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UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF ILLINOIS
SPRINGFIELD DIVISION

CHARLES HUNT and KATHY HUNT,

Plaintiff,

vs.

ARMSTRONG WORLD INDUSTRIES,
et al.,

Defendants.

NO. 86-3190

DEFENDANT, OWENS-ILLINOIS, INC.'S ANSWERS TO
PLAINTIFF'S FIRST SET OF INTERROGATORIES

PRELIMINARY STATEMENT

Some of the events which may be relevant to the matters inquired about by Plaintiffs' Interrogatories apparently occurred more than thirty-five years ago. In addition, 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' interrogatories 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 interrogatories 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 interrogatories. Unless otherwise stated in an answer to a specific interrogatory, the answers 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 answer provided hereinafter:

This answer 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 answer being supplied is incorrect. Owens-Illinois, Inc. objects to answering this interrogatory 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 answer 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.

Furthermore, Owens-Illinois, Inc. objects to the instructions and definitions supplied by plaintiffs with regard to these interrogatories, 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 interrogatories 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 answer the interrogatories in a manner consistent with a normal understanding of the language used in the interrogatory and to the extent necessary to fairly and fully answer the interrogatory.

Q. 1. Have these interrogatories been answered fully and in good faith to the extent of the actual knowledge and information available to defendant, Owens-Illinois, Inc., its insurance carrier(s) and attorneys?

A. 1. This defendant states that it has referred to the relevant business records of the Owens-Illinois Glass Company, which are still in the possession of Owens-Illinois, Inc., in connection with the preparation of answers to these interrogatories unless otherwise indicated.

Q. 2. Is the defendant, Owens-Illinois, Inc., a corporation? If so, state:

- (a) The exact corporate name;
- (b) The state of incorporation;
- (c) The date of incorporation;
- (d) The address of defendant's corporate headquarters.

A. 2. Owens-Illinois Glass Company was incorporated in the State of Ohio in 1929. Owens-Illinois Glass Company changed its name to Owens-Illinois, Inc. on April 28, 1965. Due to corporate restructuring in 1987, this defendant is now a Delaware corporation. The address of the principal place of business is One SeaGate, Toledo, Ohio 43666.

Q. 3. State the name, current address, employer, and position with employer, of all individuals, other than members of the law firm representing defendant in this action, who assisted in the gathering of information or preparation of the answers to these interrogatories.

A. 3. This defendant states that it has referred to the relevant business records of the Owens-Illinois Glass Company, which are still in the possession of Owens-Illinois, Inc., in connection with the preparation of answers to these interrogatories unless otherwise indicated.

Q. 4. Has anyone obtained from any person a statement (whether oral or written, signed or unsigned) concerning the occurrence involved in this cause of action? If so, state as to each statement:

A. 4. This defendant objects to this interrogatory as being vague, ambiguous, unintelligible, irrelevant and not reasonably calculated to lead to the discovery of admissible evidence and not limited to any issue which is the subject of this case. This defendant further objects to this interrogatory on the grounds that it seeks information within the work-product privilege and on the ground that it is oppressive and burdensome in that it would have to review all of the files and all of the records of all of its attorneys all over the country to respond to this interrogatory.

Q. 5. Has any private firm or company adjuster been directed to investigate the occurrence or ask questions of persons who may have knowledge of facts concerning the occurrence? If so, state the full name and address of each firm or adjuster.

A. 5. This defendant objects to this interrogatory as being irrelevant and not reasonably calculated to lead to the discovery of admissible evidence and not limited to any issue which is the subject of this case. This defendant further objects to this interrogatory on the grounds that it seeks information within the work-product privilege and on the ground that it is oppressive and burdensome in that it would have to review all of the files and all of the records of all of its attorneys all over the country to respond to this interrogatory.

Q. 6. Do you have any information regarding Charles Hunt's physical condition other than that information furnished you by the plaintiffs' counsel? If so, state the nature of that information, the name and address of its source, and if documentary in nature, who now has each such document.

A. 6. This defendant objects to this interrogatory as being irrelevant and not reasonably calculated to lead to the discovery of admissible evidence and not limited to any issue which is the subject of this case. This defendant further objects to this interrogatory on the grounds that it seeks information within the work-product privilege and on the ground that it is oppressive and burdensome in that it would have to review all of the files and all of the records of all of its attorneys all over the country to respond to this interrogatory.

Q. 7. Were any photos taken of Charles Hunt? If so, state the total number of photos, the date of each photo, each subject, and who has each.

A. 7. This defendant objects to this interrogatory as being irrelevant and not reasonably calculated to lead to the discovery of admissible evidence and not limited to any issue which is the subject of this case. This defendant further objects to this interrogatory on the grounds that it seeks

information within the work-product privilege and on the ground that it is oppressive and burdensome in that it would have to review all of the files and all of the records of all of its attorneys all over the country to respond to this interrogatory.

Q. 8. Were you named or covered under any policy of liability insurance, effective on the date of the occurrence, which may be construed to provide coverage for any claim stated in the Complaint? If so, as to each policy, state:

- (a) The name of the company;
- (b) The policy number;
- (c) The effective period;
- (d) The maximum liability limits for:
 - (1) Injury to any one person;
 - (2) Aggregate personal injury

limits;

(e) What amounts, if any, have previously been paid under the policy which in the opinion of the carrier reduces the coverage available.

(f) Whether the carrier denied coverage or tendered a defense under a reservation of rights;

(g) Whether the policy provides for any retained risk, or deductible amount for which defendant remains responsible, and, if so, state the amount for injury to one person, and the aggregate personal injury amount.

A. 8. This defendant objects to this interrogatory on the ground that it seeks irrelevant and immaterial information which is not reasonably calculated to lead to the discovery of admissible evidence. Expressly reserving and without waiving its objections, and subject to them, this defendant states that the issues surrounding its insurance coverage for asbestos claims are complex. Because of disputes over possible insurance coverage, this defendant has engaged in litigation against certain insurance carriers which may provide coverage for asbestos.

claims. One such lawsuit resulted in a decision of the United States District Court of the District of Columbia in Owens-Illinois, Inc. v. Aetna Casualty and Surety Company, 597 F.Supp. 1515 (D.D.C. 1984).

The litigation between this defendant and Aetna Casualty and Surety Co. has been settled. The terms and conditions of the settlement agreement are confidential, and as a consequence, the parties are precluded from disclosing the terms or contents of the agreement. Litigation with other insurance carriers is ongoing.

Q. 9. Which, if any, of the carriers listed in your answer to the preceding interrogatory are providing a defense to this suit?

A. 9. Refer to objection to Interrogatory No. 8.

Q. 10. For each expert witness you have disclosed in this case:

(a) His name, current address, telephone number, occupation, and employer;

(b) The subject matter on which the expert is expected to testify;

(c) His conclusions and opinions and the bases therefore;

(d) His qualifications, including all formal education subsequent to high school, a history of his employment and the citation to each of his published writings;

(e) The amount paid, or agreed to be paid to him, specifying his hourly rate of compensation;

(f) Whether such expert has testified, either at deposition or at trial in any case in which the claimant alleged damage as a result of exposure to asbestos and/or asbestos-containing products, and if yes, state for each case:

(1) The first-named plaintiff and first-named defendant;

(2) The court in which filed and the cause number;

(3) The date and place the testimony was given;

(4) The name and address of the reporter;

(5) Whether you have a transcript of the testimony.

(g) Whether the expert has made any written report regarding this, and if so, who possesses copies of the report;

(h) List all documents supplied to the expert by defendant, or counsel for defendant, in regard to the claims made in this cause;

(i) The names of all individuals, other than members of the law firm representing defendant in this cause, with whom the expert has conferred, corresponded, or in any way contacted, in order to reach, or for assistance in reaching, the conclusions, opinions, and the basis for the conclusions and opinions set forth in subpart (c);

(j) whether the expert has ever previously been retained as an expert for the law firm representing defendant in this cause, or defendant. If so, state on how many prior occasions the expert has been so retained, and by whom;

(k) State the date on which defendant, or counsel for defendant, first contacted the expert concerning the claims made in this cause. As to such contact, indicate whether it was in writing or by phone, and the name and current address of the individual contacting the expert. Further state the date upon which the expert first agreed to be an expert for defendant in this cause.

Q. 10.

A. 10. The identity of expert witnesses to be called at trial is not known at the present time. This defendant reserves the right to designate at a later date expert witnesses to be used at trial.

Q. 11. Has defendant ever had one or more persons whose primary responsibility included looking after or monitoring the health of defendant's employees, such as a medical director? If so, state the following as to each person who has held this position:

- (a) The name and address of the person;
- (b) The name of the position he or she held;
- (c) The dates during which he or she held the position;
- (d) The address of his or her office during the time he or she held the position;
- (e) State whether there was a written job description for that position at that time;
- (f) If there was a written job description, set forth the words of the description or attach a copy hereto.

A. 11. Charles Shook, M.D., deceased, employed from March 25, 1946 until June 30, 1960 was the Medical Director during the period in which this defendant manufactured, sold or distributed asbestos-containing products. He reported to the Vice President of Corporate Staff, Director of Corporate Personnel.

This defendant's chief medical officer is responsible for assuring and promoting preventive and corrective medical programs, services and practices to protect and preserve employee health and productivity 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. The person in this position is also responsible for the quality of medical services at Owens-Illinois locations.

Q. 12. Has defendant ever directed or contributed money toward a study of the effects of asbestos exposure upon the health of some or all of its employees? If so, state the following as to each such study:

- (a) The description or title of the study;
- (b) The dates during which it was made;
- (c) The location or locations of the plants at which the employees were employed;
- (d) The number of employees studied;
- (e) Brief description of the study;
- (f) Whether any of the results were reported into written form, and if so, who now has a copy of the report.

A. 12. This defendant ceased the manufacture, sale and distribution of asbestos-containing products in 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 relating 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 through Winne, Banta, Rizzi, Hetherington & Basralian, 25 E. Salem Street, Hackensack, New Jersey. 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 and that persons installing insulation were not exposed to excessive or hazardous levels of asbestos dust. The foregoing documents also indicate that Kaylo plant employees were x-rayed periodically and displayed no asbestos-related chest disease; that this defendant made appropriate efforts to provide ventilation and to control the emissions of all dust emitted during the manufacturing process within recognized safe levels of exposure, including the use of respirators in some instances, dust collection equipment and other devices as necessary; 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 Fiberglas Corporation indicate that the September, 1955 publication in the A.M.A. Archives of Industrial Health was a publication of inhalation experiments.

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.

Q. 13. Have there been any studies of the effect of asbestos exposure upon the health of any of defendant's employees? If so, state:

- (a) The description or title of the study;
- (b) The dates during which it was made;
- (c) The location or locations of the plants at which the employees were employed;
- (d) The number of employees studied;
- (e) Brief description of the study;
- (f) Whether any of the results were reported into written form, and if so, who now has a copy of the report.

A. 13. This defendant objects to this interrogatory as being vague, ambiguous, irrelevant, overly broad, burdensome and oppressive, not reasonably calculated to lead to the discovery of admissible evidence and not limited to any issue which is the subject of this case. Without waiving the above objection, this defendant ceased the manufacture, sale and distribution of asbestos-containing products in 1958. This defendant has not found information in its records sufficient to enable it to answer this interrogatory.

Q. 14. List the following information for each claim brought against defendant by a present or former contract-unit employee of defendant or the spouse or child of a deceased such employee alleging a disease or condition of ill-being caused by asbestos:

- (a) The name and address of the person alleged to be diseased or in a condition of ill-being;

(b) When the alleged disease or condition of ill-being began;

(c) The circumstances under which the employee is alleged to have come into contact with asbestos;

(d) Whether the person is represented by an attorney, and if so, the name and address of his attorney;

(e) The agency where the claim was filed, the docket number of the claim and the date the claim was filed.

