EXHIBIT 5

0624343 0[illegible]02834

These comments
CCM del orally at file
meeting 4-8-77

R. C. Swisher Re. MSDS for Vermiculite
CC Wood Concentrate + Finished Products

I have reviewed the Draft Proposal for MSDS for vermiculite concentrate and finished products and have the following comments

(a) Reference to Regulation 1910.93 A should be deleted. This was the designation given to the OSHA asbestos standard before it was recodified. The proper designation is to 1910.1001 and the reference should be used throughout.

~~I understand that~~

~~(b) [illegible] The [illegible] percent [illegible]~~

(b) I understand that the reason for ~~indicating~~ wanting to indicate the percent ~~[illegible]~~ by weight of tremolite content is to give the receipt ~~[illegible]~~ ~~[illegible]~~ the indication that he is not giving a product containing commercial asbestos and that the ~~[illegible]~~ ~~[illegible]~~ tremolite asbestos

PLAINTIFF'S EXHIBIT P-132

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OSHA standard 1910.1001 requires

(c) I note that the asbestos stand 1911.1001 is not mentioned in the proposed MSDS data sheet for Heavy ore. I believe that reference to the standard should be made to the standard since from time to time pockets of Allen ore are mined in South Carolina which have a tremolite asbestoform content. Further your statement "the dust has a negligible "asbestos fiber" (less than 0.5% by weight) fraction." seems confusing. As indicated above a 0.5% tremolite asbestos fiber content could be significant because respirable fibers are light. I believe a statement that the tremolite asbestoform mineral content of the Heavy ore is less than 0.5% by weight would be more accurate. However

(if I understand your data correctly) In fact the tremolite content, both platy and asbestoform could be as high as 10% of South Carolina ore

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as I indicated above I ~~[illegible]~~ ~~[illegible]~~ do not recommend the inclusion of a statement relating to percent content of translate or testing mineral.

(d) I suggest that H.A. Schaub be added to CPD's MSDS review process.

O. M.F.

CCM These _____
del. orally at Fiber
meeting 4-8-77

R. C. Ericson
CC: Wood

Re: MSDS for Vermiculite
Concentrate & Finished Products

I have reviewed the Draft Proposal for MSDS for vermiculite concentrated ore finished products and have the following comments:

(a) References to Regulation 1910.93A should be deleted. This was the designation given to the OSHA asbestos standard before it was verified. The proper designation is to 1910.1001 and this reference should be used throughout.

(b) I understand that the reason for wanting to indicate the percent by weight of tremolite content is to give the recipient the indication that he is not giving a product containing commercial asbestos and that the tremolite asbestos

contaminant content is low. However, I think that this could be construed as an invitation for the recipient to believe that because the percent tremolite asbestos content is low that the amount of tremolite asbestos fiber released in handling the product can be assumed to be less than this prescribed by the asbestos standard. As you know, respirable tremolite asbestos fibers are light and countless numbers may be present even though the percent by weight is low. A knowledgeable person could on this basis become overly concerned if he were informed that as in the case of Libby #2 ore std at it contained 2.5% tremolite asbestos mineral. Accordingly, I

would recommend that such statement be deleted. OSHA standard 1910.1001 regulates airborne fiber concentrations and that should be the recipient's concern.

SIDE ENTRY

In addition because the tremolite content of the ore body may vary one could expect that the percent asbestos tremolite content of the ore concentrate to vary so that unless the percent stated when high enough to cover all contingencies the MSDS from time to time could be in fact inaccurate.

PAGE 3

(c) I note that the asbestos standard 1910.1001 is not mentioned in the proposed MSDS data sheet for Kearney ore. I believe that reference should be made to this standard since from time to time pockets of of Allen ore are mined in South Carolina which have a tremolite asbestiform content. Further your statement that "the dust has a negligible "asbestos fiber" (less than 0.5% by weight) fraction." seems confusing. As indicated above a 0.5% tremolite asbestos fiber content could be significant because respirable fibers are light. In fact, if I understand your data correctly, the total tremolite content of both platy and asbestiform of South Carolina ore could be as high as 10%. I believe that a statement that the tremolite asbestiform mineral content of the Kearney ore is less than 0.5% by weight would be more accurate. However

PAGE 4

as I indicated above I do not recommend inclusion of a statement relating to percent content of tremolite asbestosform mineral.

