



IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
(ALL DIVISIONS)

PLAINTIFFS' MASTER SET OF INTERROGATORIES
AND REQUEST FOR ADMISSIONS

PRELIMINARY STATEMENT

Some of the events which may be relevant to the matters inquired about by Plaintiffs' Request for Admissions apparently occurred more than thirty-five years ago. In addition, more than twenty-four years ago, effective April 30, 1958, Owens-Illinois, Inc. disposed of the business involved in this action by way of sale of that business to Owens-Corning Fiberglas Corporation. Since that time, Owens-Illinois, Inc. has not engaged in any such business. It does not now and it has not since that sale manufactured, distributed or sold any asbestos-containing products. As a result of the foregoing factors, many of the individuals who might have had personal knowledge of the matters to which plaintiffs' requests relate are deceased, or are otherwise unavailable to Owens-Illinois, Inc., and investigations to date indicate that at least some documents which relate to matters inquired about by these requests may have been transferred to Owens-Corning Fiberglas Corporation with the transfer of the business in question in 1958. Owens-Illinois, Inc. is engaged in a continuing investigation in an attempt to locate, confirm the transfer of, or confirm the absence of, such documents and is also engaged in a continuing investigation into the matters inquired about in these requests. Unless otherwise stated in a response to a specific request, the responses set out hereinafter are limited to the period during which Owens-Illinois, Inc. manufactured asbestos-containing insulation products and to the facilities related to that business. The following is a part of and is incorporated by reference in every response provided hereinafter:

This response is accurate as of the date made. However, Owens-Illinois, Inc.'s investigation is continuing, and Owens-Illinois, Inc. cannot exclude the possibility that it may be able to obtain more complete information or even information which indicates that the response being supplied is incorrect. Owens-Illinois, Inc. objects to responding to this request in regard to any period of time other than the period during which it engaged in the business involved in this case which ended in mid-1958 or concerning any facility not related to that business, on the basis that any such response would be irrelevant to the subject matter of the pending litigation, would not be reasonably calculated to lead to the discovery of admissible evidence, and would be burdensome and oppressive.

Owens-Illinois, Inc. also objects to the instructions and definitions supplied by plaintiffs with regard to these requests, on the basis that the definitions are overbroad, vague, and often inconsistent with the normal usage and meaning of such words, and the instructions are overbroad, burdensome, and constitute an unreasonable expansion of the requests themselves. Owens-Illinois, Inc. therefore gives notice that it does not consider itself bound by the instructions and definitions propounded by plaintiffs, and instead shall respond to the requests in a manner consistent with a normal understanding of the language used in the response and to the extent necessary to fairly and fully respond to the requests.

REPLY TO REQUEST FOR ADMISSIONS

1. You are now in the business of manufacturing, selling or distributing products containing asbestos.

R. 1. Denied.

2. You have been in the past in the business of manufacturing, selling or distributing products containing asbestos.

(a) This was true during a part of the time between 1940 and 1972.

(b) Between 1940 and 1972, your products were sold or distributed in Texas.

(c) After 1972 some of your asbestos products were still in place where installed earlier.

R. 2. (a-b) Admitted in part and denied in part. Admitted only as follows: Owens-Illinois Glass Company began the manufacture of commercial quantities of asbestos-containing products in 1948 and continued such manufacture until about April 30, 1958. During the period 1948 to April 30, 1958 some of its products were sold or distributed in Texas. Owens-Illinois ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958 and has not engaged in any such business since. Denied except as specifically admitted in this Response.

(c) This defendant can neither admit nor deny this request in that after making reasonable inquiry, the information known or readily obtainable by this defendant is insufficient to enable it to either admit or deny the request.

3. You knew your products inquired about above contained asbestos.

R. 3. Admitted in part and denied in part.

Admitted only as set forth above in response No. 2. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958 and has not engaged in any such business since. Denied except as specifically admitted in this response.

4. You gave no warning to the plaintiff(s) in this case of the dangers of asbestos.

R. 4. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found information in its records sufficient to enable it to respond to this request. Its investigation into the subject matter referred to in this request is continuing. However, it does not appear that any warning concerning asbestos was given in that it does not appear that this defendant had reason to believe that the use of its products would result in a foreseeable risk of harm.

5. Asbestos is a known cause of asbestosis.

(a) A known cause of mesothelioma.

(b) A known cause of cancer of other bodily organs.

(c) A known cause of lung or bronchial damage.

R. 5. This defendant objects to this request because the present knowledge is not relevant to the subject matter of the pending litigation. Medical, scientific and industrial hygiene knowledge develops and evolves over time. That which is presently understood was not necessarily understood in the past. Without waiving its objection, this defendant responds that during the period of time in which this defendant engaged in the manufacture, sale, and distribution of its asbestos-containing products, medical scientific and industrial hygiene knowledge was that the inhalation of asbestos dust in excessive amounts over a

prolonged period of time (years), under certain conditions, could lead to the potential hazard of contracting a disease known as asbestosis. However, in 1958 and before and for some years thereafter, the state of the medical, scientific and industrial hygiene knowledge was that there was a safe level of asbestos to which a person could be exposed without risk of injury and to the effect that persons such as plaintiffs were not exposed to excessive amounts of asbestos and not engaged in dangerous occupations.

(a) Medical, scientific and industrial hygiene knowledge was that mesothelioma was not identified as an independent condition or entity, if at all identified, and was not associated with asbestos until 1960 or after.

(b) Objection, other bodily organs is vague and ambiguous. Medical, scientific and industrial hygiene knowledge was, in 1958 and before, that asbestos was not accepted as a cause of cancer.

(c) If the term "lung or bronchial damage" includes asbestosis, see answer to request 5 above.