A. 14. Not applicable to this defendant. 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.

Q. 15. List the following information regarding each document authored by an employee of defendant in the course of his employment, dealing in whole or in part with the consequences of exposure to asbestos:

(a) Name, title or other means of identification of the document;

(b) Name, position at time document authored, and current address, position and employer of each author of the document;

(c) Date prepared or published;

(d) The name and address of the entity responsible for its publication and/or distribution;

(e) If available in typewritten or printed form, the number of pages.

A. 15. This defendant objects to this interrogatory as being vague, ambiguous, irrelevant, overly broad, burdensome and oppressive, not reasonably calculated to lead to the discovery of admissible evidence and not limited to any issue

which is the subject of this case. This defendant objects to this interrogatory insofar as it may seek to discover work product of counsel and trial preparation material.

Q. 16. When did defendant first sell asbestos or products containing asbestos?

A. 16. Owens-Illinois Glass Company began limited pilot plant operations involving the production of "Kaylo" asbestos-containing products in 1943. It began the manufacture of commercial quantities of "Kaylo" asbestos-containing products in about 1948 and continued such manufacture until about April 30, 1958. This defendant did not engage in the business of selling raw asbestos-fiber.

Q. 17. Does defendant still sell asbestos or products containing asbestos? If not, when did defendant stop selling?

A. 17. No. This defendant ceased all involvement in the asbestos-containing product business in 1958.

Q. 18. List the following information about each different type (as opposed to different sizes of the same type) of asbestos containing building and/or insulation product manufactured or sold by defendant:

- (a) Brand or trade name;
- (b) Description;
- (c) Uses defendant recommended of it;
- (d) Asbestos content;
- (e) Dates of manufacture and/or sale.

A. 18. (a) Kaylo.
(b) This defendant ceased the manufacture, sale and distribution of asbestos-containing products in 1958.

It believes that Kaylo and Kaylo-20 were premolded, rigid products, and were manufactured in two forms, block and pipe covering. Kaylo was white or off-white in color, and Kaylo-20 was pinkish in color.

(c) The asbestos-containing products manufactured by this defendant were intended to be used for industrial high temperature thermal insulation such as pipe covering and block insulation, and to increase fireproofing and fire protection and for insulation through use as a roof deck or fireproof material or door core material.

(d) This defendant ceased the manufacture, sale and distribution of its asbestos-containing products in 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, is continuing, although this defendant now believes that this defendant's commercially produced asbestos-containing products were hydrous calcium silicates containing between 13% and approximately 20% asbestos. Chrysotile asbestos was the primary type apparently used. Amosite was used to a lesser extent.

(e) Owens-Illinois Glass Company began limited pilot plant operations involving the production of "Kaylo" asbestos-containing products in 1943. It began the manufacture of commercial quantities of "Kaylo" asbestos-containing products in about 1948 and continued such manufacture until about April 30, 1958.

Q. 19. Has defendant, at any time since it began selling asbestos or asbestos-containing products, issued a warning concerning the consequences of exposure to asbestos, which warning was intended by defendant to reach those persons who would breath or ingest asbestos or asbestos-containing products during their distribution and/or use? If so, state as to each such warning:

- (a) The language of the warning;
- (b) Date first issued or distributed;
- (c) Date last issued or distributed;
- (d) The method of communication or distribution used;
- (e) The name, position at that time, and current address, position and employer of each person ordering or recommending the warning.

A. 19. This defendant ceased the manufacture, sale and distribution of asbestos-containing products in 1958. This defendant has not found information in its records sufficient to enable it to answer this interrogatory. 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.

Q. 20. If your answer to the preceding interrogatory is in the affirmative, state the following as to the first information defendant received that exposure to asbestos caused disease:

- (a) The form in which it was received, e.g., orally, in writing;
- (b) If orally, the name and address of the person from whom received;
- (c) If the information was received in written form, give the author, title of the document, and date of the document;
- (d) The name and address of the employee or employees who received the information;
- (e) Briefly describe the information.

A. 20. Not applicable to this defendant. Refer to answer to Interrogatory No. 19.

Q. 21. If your answer to the second preceding interrogatory was affirmative, list the name and address of each employee who was responsible to investigate whether:

(a) The warnings were reaching the persons who were breathing and/or ingesting the asbestos from the asbestos-containing products;

(b) The warnings were being read by the persons who were breathing and/or ingesting the asbestos from the asbestos-containing products;

(c) The warnings were being understood by the persons who were breathing and/or ingesting the asbestos from the asbestos-containing products;

(d) The warnings were being heeded by the persons who were breathing and/or ingesting the asbestos from the asbestos-containing products.

A. 21. Refer to answers to Interrogatory Nos. 19 and 20.

Q. 22. List the following information regarding each instance where an employee of defendant testified (at deposition or trial) in asbestos disease litigation:

(a) Name of employee;

(b) Date and place testimony was given;

(c) First named plaintiff and defendant, case number and court in which pending;

(d) Name and address of reporter;

(e) Whether you have a transcript of the testimony.

A. 22. This defendant ceased the manufacture, sale and distribution of asbestos-containing products in 1958. This defendant is aware that the following present or former employees

have testified at trial or by deposition in asbestos-related litigation:

Edward C. Ames	10/8/79, 1/10/80, 2/12/81, 3/26/81 and 10/7/81.
Robert Grim	9/6 & 7/84 (trial), 10/11/84 (trial), and 7/1/87 (trial)
Richard L. Grimmie	7/10/79, 10/24/79 (trial) and 10/29/79 (trial).
David Innis	9/27/83.
William Justice	7/11/79 and 5/3/82.
John Pershing	7/26/79.
John Rhoads	7/11/79.
June Welser	7/11/79.
Everett Shuman	4/26/79, 6/12/79, 7/15/80, 8/19/80, and 3/4/81.
Willis G. Hazard	2/11/81, 3/27/81, 12/14/81, 1/27/82.
Richard R. Beck	4/1/81.
Samuel F. Schillaci	4/7/81, 7/31/81 (trial), 11/9/81 (trial), 11/17/81, 4/26-27/82, 6/4/84, 8/28/84, 9/6/84, 11/14/84, 2/5/85, 3/4/85 (trial), 4/30/85, 12/19/85 (trial), 10/8/86, 4/10/87 (trial), 6/25/87 (trial), 11/4/87 (trial), 1/20/88 (trial), 10/15/88 (trial), 11/22/88 (trial), 11/29/88 (trial), 12/8/88 (trial), and 12/15/88 (trial).
George N. Bates, M.D.	4/6/81.
Thomas A. Meehan, Esq.	8/3/81 (trial), 11/9/81 (trial), 12/15/83, 1/16/84, 8/28/84, 6/4/84, and 11/13/84.

Effective April 30, 1958, this defendant sold its asbestos-containing product manufacturing division to Owens-Corning Fiberglas Corporation. At that time certain employees

who worked in the division, some of whom are mentioned above, transferred to Owens-Corning Fiberglas Corporation. These individuals have been deposed with regard to asbestos-related litigation involving Owens-Corning Fiberglas Corporation.

This defendant objects to the production of copies of the transcripts of these depositions on the basis that said transcripts are filed with various courts around the country, they are therefore matters of public record, and therefore plaintiffs have equal access to such documents. Defendant reserves the right to advance additional arguments against the production of such documents if and when plaintiffs file a request for production.

Q. 23. Does defendant have information that plaintiff was told anything about the relationship between asbestos exposure and health? If so, state the following:

- (a) When he was told;
- (b) Where he was told;
- (c) By whom he was told;
- (d) Who was present at the time;
- (e) What was said.

A. 23. This defendant ceased the manufacture, sale and distribution of asbestos-containing products in 1958. This defendant has not found information in its records sufficient to enable it to answer this interrogatory.

Q. 24. Did defendant ever suggest or recommend that persons using or exposed to the dust from defendant's asbestos-containing products might or should use any device to reduce exposure to, or inhalation of, asbestos dust or fibers? If so, please state for each and every such suggestion or recommendation:

- (a) Date, time and place when each such suggestion or recommendation was made;

(b) Identify each person present when such suggestion or recommendation was made to or received by plaintiff;

(c) Identify each person receiving same or similar suggestion or recommendation;

(d) Exact wording and content of such suggestion or recommendation;

(e) Whether such suggestions or recommendation was written or oral, and

(1) If written, please identify in detail each such writing;

(2) If oral, identify all persons involved and details as to the manner in which each such suggestion or recommendation was presented;

(f) Type, make and model of each device referred to in each such suggestion or recommendation.

A. 24. This defendant ceased the manufacture, sale and distribution of asbestos-containing products in 1958. This defendant has not found information in its records sufficient to enable it to answer this interrogatory.

Q. 25. Identify by title and date of publication each catalog, advertising brochure, one-half page or larger advertisement, or similar document which you have published regarding asbestos or products containing asbestos available from defendant or its corporate predecessors.

A. 25. Refer to documents attached hereto as Exhibit I.

Q. 26. Did any employee or agent of defendant or its corporate predecessors send or receive any correspondence concerning safety hazards or safety precautions related to exposure to asbestos?

A. 26. This defendant ceased the manufacture, sale and distribution of asbestos-containing products in 1958. This defendant has not found information in its records sufficient to enable it to answer this interrogatory.

Q. 27. If the answer to the preceding interrogatory is affirmative, state as to each correspondence, the name and address of the person signing the correspondence, the date thereof, and to whom the correspondence was addressed.

A. 27. Refer to answer to Interrogatory No. 26.

Q. 28. During the period from 1955-1980 did defendant have a national, regional, or local sales office whose responsibility included serving the state of Illinois or areas within the State of Illinois? If yes, state the following:

- (a) Where the sales office was located;
- (b) The name and current address of the head of that sales office;
- (c) The name, position title, and last known address of the person whose responsibility it was to cover the area which included Illinois.

A. 28. This defendant objects to this interrogatory on the basis that it is overly broad and 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.

Q. 29. During the period from 1955-1980 which of defendant's employees were responsible for marketing defendant's products for the area which included Illinois? As to each individual who held such a position, state the following:

- (a) His name and last known address;

- (b) The name of the position he held;
- (c) The dates during which he held the position;
- (d) The address of his office during the time he held the position.

A. 29. This defendant objects to this interrogatory on the basis that it is overly broad and 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.

Q. 30. Did defendant sell, ship or deliver any asbestos-containing products to any of the companies or sites on Exhibit A (attached hereto) from 1955 to 1980? If so, state the following:

- (a) The type of products including trade name and quantity sold, shipped or delivered;
- (b) The date;
- (c) Describe or attach the documents evidencing such sale or shipment.

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

Q. 31. List the following information regarding each instance known to defendant where an individual has testified (at deposition or trial) that a product manufactured or sold by defendant was present or used at any of the sites on Exhibit A (in lieu of providing the answers to the following, you may provide a transcript of the testimony and plaintiff's lawyer will pay your charges for providing the same):

- (a) Name and address of witness;

- (b) First named plaintiff, case number, and court in which case is pending;
- (c) Date of testimony;
- (d) Name and address of reporter;
- (e) Whether you have a transcript of the testimony.

A. 31. This defendant objects to this interrogatory as being vague, ambiguous, irrelevant, overly broad, burdensome and oppressive, not reasonably calculated to lead to the discovery of admissible evidence and not limited to any issue which is the subject of this case. Without waiving the above objection, these documents are a matter of public record and are as available to the plaintiff as they are to this defendant.