(d) I suggest that H. A. Eschenbach be added to CPD's MSDS review process.

O. M. F.

EXHIBIT 6

Construction Products Division

GRACE

PERSONAL AND CONFIDENTIAL

03629668

To: C. E. Brookes
C. N. Graf

May 24, 1977

From: E. S. Wood

Subj: Tremolite in Vermiculite

cc: R. M. Vining
B. A. Blessington
H. C. Duecker
W. R. Hanlon
W. F. McCord
L. Rosenblatt
B. R. Williams
J. W. Wolter

The purpose of this memorandum is to discuss in some detail the nature of the tremolite problem as it impacts our vermiculite business, and also to outline our plans for dealing with the problem. These plans are based on extensive product testing, analysis of alternative configurations of the Zonolite business, and consultation with legal counsel, including the Corporate Legal Division.

THE PROBLEM

Tremolite is present as a tramp mineral in our vermiculite deposits, and while most of it is separated from the vermiculite in the milling process, small amounts are carried to expanding plants and ultimately into finished products. Tremolite is classified as asbestos and regulated by the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), the Mining Enforcement and

EXHIBIT
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Safety Administration (MESA), the Consumer Product Safety Act (CPSA), and the Toxic Substances Control Act (TSCA) as a carcinogen. Although we have been working since 1971 to reduce tremolite in our product, in our expanding plants, and in our mills, we have felt until now that tremolite was misclassified by OSHA and others as a form of asbestos. This was based on our understanding of the difference in physical characteristics of tremolite compared to other fibrous forms of commercial asbestos, as well as outside studies such as the animal study sponsored by Johnson & Johnson on a tremolite talc which showed no carcinogenicity.

Two recent developments have changed our views on this subject. First, an in-house study of mortality rates among ex-employees at Libby indicates that their risk of lung cancer is five times the national average. In this connection, we have experienced asbestosis in 41.5% of the workers (with over 10 years' service) in Libby, as well as in 28% of the workers (with over 10 years' service) exposed to Libby ore in the expanding plants. The experience at Libby is confused because all of the aforementioned workers were exposed to high dust count levels in the old dry mill. The present Libby dust environment with the new mill represents a major change in this respect. Fiber counts have dropped from a level of above 30 f/ml on the average to a level below 5 f/ml. Also, the expanding plant employees mentioned have also been exposed to commercial asbestos in the manufacture of MK for a number of years.) Secondly, with respect to national safety regulations, the prior distinctions between "commercial asbestos" and "non-commercial asbestos" (tramp contaminants) are being erased as the general nature of the hazard of exposure to fibrous materials is more thoroughly studied.

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A great deal of controversy exists over what constitutes a safe level of exposure to a carcinogen. Most people would agree that safe levels are very difficult to establish. One view, taken by most regulating agencies, is that since no safe level can be unequivocally demonstrated, carcinogens must be eliminated where there are acceptable substitutes. Where the carcinogen cannot be eliminated by substitution, exposure must be controlled at the lowest level which can be technically achieved and reliably monitored. The opposing group makes a strong case that no unusual health risks have been rigorously documented for asbestos exposures below 5 f/ml (8-hour time weighted average), much less the present standard of 2 f/ml, or proposed standard of .5 f/ml. In the presence of such controversy it is difficult to determine what posture is appropriate for us in establishing limits of exposure for our employees and customers. A more detailed discussion of the health hazards associated with asbestos exposure is contained in Appendix I.

The exposure problems that we have seen to date are limited to the fibrous type of tremolite that occurs in the Libby deposits. The tremolite associated with our deposits in and around Enoree, South Carolina is largely non-fibrous. Since we have no evidence of asbestosis or other excess health risk associated with asbestos exposure among employees working in South Carolina, we do not believe that the levels of exposure to our employees or customers utilizing material from South Carolina creates a health hazard of any kind. In the case of material from Libby, we believe that lower levels of exposure are required to assure the safety and well-being of our employees. Moreover, regulations already proposed, when put into effect, will mandate lower levels.