ANSWERS TO INTERROGATORIES

1. As to the person answering these interrogatories, state:

- (a) Name;
- (b) Title or position with defendant;
- (c) Business address;
- (d) Length of time employed by defendant

A. 1. Judith W. Kinn, Legal Assistant, One SeaGate, Toledo, Ohio; Denise E. Sheard, Legal Assistant, One SeaGate, Toledo, Ohio; Melinda Leonardelli, Legal Assistant, One SeaGate, Toledo, Ohio; Margaret G. Smith, Legal Assistant, One SeaGate, Toledo, Ohio; and Helen H. Kirk, Legal Assistant, One SeaGate, Toledo, Ohio; William G. Jennings, Legal Assistant, One SeaGate,

Toledo, Ohio; all of whom were working under the direct control and supervision of Calvin E. Carlisle, Esquire, One SeaGate, Toledo, Ohio; Michael E. McConnell, Esquire, One SeaGate, Toledo, Ohio; Lawrence Fitzpatrick, Esquire, One SeaGate, Toledo, Ohio; Stephanie G. Heim, Esquire, One SeaGate, Toledo, Ohio; and David L. Gray, Esquire, One SeaGate, Toledo, Ohio.

2. State the following concerning this defendant:

- (a) Full and correct name;
- (b) Principal place of business;
- (c) State of incorporation;
- (d) Date of incorporation, and name of corporation;
- (e) Is this defendant authorized to transact business in the State of Texas? If so, state the date such authority was first issued and last renewed;
- (f) Does this defendant have an agent, representative or place of business in Texas? If so, state the name and address of such agent, representative, or place of business.
- (g) Does this defendant have an agent for service in the State of Texas? If so, state the name and address of the registered agent.

A. 2. (a-d) Owens-Illinois, Inc. was incorporated in the State of Ohio in 1929. Owens-Illinois Glass Company changed its name to Owens-Illinois, Inc. on April 28, 1965. The address of the principal place of business is One SeaGate, Toledo, Ohio 43666.

(e) This defendant has been authorized to do business in the State of Texas since July, 1938.

(f-g) Yes. The CT Corporation System, P. O. Box 807, Dallas, Texas 75221.

3. Has this defendant been sued under its correct name? If not, state the correct legal name of the defendant and provide the information requested in No. 2 above concerning the defendant as correctly named.

A. 3. Yes, this defendant has been sued under its correct name, Owens-Illinois, Inc.

4. Has this defendant ever acquired through purchase, reorganization or merger another corporation, company, or business which manufactured, sold, processed, distributed or contracted to apply insulation products containing asbestos?

A. 4. No.

5. If the answer to Interrogatory No. 4 is "Yes," then state the following concerning such predecessor:

- (a) Full and correct name;
- (b) The principal place of business;
- (c) State of incorporation;
- (d) Date of acquisition by defendant;
- (e) Was this business authorized to transact business in the State of Texas?
- (f) Attach copies of all papers pertaining to the acquisition.

A. 5. Not applicable. Refer to answer to interrogatory No. 4.

6. As to any product containing asbestos in any form, has this defendant, or any predecessor(s):

- (a) Ever designed such a product?
- (b) Manufactured such a product?
- (c) Processed such a product?
- (d) Sold such a product?
- (e) Distributed such a product?

(f) Patented such a product?
(g) Relabeled such a product which was
manufactured, sold, or distributed by another company?

A. 6. (a-f) Yes.

(g) This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. In 1953 this defendant entered into a "Sales Agreement" under which it agreed to sell certain amounts of its asbestos-containing thermal insulation products to Owens-Corning Fiberglas Corporation. This defendant has found information in its records which indicate that in 1956 it placed Owens-Corning Fiberglas Corporation's logo on some of its boxes. This defendant does not have information sufficient to further respond to this interrogatory.

7. If your answer to No. 6(b), 6(d) and 6(e) is "Yes", then give the trade name of the product, the year the defendant or predecessor first sold or distributed such product, and the year the defendant last sold or distributed such product.

A. 7. Kaylo and Kaylo-20. Owens-Illinois Glass Company began the manufacture of commercial quantities of "Kaylo asbestos-containing products" in 1948. Its first record of any sale of any such products to any Texas customers is in 1950. Owens-Illinois Glass Company continued such manufacture until it ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. Kaylo-20 was sold from about 1956 to April 30, 1958.

8. Have any of the products listed above in Interrogatory No. 6 been altered in chemical composition since first being marketed?

A. 8. Kaylo was a hydrous calcium silicate insulation product containing an average of 15 percent asbestos. Chrysotile was the primary asbestos used, though Amosite, to a lesser extent, was also used. The chemical composition stayed essentially the same during the period that Owens-Illinois Glass Company manufactured Kaylo. Further responding to this interrogatory, this defendant has in its records microfilm copies of technical reports relating to the development and testing of Kaylo, and will make available to plaintiffs' counsel through its local counsel these microfilm records. The microfilm is old and of poor quality. Adequate copies may not be made from it, and reading it requires a reader device.

9. If so, please state:

- (a) The trade name of each such product.
- (b) The date each such product was altered.
- (c) The nature of the alteration.
- (d) The reason for the alteration.

A. 9. (a-d) Refer to answer to interrogatory No. 8.

10. What is the name, address, and the job title of each individual who participated in the design and preparation of manufacturing specifications for each such product?

A. 10. There were undoubtedly numerous people with Owens-Illinois Glass Company during the period of time inquired of, approximately 40 years ago, who participated in the design and preparation of manufacturing specifications for Kaylo. But these individuals are no longer with Owens-Illinois, Inc. For further information relative to this inquiry, see the latter part of the answer to No. 8 above.

11. Do any written memoranda, specifications, blueprints or other written materials of any kind or character relating to the design and preparation of said products now exist?

A. 11. Refer to answer to interrogatory No. 8.

12. If so, please state:

- (a) List each written material or document.
- (b) Who presently has possession of each such document?
- (c) Where is it located?

A. 12. Refer to answer to interrogatory No. 8.

13. In what year did the defendant first begin selling or distributing insulation products containing asbestos?

A. 13. Refer to answer to interrogatory No. 7.

14. In what year did the defendant last sell the insulation product which contained asbestos?

A. 14. 1958. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. It does not now, and it has not since that time, manufactured, sold or distributed any asbestos-containing products.

15. As to the named defendant or any predecessor(s) or acquired business, state the various types of products, such as blocks, pipe covering, cements, tape, spray-on insulation, mastics and cloth, and in connection with each type of such product, state how the same was packaged (i.e., bags, boxes, sacks, etc.) for sale.