Q. 32. Attached as Exhibit B is a list of those products which plaintiff, Charles Hunt, has previously supplied in this cause as products with which he worked during his exposure to asbestos. Did defendant, including divisions of defendant, or its corporate predecessor(s) ever manufacture, sell, or distribute any of the products named on Exhibit B? If so, for each such product, state:

- (a) The name of the product;
- (b) The years during which defendant or its predecessors manufactured, sold, or distributed the product, and the role (manufactured, distributed, or sold) of defendant and its predecessors;
- (c) Whether any warnings or caution labels appeared on the product or its packaging, and if so, state:
 - (1) On what date the warning or caution first appeared;
 - (2) The exact wording of such warning or caution, as well as any revisions to the warning or caution that occurred at any time while the product was manufactured, distributed, or sold by defendant;

(3) The percentage of asbestos contained in such product, for each year in which the product was manufactured, distributed, or sold;

(4) The use advertised by defendant or its predecessors for the product, or the use intended by defendant or its predecessors for the product;

(d) Any alteration and/or modifications intended or foreseen by defendant or its predecessors in order that the product be installed, applied, or used for its advertised or intended purposes.

A. 32. (a) Kaylo and Kaylo-20.

(b) Owens-Illinois Glass Company began limited pilot plant operations involving the production of "Kaylo" asbestos-containing products in 1943. It began the manufacture of commercial quantities of "Kaylo" asbestos-containing products in about 1948 and continued such manufacture until about April 30, 1958.

(c) This defendant ceased the manufacture, sale and distribution of asbestos-containing products in 1958. This defendant has not found information in its records sufficient to enable it to answer this interrogatory. 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.

(d) 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 appears that the product was applied by methods including gluing, tying, strapping, or wiring it to pipe. It appears that a limited amount of its product was cut during application. Roof deck was

intended to be laid on or fastened to building frame members and waterproofed. Core material was intended to be used as a center layer for fire doors.

Q. 33. Identify and give the location of those persons, not previously disclosed, having knowledge of facts relevant to the alleged exposure of Charles Hunt described in the Complaint.

A. 33. This defendant ceased the manufacture, sale and distribution of asbestos-containing products in 1958. This defendant has not found information in its records sufficient to enable it to answer this interrogatory.

Q. 34. Identify and give the location of those persons, not previously disclosed, having knowledge of facts relevant to the nature and extent of Charles Hunt's injury.

A. 34. This defendant objects to this interrogatory as being irrelevant and not reasonably calculated to lead to the discovery of admissible evidence and not limited to any issue which is the subject of this case. This defendant further objects to this interrogatory on the grounds that it seeks information within the work-product privilege and on the ground that it is oppressive and burdensome in that it would have to review all of the files and all of the records of all of its attorneys all over the country to respond to this interrogatory.

AFFIDAVIT

STATE OF OHIO)
)SS:
COUNTY OF LUCAS)

A. H. SMITH, 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 DEFENDANT, OWENS-ILLINOIS, INC.'S ANSWERS TO INTERROGATORIES, are true and correct to the best of his knowledge, information and belief.

A. H. Smith

A. H. SMITH

SWORN TO and subscribed
before me this 21 day
of July, 1989.

Beverly A. McNear
Notary Public

My Commission Expires:

BEVERLY A. MCNEAR
Notary Public — State of Ohio
My Commission Expires Jan. 29, 1990

PROOF OF SERVICE

THE UNDERSIGNED certifies that a copy of the foregoing instrument was served upon the attorneys of record of all parties to the above cause by enclosing same in an envelope with postage prepaid, and by depositing said envelope in a United States Post Office mail box in Edwardsville, Illinois on July 26, 1989 addressed to such attorneys at their business address as disclosed by the pleadings of record herein.

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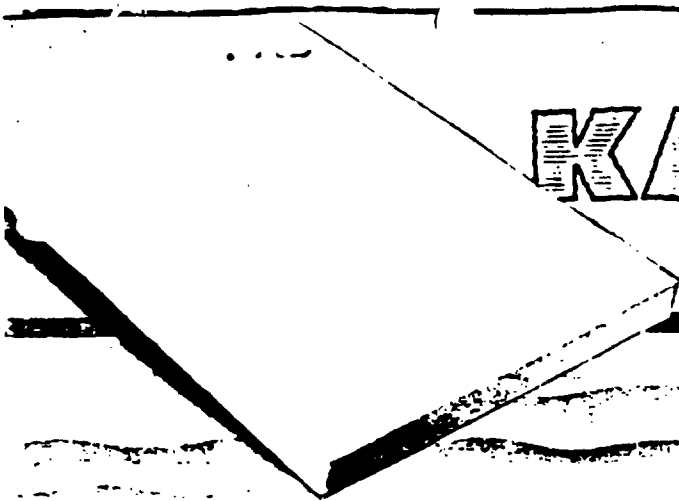
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KAYLO[®] STRUCTU



USES

Kaylo Structural Insulating Block is not a finished building material in itself and is not made for exposure to the weather. Its principal uses are as a structural roof tile, or roof deck unit, in which a steel reinforcing mat is inserted at the time of forming, and as a core material. In this latter use it serves as the core of laminated structures where the faces or laminates are applied with adhesives, and also as the core of structural shells or envelopes where the Kaylo core material is simply inserted in the open spaces and held by its own contact or by such conventional methods as clips or other attachments.

In any of these applications it adds rigidity to the structure and vastly increases insulation value and fire resistance.

PHYSICAL PROPERTIES

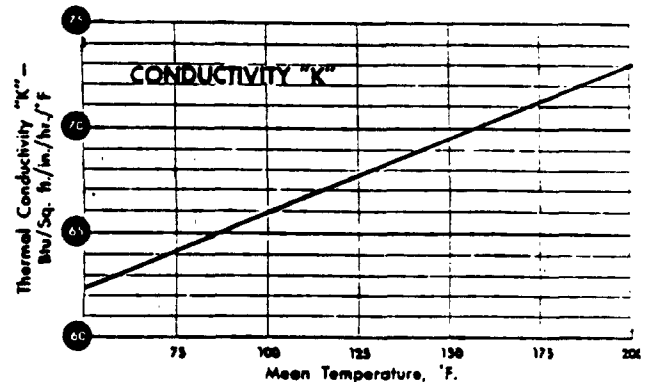
Light Weight—Nominal 20-lb. density Kaylo Block is about a third lighter than yellow pine. On an oven-dry basis it weighs from 19.5 to 22 pounds per cubic foot.

High Strength—Its compressive strength is approximately 500 lb. per sq. in. with a deformation of 5 per cent. Flexural strength is approximately 175 lb. per sq. in.

Fireproof—Kaylo 20-lb. density Structural Insulating Block has been tested at the Underwriters' Laboratories in Chicago and given the following rating, based on comparison with untreated Red Oak as 100.

Flame spread	0.0
Fuel contributed	negligible
Smoke produced	0.0

For use in fabrications that are to be Underwriters' Laboratories inspected, Kaylo Structural Insulating Block is furnished bearing the Underwriters' label for fire hazard classification for building material.

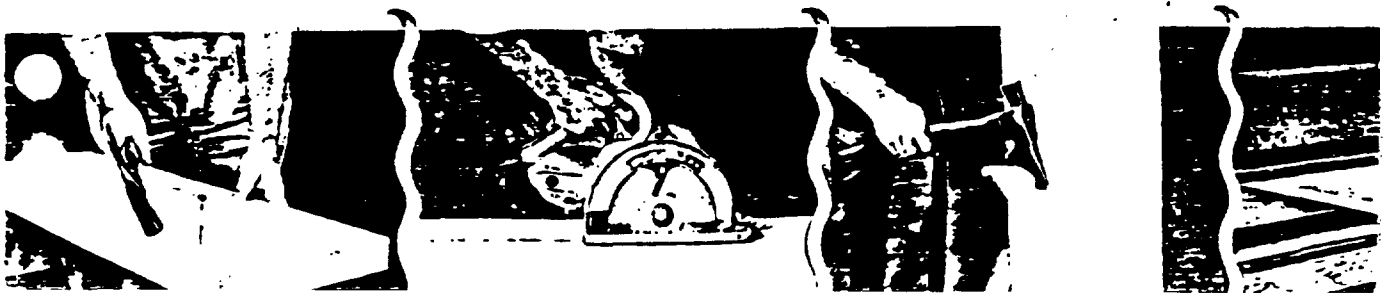


Good Insulation Value—At low mean temperatures Kaylo Structural Insulating Block is one of the most efficient structural mineral insulations. At high mean temperatures it still compares favorably with heat insulating materials of its own weight.

High Light Reflectivity—Where left exposed and untreated (as with the underside of a roof deck) Kaylo Structural Insulating Block has high light reflectivity. Its light reflection factor is from 70 to 80 per cent.

Non-Abrasive Surface—Its surface is non-abrasive. It has a somewhat "soapy" feel that makes it pleasant to handle. At the same time it has a firm surface that assures good contact with surfaces applied over it.

No Added Binder—It contains no added binder, but instead constitutes its own binder. Hence its characteristics are not modified as to temperature limit, solubility, insulation value, fire resistance or otherwise by "binder limitations."



INSULATING BLOCK (20-LB. DENSITY)

Good Workability—Kaylo Structural Insulating Block is responsive to wood working tools. It can be sawed with a hand saw or power saw, can be routed, tongue-and-grooved, sanded, and, in fact, run through most wood-working equipment.

High Modulus of Elasticity—The modulus of elasticity of 20-lb. density block is approximately 160,000 lb. per sq. in.

Low Specific Heat—The specific heat of Kaylo Structural Insulating Block is approximately 0.22.

Cellular Structure—Kaylo Structural Insulating Block is about 80 per cent inter-communicating air cells. The cells are extremely small, less than a micron in diameter.

Low Moisture Absorption—Kaylo Structural Block is hygroscopic. It will absorb moisture from humid air and will reach equilibrium at lower moisture contents when exposed to lower humidities. However, because of its extremely small cell size and other characteristics, its behavior with respect to moisture differs from that of most porous materials. It has unusual capacity to distribute moisture throughout its mass, and to give it off to surrounding air of lower moisture content.

moisture absorption when surrounded by humid air at low. Test specimens dried for 24 hours at 215° F., cooled and then exposed on all surfaces to an atmosphere of 90 per cent relative humidity and a temperature of 120° F. for six hours, absorbed less than one per cent of moisture by volume.

Consistent with the common practice for good construction involving porous insulating materials of high internal surface area, Kaylo Structural Insulating Block should be sealed against moisture on the warm side when it is subjected to extremely low temperatures.

High Wet Strength—Kaylo Structural Insulating Block, like most other insulating materials, is not intended to be immersed in water or exposed to extremely damp or humid conditions, yet its flexural strength when wet (immersed 10 hours) is reduced only about 15 per cent.

Dimensionally Stable—The dimensions of Kaylo Structural Insulating Block change little with changes in moisture content. Experience has shown from the manufacture of thousands of units of laminated structures that they have unusual dimensional stability and unusual freedom from warping.

Available with and without Reinforcing—In the form of roof tile Kaylo Structural Insulation is available with a steel reinforcing mat. In the form of core material for various types of structure it is available without reinforcing.