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PROPOSED ACTIONS

1. Fiber Control

As a result of the existing and expected regulations, we are moving ahead on a faster than planned schedule with requests for $1,271,000 in fiber control capital spending originally budgeted through the end of 1978 for the Libby mill and various vermiculite expanding plants. We will also request authorization to spend $298,000 over and above that which was budgeted, again principally for fiber control projects. The individual projects are listed in detail in Appendix II.

Insofar as fiber reduction is concerned, our experience to date indicates that removal of tremolite fibers at the mill is a preferred method of reducing employee and customer exposure levels. Immediate temporary steps have been taken to reduce the level of fines which have been recycled into the ore shipped from Libby. It is too early to assess the benefit of these changes, although taken alone they are not expected to eliminate the need for a fiber reduction program at the expanding plants and a fiber-binding program for consumer products. The cost of permanent equipment to collect and dispose of these fines is included in the overall Libby fiber reduction program discussed below.

The present MESA standard in effect at Libby is 5 f/ml (8-hour TWA). The Federal Metal and Non-Metal Mine Safety Advisory Committee has recommended that MESA lower the present standard to 2 f/ml, although the timing of such a change is uncertain. Our objective is to bring all Libby fiber counts below 2 f/ml by January 1, 1978. To meet this objective we will be proceeding with $718,000 in capital spending over the next few months (budgeted

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at $605,000 in the 1977 capital budget). Included in this amount will be $331,000 of spending against RCA 12-2 (budgeted for this year at $204,000) for mill-related fiber and dust segregation, collection and disposal equipment. The remaining $387,000 (budgeted at $401,000 for 1977) will be directed at mine area dust control and vehicular dust control equipment. Authorization for this spending is being requested under separate RCA's and shop orders.

For the long term, research is being carried on at North Carolina State, aimed at improved separation techniques that appear to be effective in clean-up of our finer grades (No. 3 and No. 4). Unfortunately, this approach does not seem to be effective for the coarse grades (No. 1 and No. 2) which are used almost exclusively for Attic Insulation (hence the need for a binder development for Attic Insulation). Laboratory scale results indicate that a reduction of over 90% in the level of fibrous tremolite in fine grades may be achievable. This would appear to be the preferred long-term solution to tighter fiber exposure levels both at our expanding plants and in the customer use environment for the greatest volume of our products ($28.3 million out of a total $35.5 million of expanded vermiculite sales and ore sales to outsiders using Libby ore in 1977).

A series of changes primarily in ore handling facilities will be made at eight expanding plants which do not presently meet the OSHA standard of 2 f/ml (8-hour TWA). These changes will total $943,000 of capital as follows: Denver ($50,000); Newark ($114,000); Phoenix ($110,000);

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Dallas ($50,000); Portland ($107,000); Dearborn ($197,000); and Omaha ($315,000). Since the steps taken to reduce fiber counts to 2 f/ml, with proper plant maintenance, can generally bring fiber counts below 1 f/ml with appropriate peripheral equipment, we expect to achieve a level of 1 f/ml at all expanding plants by mid-1978. An additional $93,000 of capital will be required for peripheral equipment to meet 1 f/ml at the following plants: Easthampton ($17,000); St. Louis ($26,000); Little Rock ($50,000). These changes will be handled through a series of individual plant RCA's or shop orders, with the exception of Omaha spending which has already been approved under RCA E76-317 ($247,000 approved by the President on November 26, 1976), and RCA E76-311 ($68,000 approved by the CPD President on September 27, 1976). Excluding Omaha, the expanding plant capital spending totals $721,000 versus budgeted 1977 and 1978 figures totaling $666,000.

In part, these changes are being undertaken now since they represent relatively small capital increments (above what would be required to reach the present mandatory levels) that will yield substantially lower exposure levels to our employees. However, it is clear that the levels which we propose meeting will eventually be embodied in stricter state and federal standards. Moreover, it is clear that the Federal Government policy for the long run will be directed to achieving the lowest level which is technically feasible and which does not have an adverse impact on the economy as a whole.

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Standards as low as .1 f/ml have been proposed by the National Institute for Safety and Health (NIOSH). While this was a proposal that has been made without regard for its economic impact or technical feasibility, it is indicative of the general philosophy behind control of substances defined as carcinogens.