A. 15. This defendant's products were manufactured in two forms, block and pipe covering. This defendant's asbestos-containing insulation products were packaged in corrugated cartons with the trademark Kaylo on the carton. However, this defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958 and does not have information sufficient to further answer this interrogatory.

16. Is your company, as of the date of answering these interrogatories, still manufacturing, selling or distributing any insulation products containing asbestos? If so, give the brand names of such products, the binding material and date first manufactured.

A. 16. No. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. It does not now, and it has not since that time, manufactured, sold or distributed any asbestos-containing products.

17. Were each of your insulation products generally expected to reach, or were packaged to reach, the consumer or user, without substantial change in the condition in which it was sold?

A. 17. Yes.

18. If your answer to Interrogatory No. 17 is "No", with respect to any product, explain in what way the defendant claims its products were altered or substantially changed after sale or distribution and before reaching the insulation helper or mechanic.

A. 18. Not applicable.

19. Do you admit that asbestos insulation applicators, helpers or mechanics, were foreseeable users of defendant's asbestos-containing insulation products, such as:

- (a) Pipe covering;
- (b) Blocks;
- (c) Asbestos cloth;
- (d) Mastics;
- (e) Spray-on insulation;
- (f) Rope or tape;
- (g) Asbestos sheeting or millboard;
- (h) Cements.

A. 19. This defendant objects to this interrogatory on the basis that it constitutes an improper form of discovery in that plaintiff in effect is submitting a disguised request for admission. This defendant further objects to the interrogatory on the basis that it is vague in that no time period as to when the submitted fact was foreseeable is indicated. Without waiving its objections, insulators installed insulation products.

(c-h) Not applicable. This defendant did not manufacture, sell or distribute asbestos cloth, mastics, spray-on insulation, rope or tape, asbestos sheeting or millboard, or cements all of which, however, may have been used by insulators.

20. Based upon the material contents of your products, the method of manufacturing, and the method of application for the purpose of insulation, can your products be generally applied by an insulator without liberating asbestos fibers?

(a) If there is a different answer concerning different products manufactured, sold, distributed, or used by your company then specify the different products by exact manufacturers name and popular name.

(b) If there is a difference in your answer depending on the year or years in which a particular product was used, then specify in detail what year or years you are referring to and the specific products you are referring to and the year involved.

A. 20. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found any information in its records sufficient to enable it to answer this interrogatory. Its investigation into the subject matter referred to in this interrogatory is continuing. However, this defendant's asbestos-containing industrial insulation was manufactured in two forms, block and pipe covering. It was a premolded, rigid product which was not intended or required to be molded or mixed in application. It was manufactured in standard premolded shapes and sizes intended to minimize cutting of pieces in application. It was appreciated that sawing or cutting of Kaylo could release small amounts of dust, which dust would probably contain asbestos fibers in about the proportion to the dust of the amount of asbestos contained in the Kaylo. It appears that the product was applied by methods including glueing, tying it to pipe, strapping it to pipe or wiring it to pipe.

21. Was it a foreseeable use of your asbestos containing insulation products that they may have to be removed, stripped or replaced at any time after installation? If your company contends the plaintiff(s) misused any of your products then state how and under what circumstances your product was misused.

A. 21. Yes.

22. Prior to releasing the products listed in Interrogatory No. 6 to the public for sale, were any tests conducted on same to determine potential health hazards involved in the use of materials contained therein?

A. 22. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958 and does not have any records from which it can obtain information sufficient to answer this interrogatory.

During May, 1979, various papers and reports were produced by an employee of the Trudeau Institute, Mr. Allan Logie, regarding animal experiments conducted at laboratories at Saranac Lake involving dust collected during the Kaylo manufacturing process. These papers and reports may contain information related to the substance of this interrogatory. This defendant has not been able to find these papers and reports in its business records or correspondence although it has searched for and continues to search for them.

This defendant's counsel obtained copies of some of the papers and reports produced by Mr. Logie. However, these copies constitute only a portion of a larger volume of papers and reports which this defendant has not copied. They are available at Milbank, Tweed, Hadley & McCloy, 1 Chase Manhattan Plaza, New York, New York. This defendant also has reason to believe that plaintiffs' counsel has copies of the documents produced by Mr. Logie. Other documents possibly relating to this interrogatory may have been produced by Owens-Corning Fiberglas Corporation in the asbestos litigation.

Those documents found at Saranac Lake and at Owens-Corning Fiberglas Corporation and elsewhere, indicate that during the period of time when Owens-Illinois was in the business of manufacturing asbestos-containing products, the state of government, industrial hygiene and medical community knowledge was that there was a recognized safe exposure level for asbestos dust, that persons installing insulation were not exposed to excessive or hazardous levels of asbestos dust, that Kaylo plant employees were x-rayed periodically and displayed no asbestos-related chest disease, and that therefore during the period in which this defendant was in the business of manufacturing Kaylo it had no reason to believe that the foreseeable use of Kaylo would create a hazard to users.

The documents produced by Owens-Corning indicate that in the September, 1955 publication in the A.M.A. Archives of Industrial Health there was a publication of inhalation experiments described by documents produced at the deposition of Mr. Logie which would have been available to the medical, scientific and industrial communities.

To the extent that this interrogatory seeks the production of documents, such documents, as outlined in this response, have not been found as part of this defendant's records and, to the extent that this defendant is in possession of copies of documents, it possesses copies only of documents collected in preparation for litigation. This defendant objects to producing the same. The documents are available from their proper source.

23. If so, please state:

(a) The name, address, and job classification of each individual who conducted such tests.

(b) The results of such said tests.

(c) Date of such studies.

A. 23. Refer to answer to interrogatory No. 22.

24. Do any written memoranda, specifications, blueprints or other written materials of any kind or character exist relating to the testing of said products?

A. 24. Refer to answer to interrogatory No. 22.

25. If so, please state:

(a) List each such written material or document.

(b) Who presently has possession of each such document and where is it located.

A. 25. Refer to answer to interrogatory No. 22.

26. Did defendant or any of its subsidiary companies make any design changes as a result of such tests?

A. 26. No, to the best of our knowledge. Refer to answer to interrogatory No. 22.

27. If so, please state:
(a) The nature of the change made.
(b) The name, address, and job classification of each person in charge of making a change.