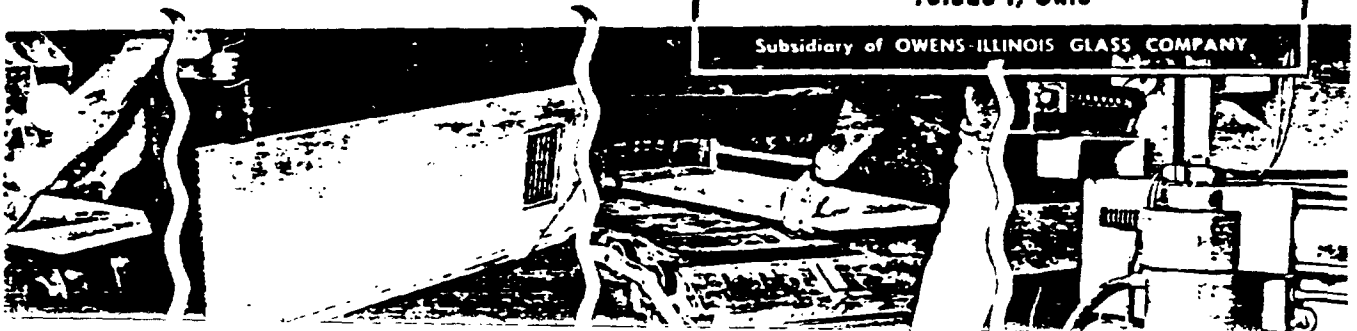
Accepts Nails and Screws—Both nails and screws can be used with Kaylo Structural Block. Tables showing holding power of both are available on request. Nails should be of the cement-coated type without barbs that abrade the sides of the opening they make as they are driven into the block. Galvanized or non-ferrous nails may be used where greater resistance to corrosion is required. Screws may be inserted either with or without drilling a pilot hole.

Sizes—Kaylo Structural Insulating Block is made in a standard size of 18 x 36 inches.

Since most uses involve manufacturing operations, thicknesses that are practical can best be worked out with the manufacturer of Kaylo Insulating Products after approximate quantities needed are known. These will usually be between one and two inches thick.

Certain thicknesses are suggested by certain building requirements. A thickness of from 1½ to 2 inches of Kaylo Structural Insulating Block is required to withstand a typical building fire for one hour—usually somewhat more for a partition than for a door because of the greater performance required of a partition.

20-Lb. and 11-Lb. Density Block Can Be Used in Combination. Where two thicknesses of insulation are used to build up an insulating structure it is possible to use the two densities in combination to develop the best insulation value strength and fire resistance.



**AMERICAN STRUCTURAL
PRODUCTS COMPANY**

Toledo 1, Ohio

Subsidiary of OWENS-ILLINOIS GLASS COMPANY

LAMINATION

Lamination over a Kaylo Insulating Core—Almost any face material may be bonded to Kaylo Structural Insulating Block surfaces. Bonding agents can be selected to meet the requirements of the particular facing—also to satisfy

the service requirements of the finished product—and still offer some choice in curing procedures.

Some adhesives which may be used with various types of face materials are listed below. (This list is not intended to be complete. Its only purpose is to identify a partial list of adhesives. These have been found to provide a tensile strength of 35 lb. per sq. in. and a minimum shear strength of 100 lb. per sq. in. when cured in the manner indicated.)

ADHESIVES FOR JOINING

KAYLO

STRUCTURAL INSULATING BLOCK TO:

Wood Veneer	Aluminum	Stainless Steel
Durite No. 3026A A 3026AWM207 3026AWF	Durite No. 3026A A Pecora 718 E Weldwood A Insolute No. 1 A	Durite No. 3026 A No. A, MH267 N100 C 3 MEC 826 CDE Weldwood A Insolute No. 1 A
Penacelite G1131 A	Interlake 4162 CD Vulcalock AB Dupont 4653 CDE	Interlake 4162 CD Vulcalock AB Dupont 4653 CDE
Pecora 718 E	Dupont 4646 CDE G. E. 2142 C G. E. 7031 C	Dupont 4646 CDE G. E. 2142 C G. E. 7031 C
Catabond 720 A	Vinylseal MA 28-18 E Amberlite PR14 D Bestik EXE 138 D Redux D	Vinylseal MA 28-18 E Amberlite PR14 D Bestik 7026 D Sodium Silicate A Redux D
Vinylseal MA 28-18 E		
Berlite PR14 D		
Bestik 7026 D		
Redux D		
Synco X-8348 + 130LW (DW) D		

ADHESIVES FOR JOINING LIKE MATERIALS:

Insulating Block to Insulating Block	Aluminum to Aluminum	Stainless Steel to Stainless Steel
Durite 3026A A Penacelite G1131 A Weldwood A Insolute 1 A G. E. 2142 C Maskon 911 CD Selectron 5003 E Vinylseal MA 28-18 E Amberlite PR14 D Bestik 7026 D Bestik EXE 138 D Sodium Silicate A Redux D Synco X-8348 + 130LW (DW) D	Vulcalock AB Dupont 4653 CDE Dupont 4646 CDE G. E. 7031 C Bestik 7026 D Bestik EXE 138 D Redux D	Dupont 4653 CDE G. E. 7031 C Bestik 7026 D Bestik EXE 138 D Redux D

Symbols for method of cure:
For Maximum Strength

- A** Clamped at room temperature for 24 hours.
- B** Clamped in oven at 120° F. for 1 hour.
- C** Placed in press at 10 p.s.i. at 300° F. for 10-30 minutes.
- D** Placed in press at 100 p.s.i. at 300° F. for 10-30 minutes.
- E** Clamped in oven at 250° F. for 10-30 minutes.

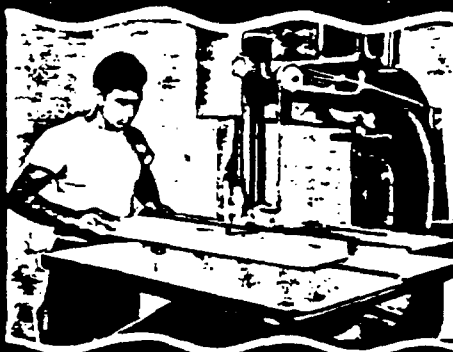
High-frequency curing has been tried successfully on an experimental basis with wood, aluminum and stainless steel bonded to a Kaylo insulating core. Many of the manufacturers making the above listed adhesives can provide adhesives suitable for high-frequency curing.

AMERICAN STRUCTURAL PRODUCTS COMPANY

TOLEDO 1, OHIO

Subsidiary of OWENS-ILLINOIS GLASS COMPANY

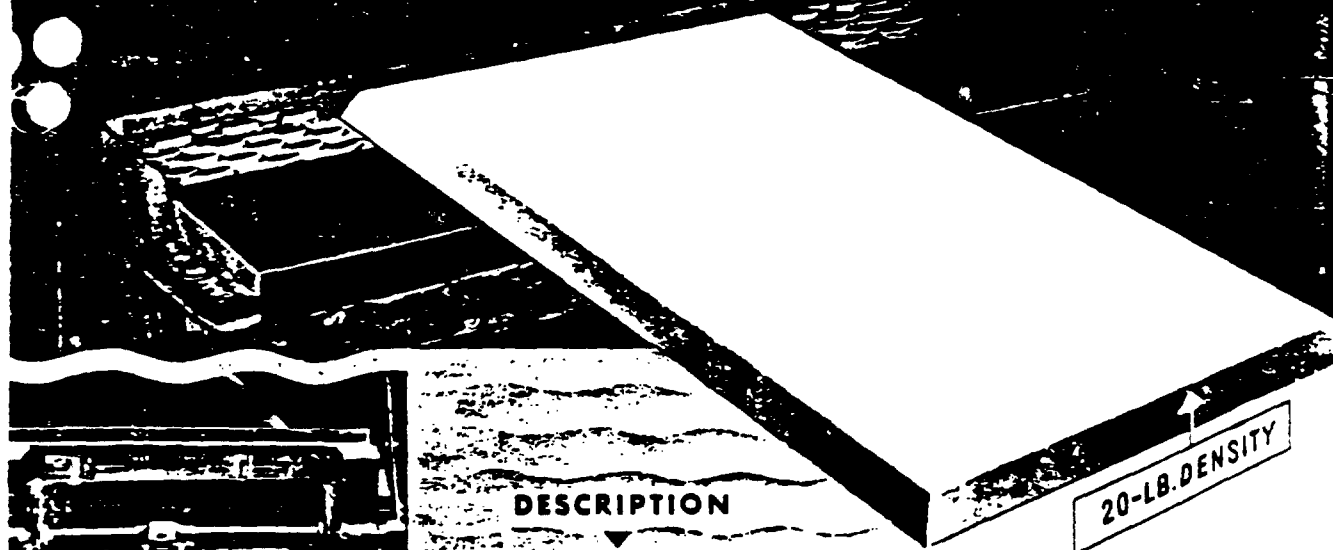
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KAYLO®

20-LB. DENSITY

STRUCTURAL INSULATING BLOCK



DESCRIPTION

Kaylo Structural Insulating Block—is a near-white, rigid mineral insulating material weighing approximately 20 pounds per cubic foot. It is composed principally of calcium silicate. Except for density and for those characteristics that are changed by density it is similar to *Kaylo Heat Insulating Block*, a lightweight insulation used to insulate against heat loss from hot surfaces. Kaylo Structural Insulating Block (20-lb. density) is designed to develop maximum strength and fire resistance without sacrificing its advantages of light weight and low thermal conductivity. In fact the practical combination of these four properties—strength, weight, insulating value and fire resistance—makes it almost unique as a building material.

It weighs nominally 20 pounds to the cubic foot (actually on an oven dry basis from 19.5 to 22 lb.), has a compressive strength of approximately 500 lb. per sq. in., a "k" of 0.66 at 100 mean and outstanding resistance to the travel of heat and flame at building fire temperatures.

KAYLO[®]

**20-LB.
DENSITY**

USES

Kaylo Structural Insulating Block is not a finished building material in itself and is not made for exposure to the weather. Its principal uses are as a structural roof tile, or roof deck unit, in which a steel reinforcing mat is inserted at the time of forming, and as a core material. In this latter use it serves as the core of laminated structures where the faces or laminates are applied with adhesives, and also as the core of structural shells or envelopes where the Kaylo core material is simply inserted in the open spaces and held by its own contact or by such conventional methods as clips or other attachments.

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PHYSICAL PROPERTIES

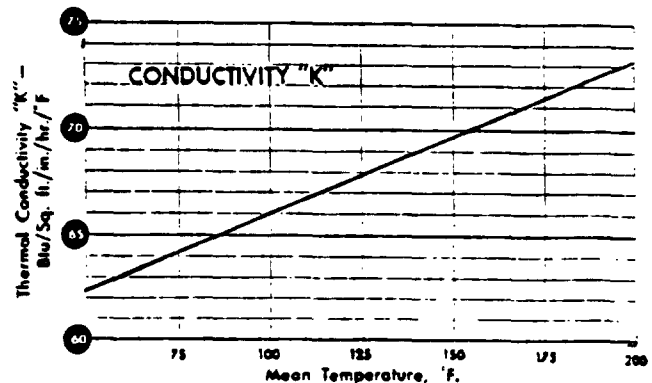
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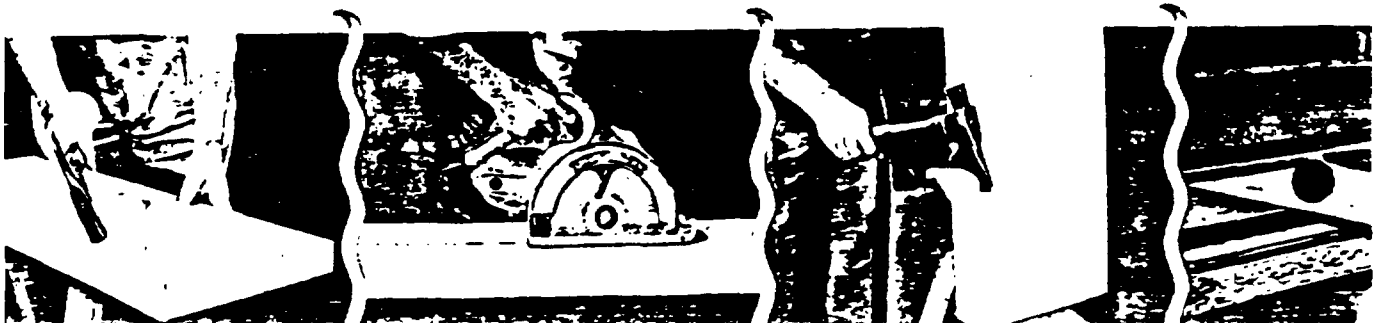


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**Kaylo Division
OWENS-ILLINOIS
GLASS COMPANY**

Toledo 1, Ohio



LAMINATION

Lamination over a Kaylo Insulating Core—Almost any face material may be bonded to Kaylo Structural Insulating Block surfaces. Bonding agents can be selected to meet the requirements of the particular facing—also to satisfy the service requirements of the finished product—and still offer some choice in curing procedures.

