all cases. The important thing is to have a proper combination of binder and pigment. Pigments are particles which are added to impart various properties to a material; asbestos is usually added to enhance the thixotropy (ability of the material to decrease in viscosity upon stirring or spraying and to return to the original viscosity when the stirring or spraying stops). When the mixture reaches the point where just enough binder is present to completely fill the voids left between the pigment particles, it has reached the critical pigment volume concentration (CPVC). If the CPVC is exceeded (too much pigment), the material will not wear or weather well and will not be competitive with other materials. If the CPVC is not exceeded, there is sufficient binder to keep asbestos fibers from being released. Therefore, it could be said that the minimum amount of binder necessary to bind the asbestos fibers during and after application is any amount which would not cause the CPVC to be exceeded.

A 10603

II, E, 8

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September 26, 1977

Ms. Linda S. Chaput
Environmental Protection Specialist
Standards Development Branch
Emissions Standards & Engineering Div. (MD13)
Environmental Protection Agency
Research Triangle Park, NC 27711

Dear Ms. Chaput:

This is in response to your file memorandum of September 12, 1977, on the subject of Asbestos-Containing Spray-On Materials. The only comment we would like to make on your very well organized memorandum pertains to the statement under question 3:

> "Some resinous materials may be friable after drying or after aging. Such materials as epoxies and acrylics may be somewhat brittle."

We assume that "friable" as used here has the Environmental Protection Agency Definition of:

> "... means any material that contains more than one percent asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure." (Emphasis added.)

We are not aware of any resinous materials (natural or synthetic), particularly epoxies or acrylics, which meet this definition of friable. If such a material does exist it is extremely unlikely that it would be used in coating or laminating operations since it is extremely important that such coatings are not friable, but, on the contrary, long-lasting and durable.

It was a pleasure talking to you and we appreciate the opportunity to express our comments. Don't hesitate to contact me if you think we can be of any further assistance.

Very truly yours,

John L. Myers

John L. Myers
Marketing Manager

JLM:dal
CC: R. H. Mereness
H. B. Rhodes

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