A. 27. Refer to answer to interrogatory No. 22.

28. After releasing said products to the public, were any tests conducted thereon to determine potential health hazards involved in the use of materials contained therein?

A. 28. No, to the best of our knowledge. Refer to answer to interrogatory No. 22.

29. If so, please state:
(a) The name, address, and job classification of each person conducting said tests.
(b) The results of said tests.

A. 29. Refer to answer to interrogatory No. 22.

30. Prior to 1970, did you or your predecessor(s) ever have any labor inspectors or anyone from your company whose job it was to go to areas where your products were being used or installed to make a dust level count? If so, state when this procedure started, the purpose of such procedure, and what action, if any, was taken in response to the findings, and attach results.

A. 30. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found any information in its records sufficient to enable it to answer this interrogatory. Its investigation into the subject matter referred to in this interrogatory is continuing.

31. If your company performed or had performed any dust level counts, what action based on the results did your company take?

A. 31. Refer to answer to interrogatory No. 30.

32. Has your company or its predecessor(s) ever conducted any studies concerning the effects of the inhalation of asbestos dust or fibers on one using or being exposed to any of your asbestos materials manufactured, sold or distributed by you, or your predecessor(s)? In answer to this question, give the date and nature of such studies, if any; the name or names of the persons conducting such studies and their addresses; what the purpose of the studies were; and attach a copy of any reports based upon such studies, showing to whom such reports were given, and the date.

A. 32. No, however, refer to answer to interrogatory No. 22.

33. Has your company or its predecessor(s) ever conducted or caused to be conducted any studies designed to minimize or eliminate the inhalation of asbestos dust and fibers by those exposed to the use of your company's insulation products? If so, give the following:

(a) Name of the person or firm conducting such studies;

(b) The date the studies began and the date completed;

(c) Any publication or dissemination of the results of the studies;

(d) The nature of any action to eliminate or minimize inhalation of asbestos dust or fibers

(e) Attach copies.

A. 33. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found any information in its records sufficient to enable it to answer this interrogatory. Its investigation into the subject matter referred to in this interrogatory is continuing.

34. If your answer to Interrogatory No. 33 is "Yes," state the name and address of such industrial hygienist or hygienists.

A. 34. Refer to answer to interrogatory No. 33.

35. Does your company have, has it ever had, or has your predecessor(s) ever had, a Research Department? If so, give the year such Research Department was established, and whether or not such Research Department has operated continuously since being established.

(a) How much expended each year on research, etc.;

(b) What percentage of gross sales did your company or its predecessor spend on research concerning the health affects of asbestos.

A. 35. Yes. This defendant's research department was involved in the development of its products.

(a) This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found any information in its records sufficient to enable it to answer this interrogatory. Its investigation into the subject matter referred to in this interrogatory is continuing.

(b) Not applicable. This defendant's research facility was not utilized to conduct research on the health effects of the products in question. Refer to answer to interrogatory No. 22.

36. State in detail the purpose, duties and responsibilities of such Research Department.

A. 36. See response to interrogatory No. 35.

37. Does your company have, has it ever had, or has your predecessor ever had, a Medical Department? If so, give the year such Medical Department was established, and whether or not such Medical Department has operated continuously since being established.

(a) Name each director, chief, or head of your Medical Department year by year with the first year you had a medical director or Medical Department. Give the last known address of each.

A. 37. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. It does not have and it has not had a "Medical Department." It has had a medical director since about 1946. Charles Shook, M.D., deceased, employed from March 25, 1946 until June 30, 1960 was this defendant's first medical director and its director for the entire period during which it made, sold or distributed asbestos-containing products.

38. State in detail the duties and responsibilities of such Medical Department.

A. 38. This defendant's chief medical director is responsible for assuring and promoting preventive and corrective medical programs, services and practices to protect and preserve employee health throughout Owens-Illinois, Inc. The individual in this position develops, organizes, introduces and implements pre-employment and periodic examinations as well as new health programs in order to insure the continued well being of defendant's employees in a safe and healthy environment.

39. Prior to 1965, did your company, or any predecessor(s), ever at any time give insulation mechanics or insulation helpers who would be applying or removing your products instructions concerning safety precautions to use in applying such products? If so, describe such instructions, to whom they were given, the dates they were given, and the manner of giving such instructions.

A. 39. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found information in its records sufficient to enable it to answer this interrogatory. Its investigation into the subject matter referred to in this interrogatory is continuing. However, it does not appear that any instructions concerning asbestos were given in that it does not appear that this defendant had reason to believe that the use of its products would result in a foreseeable risk of harm.

40. Did your company, or your predecessor(s), ever place any warning signs on the containers in which asbestos insulation products were packaged?

A. 40. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found information in its records sufficient to enable it to answer this interrogatory. Its investigation into the subject matter referred to in this interrogatory is continuing. However, it does not appear that any warning concerning asbestos was given in that it does not appear that this defendant had reason to believe that the use of its products would result in a foreseeable risk of harm.

41. If you have answered Interrogatory No. 40 in the affirmative, please state:

(a) On what date did your company, or your predecessor(s), issue an order directing a warning be placed on your insulation products, or containers?

(b) On what date was such warning actually first placed on your insulation products or containers?

(c) On what date did your insulation products, accompanied by such warning, first reach the insulation contractor?

(d) State the exact wording of the first warning.

(e) State the exact size of the warning printed on your asbestos insulation products or containers.

(f) Did your company, or its predecessor(s), dictate the exact size of the printed warning?

(g) Why did your company or its predecessor(s) place such warning on your asbestos insulation products or containers?

(h) Did your company or its predecessor(s) place such warning on your asbestos insulation products or containers because you received a directive, command, suggestion, legal opinion, or any type of communication (written or otherwise) from any person, firm, corporation, governmental agency, committee, association, attorney or institute? If so, from whom and on what date did you receive such directive, command, suggestion, legal opinion, or other type of communication.

(i) If the wording of the warning has ever been changed or altered, state when it was changed, and the exact change in the wording.