Some adhesives and primers which may be used with various types of face materials are listed below. (This list is not intended to be complete. Its only purpose is to identify a partial list of adhesives. An adhesive not listed does not imply that it is not suitable. These have been found to provide a tensile strength of 35 lb. per square inch and a minimum shear strength of 100 lb. per square inch when cured according to the manufacturer's recommendation. They are not listed in the order of their adhesive strength.)

ADHESIVES AND PRIMERS FOR JOINING



STRUCTURAL INSULATING BLOCK TO:

Wood Veneer or Paper or Plastics		Steel, Stainless Steel Galvaneal, or Aluminum		Kaylo Insulating Block or Cement-Asbestos Board	
Durite No. 3026A	A	Durite No. 3026A or No. A NH267	A	Durite 3026A	A
Penacolite G1131	A	N100	C	Penacolite G1131	A
Pecora 718	E	Pecora 718	E	Armstrong J 1162	D
Catabond 720	A	3MEC 826	C D E	Insolute 1	A
Vinylseal MA 28-18	E	Penacolite G1131	A	G.E. 2142	C
Amberlite PR 14	D	Insolute No. 1	A	Selectron 5003	E
Bostik 7026	D	Interlake 4162	C D	Vinylseal MA 28-18	E
Redux	D	Vulcalock	A B	Amberlite PR-14	D
Synco S-8348+130LW (DW)	D	DuPont 4633	C D E	Bostik 7026	D
Resorsabond R-12	A	DuPont 4646	C D E	Bostik EXE 138	D
Armstrong J-1162	D	Resorsabond R-12	A	Sodium Silicate	A
Tego	D	G.E. 2142	C	Redux	D
		G.E. 7031	C	Synco X-8348+130LW (DW)	D
		Bostik 7026	D	Resorsabond R-12	A
		Bostik EXE 138	D	Tego	D
		Bostik 1007	A		
		Vinylseal MA 28-18	C		
		Amberlite PR-14	D		
		Redux	D		
		Armstrong J-1162	D		

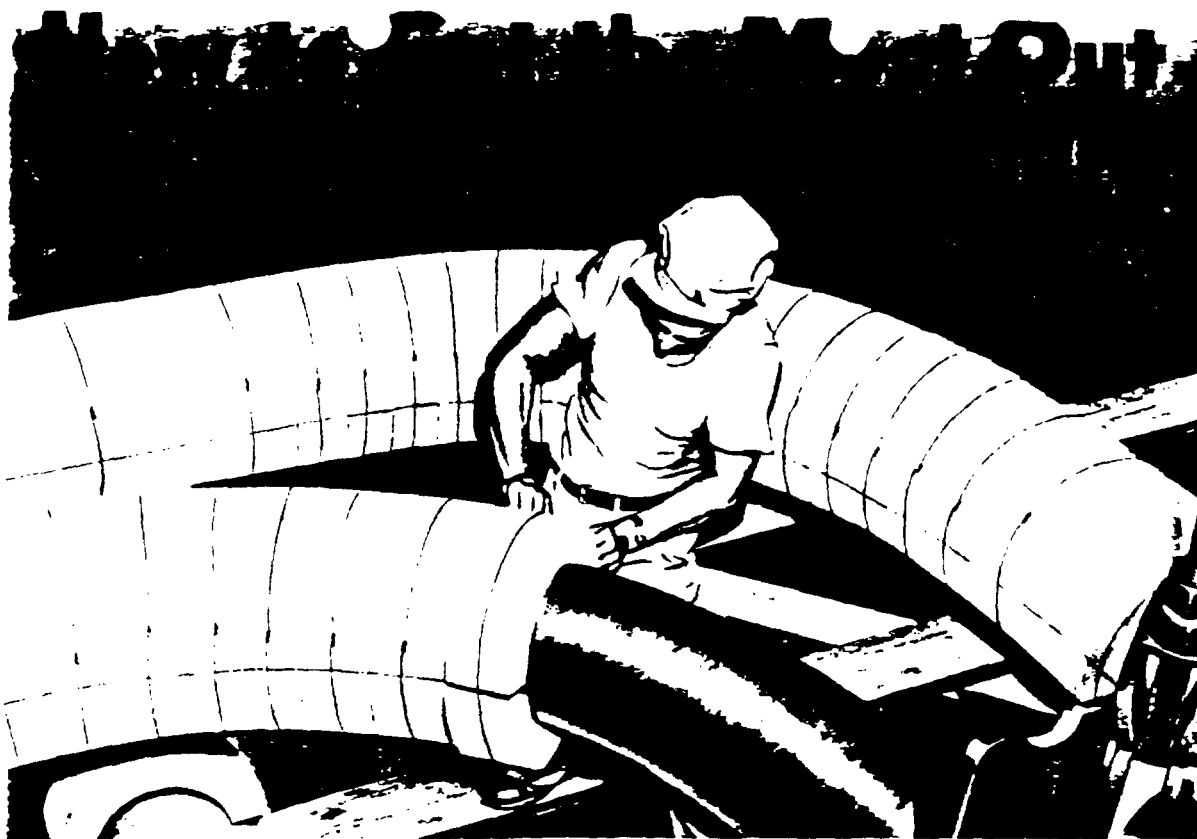
Symbols for method of cure:

For Maximum Strength

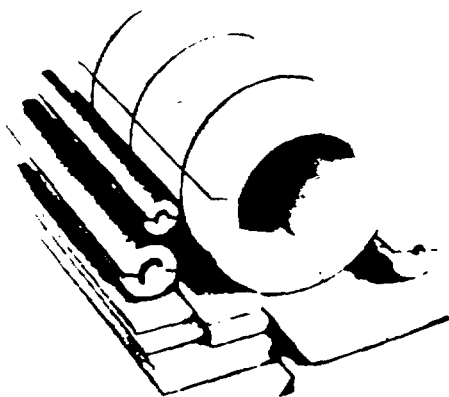
- A Clamped at room temperature for 24 hours.
- B Clamped in oven at 120° F. for 1 hour.
- C Placed in press at 10 p.s.i. at 300° F. for 10-30 minutes.
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High-frequency curing has been tried successfully on an experimental basis with wood, aluminum and stainless steel bonded to a Kaylo insulating core. Many of the manufacturers making the above listed adhesives can provide adhesives suitable for high-frequency curing.

Kaylo Division
OWENS-ILLINOIS
GLASS COMPANY
 Toledo 1, Ohio



The Right Material... Expert Application



First, Kaylo Heat Insulation is *proved* a better material hydrous calcium silicate. Its light weight, strength, water-insolubility, low conductivity and wide temperature range give you extra advantages *at no extra cost*.

Second, Kaylo distributors have the technical knowledge and experience to provide you with a complete insulating service. Their trained applicators are skilled craftsmen who do neat and efficient installation.

To be *sure* of getting the most out of your insulating dollars for your next job, call the nearest Kaylo distributor. Chances are you can find him listed in the yellow pages of your phone book. If not contact us and we'll give you his name.

WRITE FOR FREE BOOK—"Kaylo Heat Insulation."
Address: Dept. M-370, Owens-Illinois Glass Company, Kaylo Division, Toledo 1, Ohio.



KAYLO

...first in calcium silicate

...pioneered by OWENS  ILLINOIS Glass Company

MAIN OFFICE TOLEDO 1, OHIO—KAYLO SALES OFFICES: ATLANTA • CHICAGO • HOUSTON • NEW YORK • PHILADELPHIA • PITTSBURGH • ST. LOUIS

Owens Illinois Glass Company—Kaylo Division
Advertisement No. K 153, appearing in the following publications:

Chemical Engineering—Jan., 1953
Oil & Gas Journal—Jan. 12, 1953
Plant Engineering—Jan., 1953
Power—Jan., 1953
Petroleum Refiner—Feb., 1953
Chemical Processing—Feb., 1953

For Radii from $\frac{1}{4}$ Inch...

to
Infinity...

Nesting Kaylo Heat Insulation Requires Fewer Pieces Per Job

The complete range of Kaylo Insulation includes pipe covering in Simplified Dimensional Standards for diameters from $\frac{1}{4}$ in. to 72 in., curved block from 72 in. to 60 ft. and flat block for surfaces of less curvature whose radii approach infinity. With its wide selection of interchangeable sizes and shapes, Kaylo Insulation reduces the number of items needed per job and permits substantial savings in warehousing maintenance stock.

WRITE FOR FREE BOOK — "Kaylo Heat Insulation."
Address: Dept. N-371, Owens-Illinois Glass Company,
Kaylo Division, Toledo 1, Ohio.



KAYLO

... first in calcium silicate

... pioneered by OWENS-ILLINOIS Glass Company

MAIN OFFICE: TOLEDO 1, OHIO—KAYLO SALES OFFICES: ATLANTA • CHICAGO • HOUSTON • NEW YORK • PHILADELPHIA • PITTSBURGH • ST. LOUIS

Owens-Illinois Glass Company
Advertisement No. K-154—appearing in the following publications:
Plant Engineering—March, 1953
Oil & Gas Journal—March 23, 1953
Chemical Engineering—March 1953

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EDWARDSVILLE, ILLINOIS 62025
(815) 858-4646