2. Product Labeling

Based on the advice of corporate general counsel, we have decided not to affix asbestos warning labels on any of our expanded products which, in their normally intended use, do not expose customers to fiber levels above those permitted by OSHA. Thus, no products made from South Carolina ore will require labeling. Subject to the results of additional job-site tests, no present expanded products using Libby ore will require labeling, with the possible exception of industrial grades for which we may not be able to identify and test all end uses. This policy is consistent with the posture of Johns-Manville, the largest supplier of asbestos products in the U.S. and a leader in the field of asbestos safety and health precautions. Effective July 1, 1977, all new packaging purchased will include a general dust warning label printed on the package.

In the case of consumer products, we are operating under the presumption that the present controversy over regulation of materials containing asbestos will be resolved by the Consumer Product Safety Commission (CPSC) in favor of a complete ban on consumer products containing asbestos fibers unless they can be shown to be "bound". Recent action of the CPSC

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in proposing a ban on drywall joint compounds containing asbestos, artifical fireplace logs using free asbestos fibers, and spackling compounds containing tremolitic talcs tends to support our presumption of an eventual ban on unbound asbestos-containing consumer products.

Equipment is being installed at 14 key plants at a projected cost of $130,000 (average of $9,300 per plant) using individual, locally approved shop orders. This equipment will permit us to apply a binder for our two major consumer products -- Attic Insulation and Horticultural Vermiculite. Simultaneously with the installation of the equipment, we are in the process of choosing an appropriate binder and level of treatment with the objective of reducing the use exposure for these products to a level of 1 f/ml maximum exposure and .2 f/ml on an 8-hour time weighted average basis. These are levels chosen because we think they are technically achievable and are close (within a factor of 2) to the level which NIOSH proclaims to be the lowest level which can be reliably monitored.

It should be emphasized that these steps are being taken to comply with the extremely stringent projected regulations, and not because we feel that the use of these products creates a serious risk for consumers.

Considering the brief and irregular pattern of use, we do not believe that asbestos exposure from our products causes an increased risk of health problems. However, there is a fringe of expert opinion, most prominently and articulately represented by a well-publicized expert from Mt. Sinai (Dr. Selikoff) suggesting that even brief exposures, presumably at high levels, can later produce mesothelioma. Mesothelioma is a rare form

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of lung cancer linked to asbestos exposure. For this reason, and the expected stiff regulation of asbestos-containing materials in consumer products, we feel that it is prudent to develop a treatment for our consumer products, even though it is anticipated this will increase our cost of manufacture by up to 15%.

Even though we will not be labeling most of our products, we intend to notify customers who inquire that small amounts of tremolite are present in our end products with the exception of our mixed products. In the case of mixed products (MONOKOTE and soil mixes), tremolite is detectable only through the use of internally developed analytical procedures which require elaborate techniques not commonly recognized or employed in the scientific community for detection of asbestos. For this reason, we are taking the position with all but authorized government authorities that our mixed products are "non-asbestos" products. Obviously, in responding to government inquiries we intend to provide specific data, which we have, that identifies trace levels of tremolite even in mixed products. It is our belief, for purposes of the law, that the amount of fibrous tremolite present in our mixed products is de minimis.

Requests for written statements concerning the presence of asbestos in our products from customers will be answered by indicating that we have small amounts of tremolite present in the product and by referring them to the OSHA regulations covering asbestos-containing products.

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ZONOLITE PROFITABILITY IMPACT

Comparative financial analyses have been completed for the present Zonolite business and several alternative configurations which could be forced by future regulatory activity and/or our ability to meet future fiber standards. The base case and alternative case assumptions and financial comparisons are presented in Appendix III. The following table summarizes key financial statistics for: 1.) the Zonolite 1977 budget and forecast, prepared in October 1976; 2.) a 1977 re-estimate completed in January 1977 reflecting adjustments to sales and gross margins based on the economic outlook at that time (used as the "base case" in Appendix III); 3.) a "most likely" future case reflecting additional capital spending for fiber control, additional costs for binder treatment in certain products, withdrawal of certain consumer products such as Attic Insulation in the U.S., and labeling of the remaining consumer products (Case B in Appendix III).