A. 41. Refer to answer to interrogatory No. 40.

42. Did your company or its predecessor(s) ever place any warning directly on any of its asbestos insulation pipe covering itself, block itself, cloth itself, or millboard itself?

A. 42. Refer to answer to interrogatory No. 40.

43. Did your company every stamp the name of the company, its initials, or any identifying logo on any of its asbestos pipe covering, blocks, cloth, or millboard?

A. 43. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found any information in its records sufficient to enable it to answer this interrogatory. Its investigation into the subject matter referred to in this interrogatory is continuing.

44. Did the warning inquired about in Interrogatories Nos. 42 and 43, or similar warning, ever appear in any of your sales literature? If so, attach copies of such sales literature, showing the date such literature was printed.

A. 44. Refer to answer to interrogatory No. 40.

45. On what date was the sales literature inquired about in Interrogatory No. 44 first provided to distributors or sellers of your company's products, or your predecessor(s)'s products?

A. 45. Refer to answer to interrogatories Nos. 40 and 44.

46. Has your company, or your predecessor(s), ever devised a high temperature heat insulation which does not contain asbestos? If so, state the date that such insulation was first placed on the market.

A. 46. No. During the period in which this defendant engaged in the manufacture, sale and distribution of asbestos-containing products it tried unsuccessfully to substitute other materials for the asbestos component in its Kaylo products.

47. Were any material safety data sheets ever prepared by your company or its predecessor(s)? If so, attach copies.

A. 47. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found any information in its records sufficient to enable it to answer this interrogatory. Its investigation into the subject matter referred to in this interrogatory is continuing.

48. Did your company or its predecessor ever recall any products containing asbestos from the common market?

(a) State all details of such recall, giving the name of the product, the time of recall and any further action taken in connection with the recall.

A. 48. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found any information in its records sufficient to enable it to adequately or accurately answer this interrogatory, but to date has not found any record of any such recall. Its investigation into the subject matter referred to in this interrogatory is continuing.

49. Has your company or its predecessor(s) ever directly advised any contractor to whom you sell your products containing asbestos of threshold limit values for exposure to asbestos dust recommended by the American Conference of Governmental Industrial Hygienists? If so, state the date or

dates that you so advised such contractors, the manner in which you advised such contractor and the name of each contractor.

A. 49. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found any information in its records sufficient to enable it to answer this interrogatory. However, information indicating that the level of exposure of insulation workers was below recognized threshold limit values was readily available in the medical literature after 1946. Insulator exposures to asbestos were found by Irving J. Selikoff, M.D. in 1964 to be limited and intermittent and generally within the threshold limit value. Further, studies by Drs. Balzer and Cooper in 1967 and 1968 found that insulators were exposed to levels of asbestos within the threshold limit value.

50. Prior to 1964 did your company or its predecessor(s) ever manufacture insulation products containing asbestos without a warning? List the years.

A. 50. Refer to answer to interrogatory No. 40.

51. After 1964 did you ever manufacture insulation products containing asbestos without a warning? If so, list the name of the product and the years.

A. 51. No. Not applicable. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. It does not now, and it has not since that time, manufactured, sold or distributed any asbestos-containing products.

52. Prior to 1970, did your company, or any predecessor(s), ever manufacture and sell a high temperature heat insulation which does not contain asbestos? If so, state the date that such insulation was first placed on the market.

A. 52. No. Refer to answer to interrogatory No. 46.

53. Is your company, as of the date of answering these interrogatories, still manufacturing, selling or distributing any insulation products containing asbestos? If so, give the brand names of such products and the binding material and date of first manufacture of such product.

A. 53. No. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958.

54. If your company, or your predecessor(s), ever devised a high temperature heat insulation which does not contain asbestos, state what prompted your company to devise such high temperature heat insulation not containing asbestos.

A. 54. Refer to answer to interrogatory No. 46.

55. Has such high temperature heat insulation not containing asbestos performed satisfactorily; that is, is such insulation suitable for the purpose for which it is to be used?

A. 55. Refer to answer to interrogatory No. 46.

56. Give the trade names of your high temperature heat insulation products which do not contain asbestos, and state fully what such insulation contains.

A. 56. Refer to answer to interrogatory No. 46.

57. State the decade that there first existed manufacturing technology for commercial purposes the use of chemicals and minerals for combining into a high heat insulation product a substitute for asbestos in insulation materials.

A. 57. Owens-Illinois Glass Company was not aware of any such technology during the period of time it manufactured asbestos-containing products, which manufacture it ceased in 1958. This defendant objects to this interrogatory on the basis that it seeks information which is not relevant to the subject matter of this litigation and is not reasonably calculated to lead to the discovery of admissible evidence. For further answer, if such be necessary, see answers to interrogatories No. 46 and No. 8.

58. To your company's knowledge, in what decade was fiberglass first commercially available for insulation over 350°F.?

A. 58. This defendant has no knowledge on the subject of the interrogatory as it did not, and does not, utilize fiberglass in its products. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found any information in its records sufficient to enable it to answer this interrogatory.

59. In what decade was each of the following products commercially available for use and sale:

- (a) Fiberglass;
- (b) Calcium silicate;
- (c) Mineral wool;
- (d) Rock wool;
- (e) Foamglass;
- (f) Ceramics;
- (g) Wood pulp;
- (h) Organic pulp.

A. 59. This defendant objects to this interrogatory on the basis that it seeks information which is not relevant to the subject matter of this litigation and is not reasonably calculated to lead to the discovery of admissible evidence. This interrogatory is vague and ambiguous in that the intended application of the products inquired of is not set forth. For further answer see answer to interrogatories No. 58, No. 46, and No. 8.

60. List all insulation products sold in the 1940's, 1950's and 1960's which did not contain asbestos and give the physical and tensile strength and temperature decomposition data for each product.

A. 60. This defendant objects to this interrogatory on the basis that it seeks information which is not relevant to the subject matter of this litigation and is not reasonably calculated to lead to the discovery of admissible evidence. This defendant cannot speak for the data inquired of in "all insulation products" in any decade, and certainly not in the years following its leaving the insulation manufacturing business. For further answer, if such be necessary, see the answers to interrogatories No. 58, No. 46, and No. 8.