EXHIBIT I

APR 28 1999

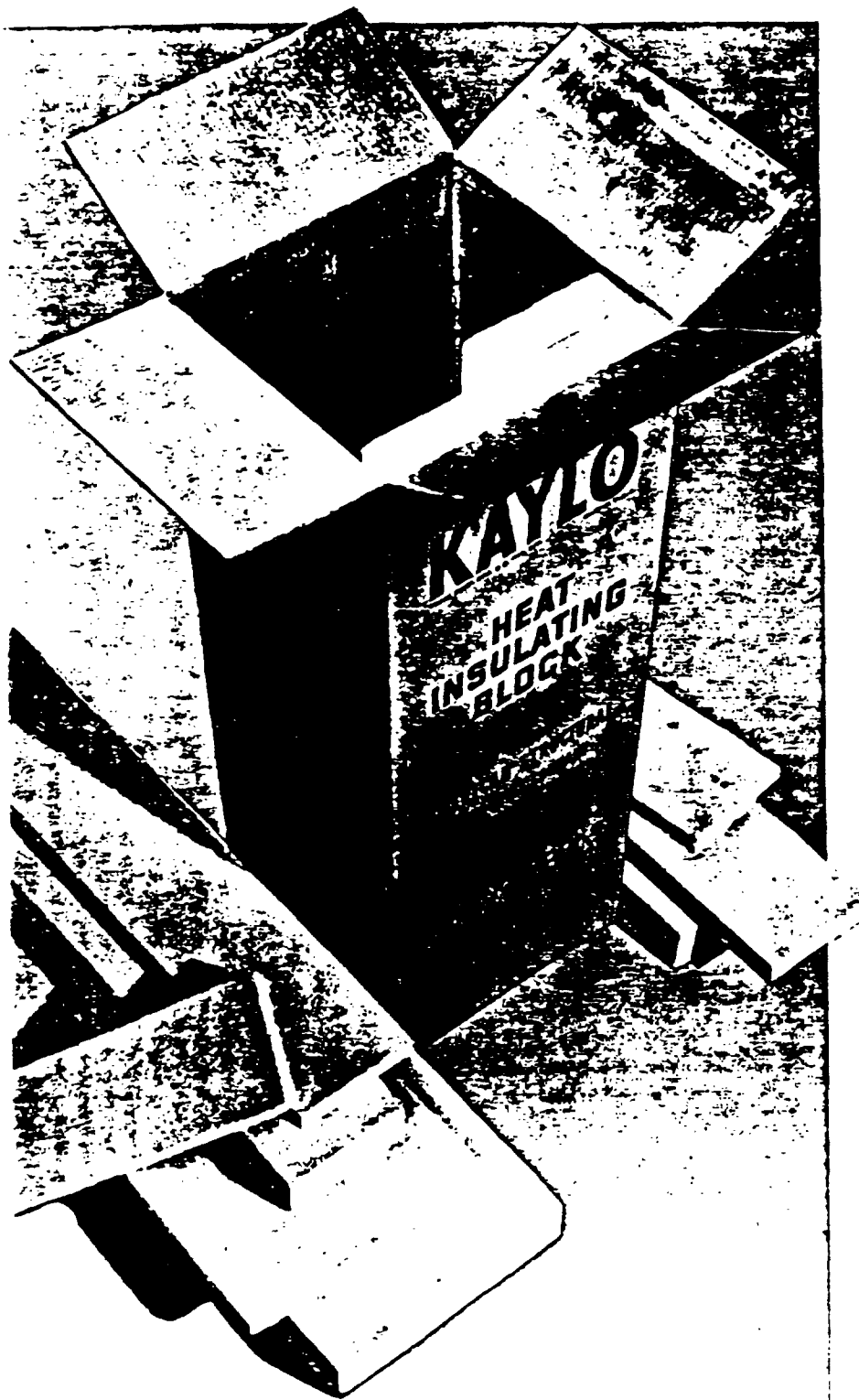
NEW

KAYLO

HEAT INSULATING BLOCK
For Temperatures up to 1200° F.

**AMERICAN STRUCTURAL
PRODUCTS COMPANY
TOLEDO, OHIO
LOWE'S-ILLINOIS GLASS COMPANY**

A NEW HEAT INSULATION WITH A REMARKABLE COMBINATION OF ADVANTAGES....



Kaylo Heat Insulating Block is a new type of lightweight mineral insulation that is *efficient* enough to be used at ordinary room temperature and *resistant* enough to perform effectively up to 1200° F.

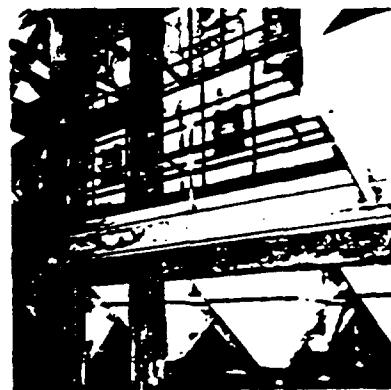
Few new products of any kind have been so thoroughly researched before being placed on the market. Kaylo Heat Insulating Block is the achievement of many years' work by Owe Illinois Glass Company engineers, physicists and chemists.

No other material, new or old, effectively combines the most desirable characteristics of the ideal heat insulation.

For instance...

LOW DENSITY

Kaylo Heat Insulating Block weighs only 11 pounds per cubic foot. This light weight (less than one pound to the board foot) simplifies handling, shipping and application. It greatly reduces weight—an important advantage on ships, for an example.



Notice the clean, straight edge on these insulated precipitator hoppers. Applicators find it easy to do this kind of work with Kaylo Heat Insulating Block because they are so easy to cut and yet they have a relatively high flexural strength. The walls above the hoppers are also insulated with Kaylo Heat Insulating Block.

LOW THERMAL CONDUCTIVITY

coefficient of conductivity, or Kaylo Heat Insulating Block, shown on the chart on page four, is among the most efficient insulations for medium high temperatures. Its insulation value comes principally from its fine, interlaced cellular structure. These cells are so tiny and numerous that they present a material surface of approximately 140 res per cubic foot of insulation.

Experience shows that the insulation value of Kaylo insulation improves when the material is put into service.

EFFECTIVE OVER WIDE TEMPERATURE RANGE

Kaylo Heat Insulating Block performs efficiently not only on temperatures in the low pressure steam and hot water range but on temperatures in the superheated steam range as well. This is shown by the flatness of the conductivity curve. One-material coverage with Kaylo insulation handles applications which often require two thicknesses of different materials.

HIGH COMPRESSIVE STRENGTH

Its compressive strength is unusually high for a mineral product of such light weight. Kaylo Heat Insu-

lating Block withstands compression values equivalent to those of a man's walking on it or even to those of a heel's being ground into it.

HIGH FLEXURAL STRENGTH

Its flexural strength is higher than the normal requirement for heat insulation of this type. This strength makes for easy handling and application, and contributes to long service with low maintenance.

NO ADDED BINDER

Kaylo insulation is an inorganic compound, containing no added binder. Its performance characteristics, therefore, are not affected by additives, which often reduce insulating value, modify effective temperature range or otherwise limit performance.

EASY TO APPLY WELL

Kaylo Heat Insulating Blocks are clean-cut and trim. They are easy to fit into place to make a good-looking installation. Their "feel" is pleasant and non-irritating. They can be cut, scored and sawed with ordinary woodworking tools. Finishes that go over the block, whether cement, cloth or other types, can be applied smoothly and with a minimum of effort. No special tools are needed.

LOW MOISTURE ABSORPTION

Moisture absorption is no problem with Kaylo insulation. Even when subjected to an atmosphere of 90% relative humidity and a temperature of 120° F., in standard tests, specimens absorb less than 1% moisture by volume.

RETAINS EFFECTIVENESS AFTER LONG SERVICE

Kaylo Heat Insulating Block remains strong, free from excessive powdering, and shows little loss in weight or shrinkage after long application to temperatures up to 1200° F. Even conventional tumbling tests, run after prolonged heating, produce relatively little crumbling or breakdown of the material.

STANDARD SIZES

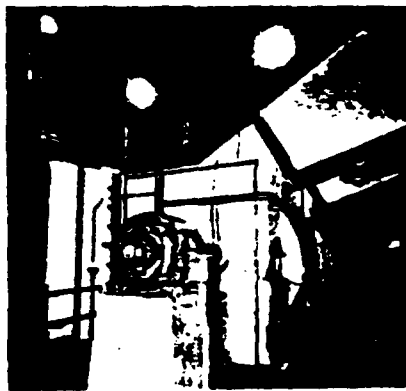
Lengths (inches)	Widths (inches)	Thicknesses (inches)
36	6	1
36	6	1½
36	6	2
36	6	2½
36	6	3
36	12	1
36	12	1½
36	12	2
36	12	2½
36	12	3

Other sizes are available on special order.

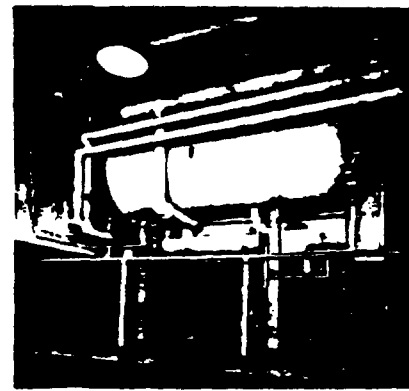
AND A REMARKABLE VERSATILITY



On large or small equipment, inside or out, Kaylo Heat Insulating Block performs efficiently and with a minimum of maintenance. Here it is being applied to the walls of a large precipitator. Workmen are laying block over 6" x 6" wire mesh welded to the stiffeners. The block are then covered with finishing cement and asphalt mastic weatherproofing.



Kaylo Heat Insulating Block covers both flat and curved surfaces on the power house equipment pictured here. At the right are fresh air intakes; the center compartments house induced draft fans; and at the left are conduits leading to a precipitator. Kaylo insulation means continuous fuel savings to this power plant.



Hot water is always ready when needed in the office building where this hot water storage tank is installed, thanks to Kaylo Heat Insulating Block. This permanent insulation holds water temperature constant with a minimum of power consumption.

Other applications for Kaylo Heat Insulating block are listed on the back page.

PRINCIPAL FEATURES OF KAYLO HEAT INSULATING BLOCK

HIGHLY EFFICIENT



EXTREMELY LIGHTWEIGHT



EASY TO APPLY



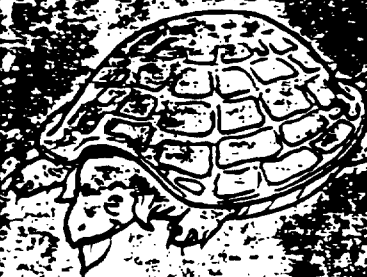
HIGH COMPRESSIVE STRENGTH



FIREPROOF



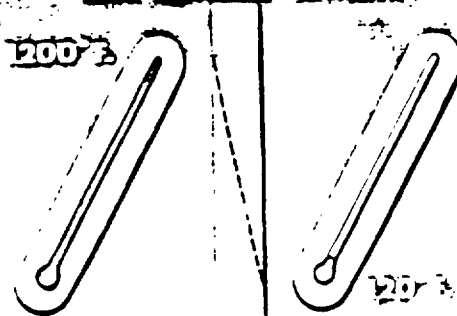
DURABLE



NO ADDED BINDER



**EFFECTIVE OVER WIDE
TEMPERATURE RANGE**



PHYSICAL CHARACTERISTICS AT A GLANCE

DENSITY Approximately 11 lb. per cu. ft.

FLEXURAL STRENGTH 50 lb. per sq. in.

COMPRESSIVE STRENGTH (3% deformation) 150 lb. per sq. in.

Before heating 150 lb. per sq. in.

After heating for 24 hours

at 750° F. 144 lb. per sq. in.

at 1000° F. 123 lb. per sq. in.

at 1200° F. 117 lb. per sq. in.

After boiling for 24 hours (while wet) 74 lb. per sq. in.

LOSS IN WEIGHT

After heating for 24 hours

at 750° F. 5.5%

at 1000° F. 7.9%

at 1200° F. 9.8%

After boiling for 24 hours 0.2%

RESISTANCE TO ABRASION

(Conventional Tumbling Test—Loss in weight after 10 minutes)

Before heating 2.2%

After heating for 24 hours

at 750° F. 3.7%

at 1000° F. 3.7%

at 1200° F. 5.9%

DIMENSIONAL STABILITY

Linear Shrinkage after heating for 24 hrs.

at 750° F. 0.8%

at 1000° F. 0.9%

at 1200° F. 1.5%

Elongation after saturation (max.) 0.4%

MOISTURE ABSORPTION (volume)

After 6 hours exposure in atmosphere of

120° F. and 90% Relative Humidity 0.9%

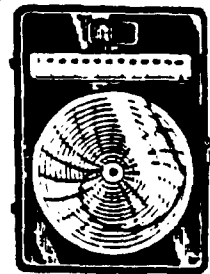
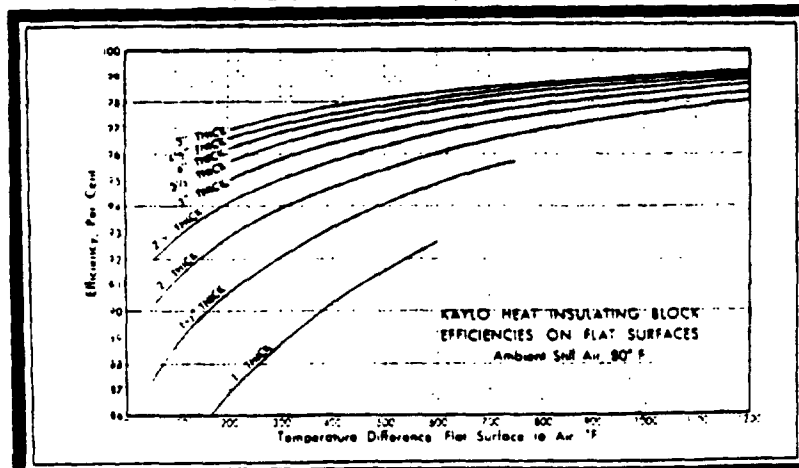
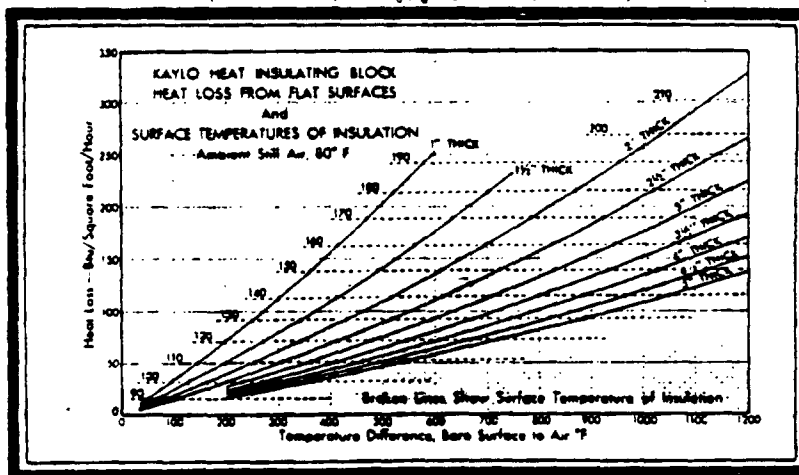
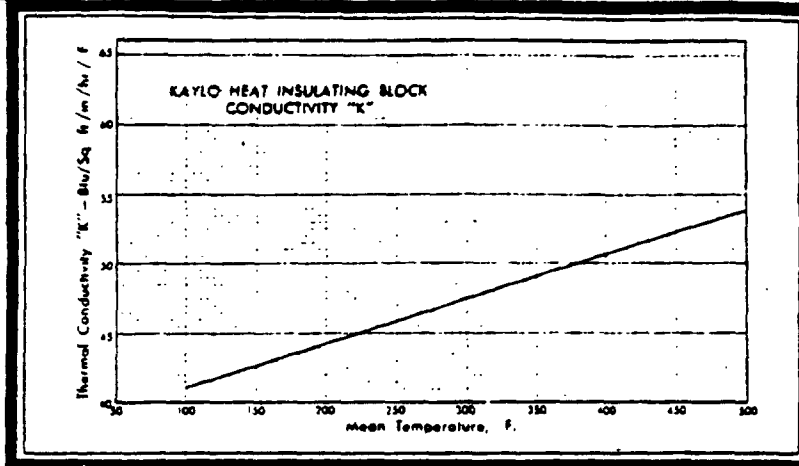
COEFFICIENT OF EXPANSION

At 300° F. mean temperature 0.474

KAYLO

HEAT INSULATING BLOCK

Heat Loss, Surface Temperatures
and Efficiencies...



Inside or outside, for large installations or small, from 0 to 1200° F, use Kaylo Heat Insulating Block to insulate:

Breechings	Lehrs
Hot Air Ducts	Autoclaves
Tanks	Ovens
Towers	Furnaces
Dryers	Turbines
Evaporators	Chilling Pits
Heat Exchangers	Boilers
Condensers	Precipitators
	Locomotives

SOURCES OF TEST DATA

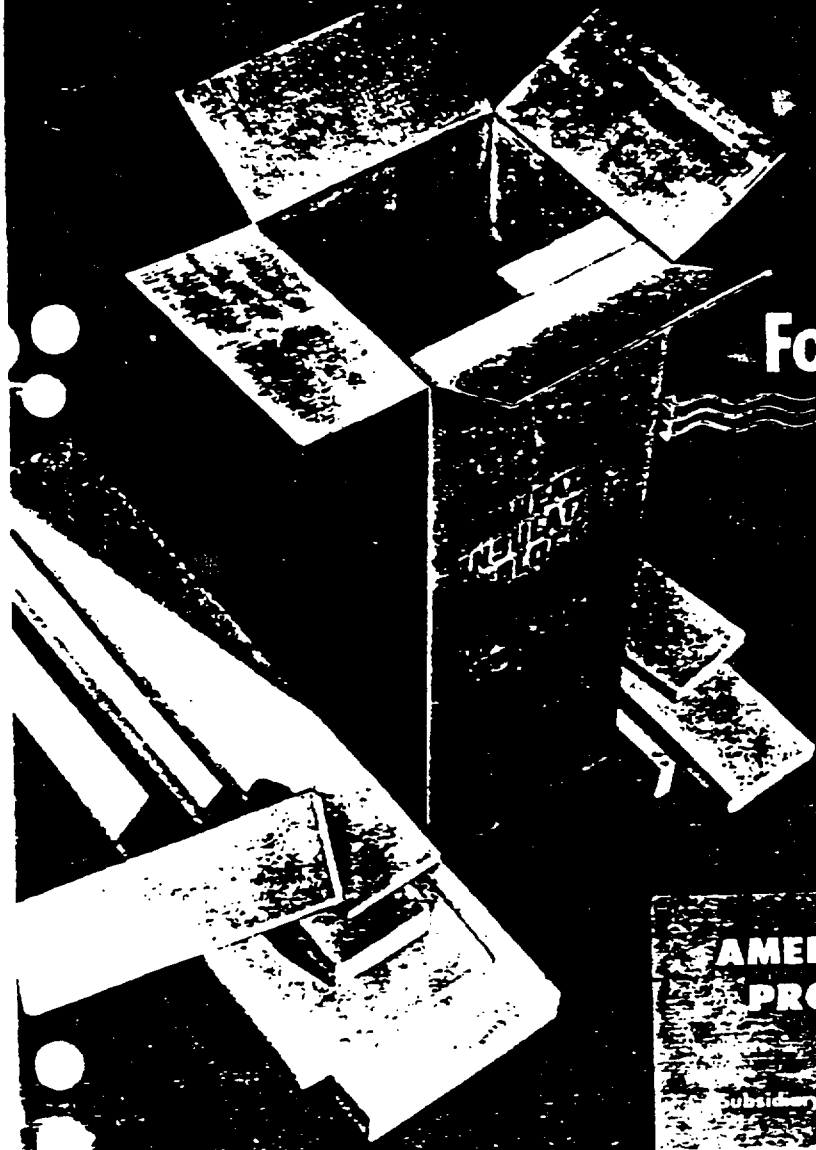
The data shown on these pages are supported by tests run at various laboratories, all well-known to the insulation industry. They are further supported by the performance of the product in service.

More detailed information on Kaylo Heat Insulating Block is available on request. American Structural Products Company, Toledo 1, Ohio. Subsidiary of Owens-Illinois Glass Company.

NEW

KAYLO®

HEAT INSULATING BLOCK



**For Temperatures
Up To 1200° F.**

**AMERICAN STRUCTURAL
PRODUCTS COMPANY**
Toledo 7, Ohio
Subsidiary of TOWNS-ILLINOIS GLASS COMPANY

A new heat ins

WITH A REMARKABLE COMBINATION OF

KAYLO HEAT INSULATING BLOCK is a new type of lightweight mineral insulation that is *efficient* enough to be used at ordinary room temperatures and *resistant* enough to perform effectively up to 1200° F.

Few new products of any kind have been so thoroughly researched before being placed on the market. Kaylo Heat Insulating Block is the achievement of many years' work by Owens-Illinois Glass Company engineers, physicists and chemists. It combines the most desirable characteristics of the ideal heat insulation.

LOW DENSITY. Kaylo Heat Insulating Block weighs only 11 pounds per cubic foot. This light weight (less than one pound to the board foot) simplifies handling, shipping and application.

LOW THERMAL CONDUCTIVITY. The coefficient of conductivity, or *k*, of Kaylo Heat Insulating Block places it among the most efficient insulations for medium high temperatures. Its insulation value comes principally from its fine, cellular structure. These cells are so tiny and so numerous that they present a material surface of approximately 140 acres per cubic foot of insulation.

Experience shows that the efficiency of Kaylo insulation improves after exposure to service temperatures.

EFFECTIVE OVER WIDE TEMPERATURE RANGE.

Kaylo Heat Insulating Block performs efficiently not only on temperatures in the low pressure steam and hot water range but on temperatures in the superheated steam range as well. One-material coverage with Kaylo insulation handles applications which often require two thicknesses of different materials.

HIGH COMPRESSIVE STRENGTH. Its compressive strength is unusually high for a mineral product of such light weight.

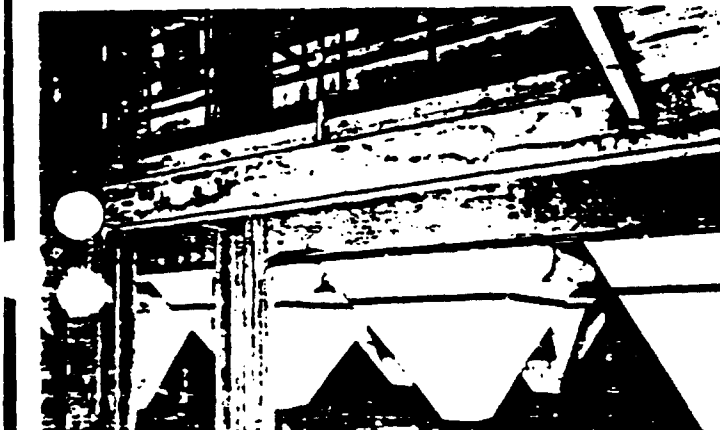
HIGH FLEXURAL STRENGTH. Its flexural strength is higher than the normal requirements for heat insulation of this type. This strength makes for easy handling and application, and contributes to long service with low maintenance.

NO ADDED BINDER. Kaylo insulation is an inorganic compound, containing no added binder. Its performance characteristics, therefore, are not affected by additives, which often reduce insulating value, modify effective temperature range or otherwise limit performance.

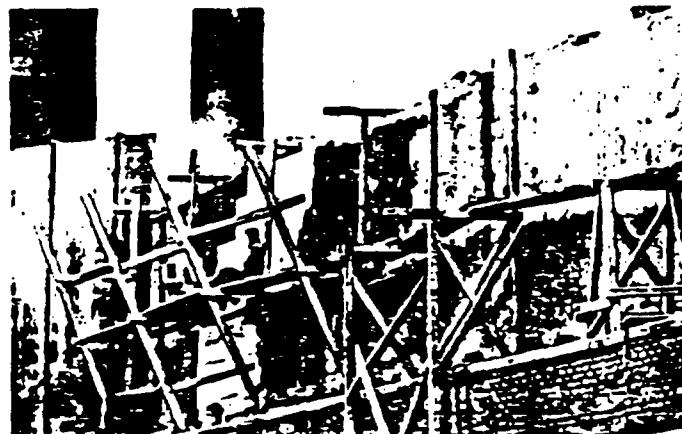
EASY TO APPLY. Kaylo Heat Insulating Blocks are clean-cut and trim. They are easy to fit into place to



Notice the clean, straight edges on these insulated precipitator hoppers. Applicators find it easy to work with Kaylo Heat Insulating Block because they are so easy to cut and yet have a high flexural strength.



On large or small equipment, inside or out, Kaylo Heat Insulating Block performs efficiently and with a minimum of maintenance. Here it is being applied to the walls of a large precipitator.



Installation

ADVANTAGES...

Make a good-looking installation. Their "feel" is pleasant and non-irritating. They can be cut, scored and sawed with ordinary woodworking tools. Finishes go over the block, whether cement, cloth or other, can be applied smoothly and with a minimum effort. No special tools are needed.

LOW MOISTURE ABSORPTION. Kaylo Heat Insulating Block absorbs little moisture from surrounding humid air.