61. Did your company or any predecessor(s) ever have a division or subsidiary company engaged in the contracting business of applying insulation products? If so, give the name of such division or subsidiary company, the full address of the home office of such division or subsidiary company, and the dates such division or subsidiary company was engaged in the contracting business.

A. 61. No. This defendant has never formed nor maintained a group or groups known as "contract units," such "contract units" being a division or group within or maintained by the corporation which, inter alia, engaged in the actual installation of insulation products containing asbestos at job sites.

62. Did any division of your company or subsidiary company engaged in the contract business of applying insulation products or your workmen's compensation insurance carrier ever have any claims for lung diseases or death from lung diseases, whether directly or indirectly attributed to asbestosis, mesothelioma, lung cancer, or any exposure to asbestos products prior to 1972? If the answer is "Yes," give the name of such employees and attach copies of such claims and copies of all documents relating to the disposition and handling of such claims.

A. 62. Not applicable. Refer to answer to interrogatory No. 61.

63. Give the location of the state industrial accident board handling each such claim, the disposition of such claims, and the amounts paid in workmen's compensation benefits to each such employee, and the name of the compensation carrier.

A. 63. Not applicable. Refer to answer to interrogatory No. 61.

64. Was your medical department or industrial health department or industrial hygienist responsible for contracting unit employees?

A. 64. Not applicable. Refer to answer to interrogatory No. 61.

65. Did your company or its predecessor(s) ever make any industrial hygiene surveys? If so, give the date of such surveys, and attach copies of such surveys.

A. 65. Refer to answer to interrogatory No. 22. This defendant has not found information sufficient to further answer this interrogatory.

66. State the year that this defendant or any predecessor(s) was first advised of either threshold limit values or maximum allowable concentrations of both asbestos dust and total dust by the American Conference of Governmental Industrial Hygienists, and state the name of the employee-official of the company receiving such advice and attach copies of the instrument communicating such advice.

A. 66. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. It has not located information in its records that would enable it to answer this interrogatory. However, this defendant was aware of the TLV for asbestos dust and other dusts as published by the American Conference of Governmental Industrial Hygienists (ACGIH) in the mid to late 1940's or 1950's.

During the 1940's and after, this defendant subscribed to and received the Journal of Industrial Hygiene and Toxicology which contained, in 1946, an article entitled "A Health Survey of Pipe Covering Operations in Constructing Naval Vessels," by Fleischer, Drinker and others which discusses safe levels of asbestos. Also, this defendant was a member of the Industrial Hygiene Foundation in 1946. The transactions of the Eleventh Annual Meeting, Industrial Hygiene Foundation, dated November 7, 1946 contain, beginning at page 71, an explanation by J.J. Bloomfield of then existing threshold limit values including the TLV for asbestos.

Further, in May, 1979, various papers and reports were produced by an employee of the Trudeau Institute, Mr. Allan Logie, regarding animal experiments conducted at laboratories at Saranac Lake, New York purportedly involving dust collected during the manufacture of Kaylo. These papers and reports may contain information related to the substance of this interrogatory. This defendant has not been able to find those papers and reports in its business records or correspondence although it has searched for and continues to search for them. Among those papers and reports is a paper dated May 29, 1951 which refers to the TLV for asbestos dust.

During the period of time this defendant manufactured, sold and distributed asbestos-containing products, the threshold limit value for asbestos dust, as taken from the published transactions and other material of the American Conference of Governmental and Industrial Hygienists was 5,000,000 particles of asbestos dust per cubic foot of air.

Additionally, Owens-Corning Fiberglas Corporation produced, in various cases in 1979, papers purporting to relate to this defendant's asbestos-containing product business. One such paper is a copy of a letter to Dr. Miriam Sachs, Chief, Bureau on Adult and Industrial Health, State of New Jersey Department of Health, Trenton, New Jersey regarding State standards. Neither the documents produced by Owens-Corning Fiberglas Corporation nor those produced by Mr. Logie have been located in this defendant's records. Refer to answer to interrogatory No. 22 above.

67. Was such threshold limit values or maximum allowable concentrations inquired about in Interrogatory No. 66 total dust and not just asbestos dust?

A. 67. No. This defendant understands the term "threshold limit value" as it pertains to the asbestos trade to mean the maximum average atmospheric concentration of asbestos dust to which workers may be exposed for an eight hour day without injury to health. During the period of time this defendant manufactured, sold and distributed asbestos-containing products, the threshold limit value for asbestos dust, as taken from the published transactions and other material of the American Conference of Governmental and Industrial Hygienists was 5,000,000 particles of asbestos dust per cubic foot of air. See the paper dated May 29, 1951 noted in answer to interrogatory No. 66 above.

68. State in detail what test, if any, your company ever made with regard to the quantity, quality or threshold limit values of asbestos dust or particles to which insulators were exposed while using your products containing asbestos.

(a) If there were any such tests or studies, give the name or names of the person(s) conducting the tests, the date of the tests and attach true copies of any reports, findings or memorandums concerning such tests or studies.

A. 68. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. This defendant has not found any information in its records sufficient to enable it to answer this interrogatory. Its investigation into the subject matter referred to in this interrogatory is continuing. Refer to answer to interrogatory No. 49 above.

69. When did any official with your company first have knowledge, information or understanding that asbestos would or could or might produce the diseases of:

(a) Asbestosis;
(b) Mesothelioma;
(c) Lung cancer;
(d) Any other diseases;
(e) With reference to your company give the name of such official who first had such knowledge, information or understanding;

(f) If there are any documents, records or memorandums of any kind concerning such knowledge, list them and attach copies.

A. 69. (a) To the extent this interrogatory inquires as to asbestos-containing products manufactured or sold by other defendants, this defendant states that it does not have any records from which it can obtain information sufficient to answer this interrogatory, nor can it locate any present employees with knowledge thereof.

Insofar as this interrogatory inquires as to asbestos-containing products manufactured by this defendant, this defendant states that it ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958 and has not engaged in any such business since.

During May, 1979, various papers and reports were produced by an employee of the Trudeau Institute, Mr. Allan Logie, regarding animal experiments conducted at laboratories at Saranac Lake involving dust collected during the Kaylo manufacturing process. These papers and reports may contain information related to the substance of this interrogatory. This defendant has not been able to find these papers and reports in its business records or correspondence although it has searched for and continues to search for them.