EFFECTIVE AFTER LONG SERVICE. Kaylo Heat Insulating Block remains strong, free from excessive powdering, and shows little loss in weight or shrinkage after long application to temperatures up to 1200° F. Even conventional tumbling tests, run after prolonged heating, produce relatively little crumbling or breaking of the material.

TYPICAL APPLICATIONS:

Indoor or outside, for large installations or small, up to 200° F., use Kaylo Heat Insulating Block to insulate:

Boiler casings	Heat Exchangers	Turbines
Boiler Air Ducts	Condensers	Chilling Pits
Boiler Flues	Lehrs	Boilers
Boiler Headers	Autoclaves	Precipitators
Boiler Pipes	Ovens	Locomotives
Boiler Vessels	Furnaces	



Kaylo Heat Insulating Block covers both flat and curved surfaces on the power house equipment pictured here. By minimizing heat loss, it saves fuel and keeps temperatures within the room at comfortable levels.



PHYSICAL CHARACTERISTICS

DENSITY	Approximately 11 lb. per cu. ft.
FLEXURAL STRENGTH	50 lb. per sq. in.
COMPRESSIVE STRENGTH (at 5% deformation)	150 lb. per sq. in.
Before heating	
After heating for 24 hours	
at 750° F.	144 lb. per sq. in.
at 1000° F.	123 lb. per sq. in.
at 1200° F.	117 lb. per sq. in.
After boiling for 24 hours (while wet)	74 lb. per sq. in.
LOSS IN WEIGHT	
After heating for 24 hours	5.5%
at 750° F.	7.9%
at 1000° F.	9.8%
at 1200° F.	0.2%
After boiling for 24 hours (after drying)	
RESISTANCE TO ABRASION	
(Conventional tumbling test—loss in weight after 10 minutes)	2.2%
Before heating	
After heating for 24 hours	3.7%
at 750° F.	5.7%
at 1000° F.	6.9%
at 1200° F.	
DIMENSIONAL STABILITY	
Linear shrinkage after heating for 24 hours	0.8%
at 750° F.	0.9%
at 1000° F.	1.5%
at 1200° F.	
Elongation after saturation (max.)	0.04%
MOISTURE ABSORPTION (volume)	
After 6 hours exposure in atmosphere at 120° F. and 90% Relative Humidity	0.9%
CONDUCTIVITY (K)	
At 100° F. mean temperature	0.41
At 500° F. mean temperature	0.54

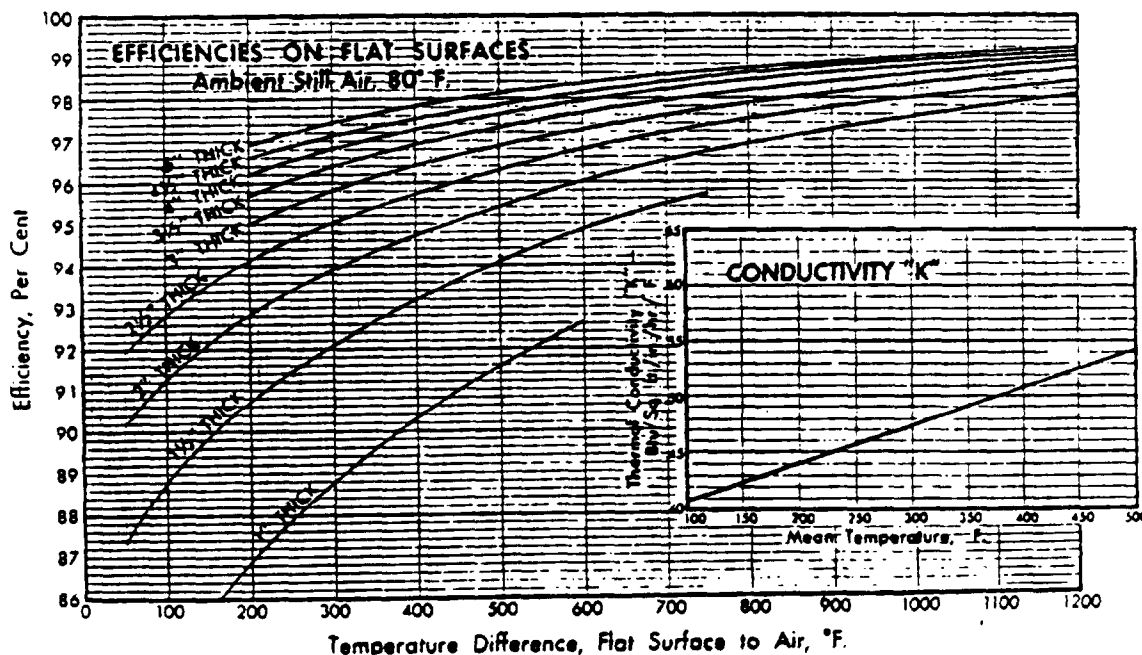
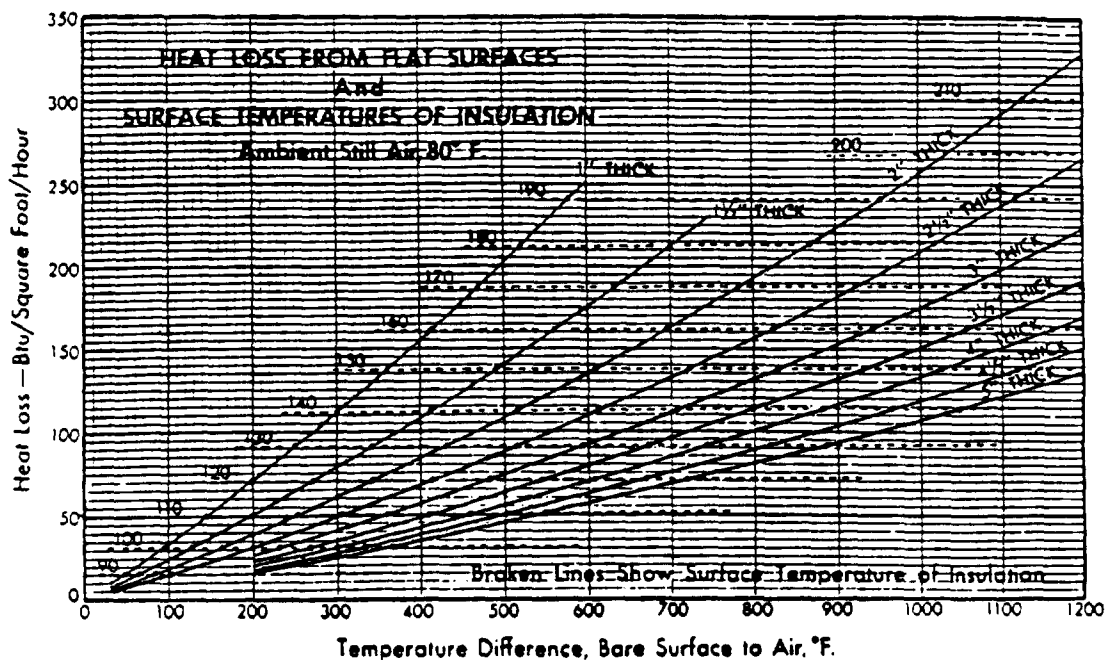
STANDARD SIZES

LENGTH (inches)	WIDTH (inches)	THICKNESS (inches)
36	6	1
36	6	1 1/2
36	6	2
36	6	2 1/2
36	6	3
36	12	1
36	12	1 1/2
36	12	2
36	12	2 1/2
36	12	3



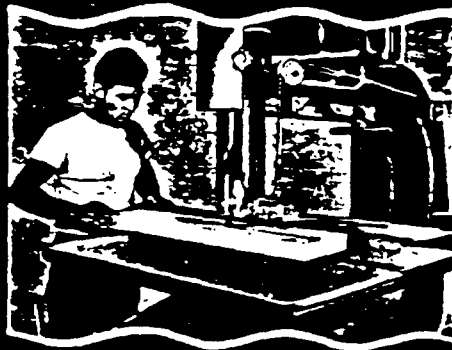
HEAT INSULATING BLOCK

Heat Loss, Surface Temperatures, and Efficiencies



SOURCES OF TEST DATA: The data shown on these pages are supported by tests run at various laboratories, all well known to the insulation industry. They are further supported by the performance of the product in service.

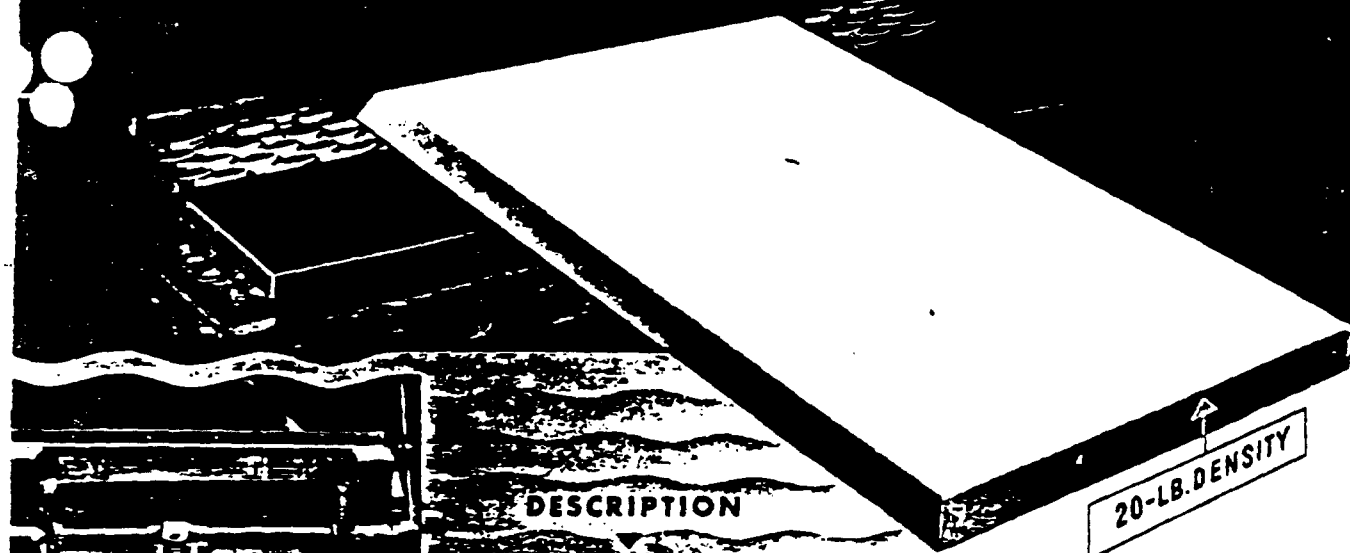
More detailed information on Kaylo Heat Insulating Block is available on request.



KAYLO®

20-LB. DENSITY

STRUCTURAL INSULATING BLOCK



DESCRIPTION

Kaylo Structural Insulating Block—is a near-white, rigid mineral insulating material weighing approximately 20 pounds per cubic foot. It is composed principally of calcium silicate. Except for density and for those characteristics that are changed by density it is similar to *Kaylo Heat Insulating Block*, a lightweight insulation used to insulate against heat loss from hot surfaces. Kaylo Structural Insulating Block (20-lb. density) is designed to develop maximum strength and fire resistance without sacrificing its advantages of light weight and low thermal conductivity. In fact the practical combination of these four properties—strength, weight, insulating value and fire resistance—makes it almost unique as a building material.

It weighs nominally 20 pounds to the cubic foot (actually on an oven dry basis from 19.5 to 22 lb.), has a compressive strength of approximately 500 lb. per sq. in., a "k" of 0.66 at 100 mean and outstanding resistance to the travel of heat and flame at building fire temperatures.