This defendant's counsel obtained copies of the papers and reports produced by Mr. Logie. However, these copies constitute only a portion of a larger volume of papers and reports which this defendant has not copied. This defendant also has reason to believe that plaintiffs' counsel has copies of the documents produced by Mr. Logie. They are available at Milbank, Tweed, Hadley & McCloy, 1 Chase Manhattan Plaza, New York, New York. Other documents possibly relating to this interrogatory have been produced by Owens-Corning Fiberglas Corporation. Those documents indicate that the experiments referred to in the documents produced by Mr. Logie were published in an AMA publication in September, 1955. As with the documents produced by Mr.

Logie, the documents produced by Owens-Corning Fiberglas Corporation have not been found as part of this defendant's records.

The foregoing documents indicate that during the time in which this defendant engaged in the manufacture, sale and distribution of asbestos-containing products, its products contained a relatively small portion of asbestos when compared to other asbestos-containing products in use during and prior to the same period of time. This defendant's employees at its asbestos product manufacturing plants were x-rayed periodically and displayed no asbestos-related chest disease, although in the course of their employment they were exposed to the raw materials of this defendant's products as well as the dust of the finished product. Furthermore, these documents indicate that there were no worker's compensation claims filed by its employees for asbestos-related diseases.

It was this defendant's understanding of the state of medical and industrial hygiene knowledge that exposure to asbestos in excessive amounts over a prolonged period of time (years), in the conditions typically experienced in factories, workshops, and possibly mines and mills could lead to the potential hazard of contracting a disease known as asbestosis.

However, the state of medical and industrial hygiene knowledge was also to the effect that there was a safe level (threshold limit value) of asbestos to which a person could be exposed without risk of injury. This defendant was aware of the threshold limit value for asbestos as published by the American Conference of Governmental Industrial Hygienists (ACGIH) in the 1940's and 1950's through publications by the Industrial Hygiene Foundation, ACGIH and from the above referenced "Logie" and "OCF" documents.

In addition, this defendant subscribed to and received the Journal of Industrial Hygiene and Toxicology which contained in January, 1946 an article published by the Navy entitled, "A Health Survey of Pipe Covering Operations in Constructing Naval Vessels," by Fleischer, Viles, Gade and Drinker. This article stated that persons such as plaintiffs, who worked in shipyards,

were not exposed and did not work in conditions similar to those experienced in factories, workshops, mines and mills, and were not exposed to excessive levels of asbestos or engaged in dangerous work. The article concluded that such persons were not engaged in a hazardous occupation.

From the foregoing papers, reports and articles, this defendant had no reason to believe that exposure to its asbestos-containing products would result in a foreseeable risk of harm to users.

To the extent that this interrogatory seeks the production of documents, such documents, as outlined in this response, have not been found as part of this defendant's records and, to the extent that this defendant is in possession of copies of documents, it possesses copies only of documents collected in preparation for litigation. This defendant objects to producing the same. The documents are available from their proper source.

(b) This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. In 1958 and before, this defendant understands that the state of medical, scientific and industrial hygiene knowledge was that mesothelioma was not identified or recognized as an independent condition or entity and it was not associated with asbestos. This defendant did not have the knowledge, information or understanding inquired about in this interrogatory.

(c) This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. In 1958 and before, this defendant understands that the state of medical, scientific and industrial hygiene was that lung cancer was not accepted as being associated with or caused by asbestos. This defendant did not have the knowledge, information or understanding inquired about in this interrogatory.

(d) This defendant objects to this interrogatory for the reason that "other diseases" is vague, ambiguous and does not permit formulation of an answer. However, for further answer, if such be necessary, this defendant states that it never did learn that there was medical speculation that asbestos might produce "other diseases" other than the aforementioned asbestosis, mesothelioma, and lung cancer.

(e) See answers to interrogatories 69 (a), (b), (c) and (d) above.

(f) See answers to interrogatories 69 (a), (b), (c) and (d) above.

70. As to every product of yours which you have identified in previous interrogatories state specific type or types of asbestos, (i.e., crocidolite, chrysotile, amosite or any others) which your products contained. If you have any percentage figures available, then give the percentage as to each product.

A. 70. This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958. Its investigation as to the composition of each such product, including the type of asbestos contained therein (i.e., amosite or chrysotile) and the quantitative percentage of asbestos in each product, is continuing, although defendant now believes that its asbestos-containing products were hydrous calcium silicates containing between 13% and 25% asbestos, nominally 15%. Chrysotile asbestos was the primary type apparently used. Amosite was used to a lesser extent.

71. Does defendant contend that plaintiff improperly used its products?

A. 71. Discovery is continuing. However, yes, to the extent it is proven that plaintiff was exposed to this defendant's products.

72. Set forth a list of photographs, plats, sketches or other documents in the possession of the party that will potentially be used as an exhibit at the trial of this case by you.

A. 72. The documents upon which this defendant intends to rely upon at trial are not known at the present time. This defendant reserves the right to designate documents to be used at trial at a later date. As a partial listing, however, the following materials may be relied upon: "A Study of Asbestosis in the Asbestos Textile Industry," Dreessen, W. C. (1938); an article published in the Transactions of the Eleventh Annual Meeting, Industrial Hygiene Foundation, November 7, 1946 by J. J. Bloomfield; "A Health Survey of Pipe Covering Operations in Constructing Naval Vessels," Fleischer, Drinker, et al (1946); "Asbestos Exposure During Naval Vessel Overhaul," Marr, William T. (1964); "Prevalence of Chronic Respiratory Disease," Ferris, B. G., Jr. 1971); "Asbestosis and Bronchogenic Carcinoma," Isselbacher, K. J. (1953); Annals of the New York Academy of Sciences Volumes 132 and 330; and the Threshold Limit Values promulgated by the American Conference of Governmental Industrial Hygienists for the years 1946 through 1958.

73. Were you or any of your agents, servants, employees aware of any of the articles described on Exhibit A prior to the year 1950?

A. 73. This defendant ceased the manufacture, sale and distribution of asbestos-containing products, effective April 30, 1958. Thus, to the extent this interrogatory seeks information for articles published in 1959 and after, this defendant objects for the reason that such information is not relevant to the subject matter of the pending litigation nor reasonably calculated to lead to the discovery of admissible evidence. This defendant has not found any information in its records sufficient to enable it to answer this interrogatory for publications prior to 1959. Its investigation into the subject matter referred to in this interrogatory is continuing. However, this defendant subscribed to and received the Journal of Industrial Hygiene and Toxicology which contained, in 1946, an article entitled "A Health Survey of Pipe Covering Operations in Constructing Naval

Vessels," by Fleischer, Drinker and others which discusses safe levels of asbestos. That article made reference to a study by Dreessen and others dated 1938 and published as United States Public Health Service Bulletin No. 241. That article concluded that persons installing insulation, such as plaintiffs were engaged in a safe occupation. This defendant objects to all articles dated subsequent to 1958.

74. If you answered the foregoing question "Yes," then answer the following:

(a) Set forth such article you had knowledge of and the date you acquired such knowledge.

A. 74. Refer to answer to interrogatory No. 73.

75. As of January 1, 1965, what quantity of the following asbestos-containing insulation products were stored in your warehousing facility or facilities awaiting sale to contractors or other concerns:

(a) Pipe covering (state figure and number of boxes);

(b) Block (state figure and number of boxes);

(c) Cement (state figure and number of bags).

A. 75. (a-b) None. This defendant ceased manufacture, sale and distribution of asbestos-containing products effective April 30, 1958.

(c) This defendant has never manufactured, marketed or distributed cement or cement products.

76. Do you have any photographs of the products inquired about above or their packages or containers? If so, please attach exact copies.

A. 76. Not applicable. Refer to answer to interrogatory No. 75.

77. Do you contend that none of your asbestos-containing insulation products were sold to or ever reached the premises of any or all of the concerns listed in Exhibit "B" attached hereto? If so, indicate which and explain the factual basis for this contention.

A. 77. This defendant has found no records of any sales of asbestos-containing products to the following companies listed on Exhibit B:

Atlantic Refinery	Port Arthur, Texas
Arco Polymers Refinery	Port Arthur, Texas
American Bridge	
Division, U.S. Steel	Orange Texas
American Petrofina	Port Arthur, Texas
Amoco	Chocolate Bayou, Texas
Bethlehem Steel	Beaumont, Texas
Cities Service Refinery	Lake Charles, Louisiana
Cit Con Refinery	Lake Charles, Louisiana
Consolidated Shipyard	Orange, Texas
Continental Refinery	Lake Charles, Louisiana
E.I. DuPont	Orange, Texas
E.I. DuPont	Beaumont, Texas
Firestone	Orange, Texas
Gulfport Shipbuilding	Port Arthur, Texas
Goodyear	Baytown, Texas
Gulf States Powerhouse	Bridge City, Texas
Levingston Shipbuilding	
Company	Orange, Texas
Mobil Chemical	Beaumont, Texas
Monsanto Chemical	Chocolate Bayou, Texas
Olin-Matheson	Lake Charles, Louisiana
Petro Tex	Houston, Texas
PPG Plant	Lake Charles, Louisiana
Pure Oil Refinery	Port Neches, Texas
Sinclair-Koppers	Port Arthur, Texas
Sinclair-Koppers	Pasadena, Texas
Sinclair-Koppers	Houston, Texas
Texaco Refinery	Port Arthur, Texas
Union Oil	Port Arthur, Texas

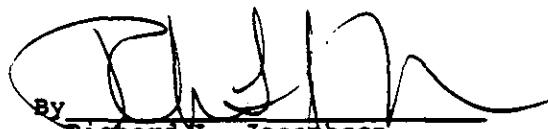
This defendant has found records indicating that it made sales of asbestos-containing products to the following companies and places listed on Exhibit B for the years shown below:

Carbide and Chemical Company, Texas City	1950-1953
Dow Chemical Company, Freeport, Texas	1950-1955
Gulf Oil Corporation, Port Arthur, Texas	1951-1952
Jefferson Chemical, Port Neches, Texas	1952
Shell Oil Company, Deer Park, Texas	1950-1953

This defendant ceased the manufacture, sale and distribution of asbestos-containing products effective April 30, 1958.

Respectfully submitted,

BAKER & BOTTS

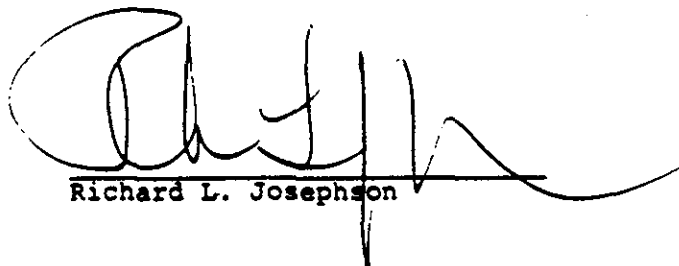


By Richard L. Josephson
3000 One Shell Plaza
Houston, TX 77002
(713) 229-1460

ATTORNEY FOR DEFENDANT,
OWENS-ILLINOIS, INC.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of
the foregoing instrument has been forwarded to all known
counsel of record in the Eastern District by U. S. First
Class Mail on this 23rd day of December, 1982.



Richard L. Josephson

AFFIDAVIT

STATE OF OHIO)

) SS:

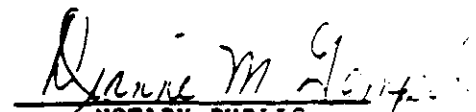
COUNTY OF LUCAS)

PHILIP M. RICE, being duly sworn according to law, deposes and says that he is an Assistant Secretary of Owens-Illinois, Inc., a defendant herein; that as such he is authorized to make an Affidavit on its behalf; and that the facts set forth in the foregoing Answers of Owens-Illinois, Inc. to Plaintiffs' Master Set of Interrogatories and Request for Admissions are true and correct to the best of his knowledge, information and belief.



PHILIP M. RICE

Sworn to and subscribed before me this 3rd day
of December, 1982.



NOTARY PUBLIC