($000)	1977			1980		
	Budget	Base Case	Case B(1)	Budget	Base Case	Case B
Net Sales	$65,719	$63,495	$57,303	$92,639	$92,281	$80,232
Operating Profit	5,201	4,183	3,033	8,278	8,512	6,065
Profit After Tax	2,779	2,556	2,018	5,305	5,373	3,758
Total Capital Employed	$31,573	$30,891	$29,937	$37,613	$37,215	$34,328
% Return on TCE	9.0%	8.5%	7.0%	14.3%	14.6%	11.2%

(1) Case B presented in 1977 is for comparative purposes only. The full-year impact of assumptions in Case B would not actually be experienced in 1977.

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Our projections indicate that even with the loss of our consumer business (assuming the Canadian Attic Insulation business continues) Zonolite continues to be a viable business albeit at lower than forecasted returns.

More selective internal use of South Carolina ore in place of Libby ore can largely eliminate the 10-50% reduction in sales volume that would result from a requirement to label our products as containing asbestos. The reduction in sales from labeling is primarily the result of our being the first labeled product on a construction job site which would force contractors to comply with impractical OSHA regulations.

ALTERNATIVE APPROACHES

Considering the large potential liability that results from the sale of products that contain even a small amount of contaminant defined by the government as a carcinogen, it is reasonable to question whether there are alternatives to the proposed action. Our exposure to law suits cannot be ignored. In addition, we are forecasting a continued demand for no return capital to be invested in the business in order to meet increasingly tighter standards for asbestos fiber exposure, independent of whether a proven risk exists or not. Two obvious alternatives would be to seek divestment of the business or to close Libby and retrench to South Carolina where the health issues are minimal (but not eliminated).

Divestment of Zonolite has been considered in the past and been judged impractical. It is felt that no buyer could be found, capable of continuing to operate the business (with adequate capital resources) to give us an acceptable price for the business as compared to other alternatives.

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Closing of Libby and retrenching to South Carolina would require a drastic change in the basis on which the business is run. It is likely that we would be operating a regional business in the East, Midwest, and Southeast, rather than the present national business for Zonolite products. This alternative, if required, would be expected to produce a high return but substantially lower after-tax profits. For example, our projection for 1980 for a regional business, without Libby, shows after-tax profit of 2.6 million dollars giving a 15.2% return on the 17.2 million dollar Total Capital Employed. (This case is presented as Case C in Appendix III.) Large asset write-offs and interim operating losses would be incurred to convert to this regional business basis.

We now believe the most likely case for 1980, retaining Libby, but recognizing the possible loss of consumer businesses to be a 3.8 million dollar after-tax profit, generating an 11.2% return on 34.3 million dollars of Grace Capital Employed.

Our forecast indicates that continuing to operate Libby and continuing to conduct a national business is a preferred alternative unless large amounts of capital are required to meet drastically tightened asbestos fiber exposure levels. Our best estimate is that a 1 f/ml standard for Libby would require 3.6 million dollars of additional capital. A tightening of the OSHA regulations covering our expanding plants to a level of .1 f/ml would require 6 million dollars of additional capital. Based on our present assessment of what is technically required, a move to the standards of .1 f/ml in the expanding plants and 1.0 f/ml in Libby would make it uneconomical to continue operating Libby.

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In the absence of such extreme (and unlikely) tightening of standards, our projections indicate that the best course is continued operation of Zonolite from two mine locations.

RISKS

There are seven specific risks associated with tremolite in our workplaces and products which we assess as follows:

1. Harm to customers.

We do not feel that our products create a hazard for normal end uses. The highest level of exposure is for Attic Insulation and Masonry Insulation. The high concentrations of upwards of 15 f/ml (15 minute maximum) for Attic Insulation and 12 f/ml (15 minute maximum) for Masonry Insulation that were observed in simulated tests early in 1976 have not been confirmed by the results of more recent testing in actual field use. (The present OSHA ceiling limit is 10 f/ml for any 15 minute period.) The maximum concentration in the case of Masonry Insulation observed in recent testing was 3.65 f/ml (15 minute maximum) and in the case of Attic Insulation was 4.28 (15 minute maximum). However, we have observed very large variations in simulated test results such that further improvement in Attic Insulation, in particular, may be necessary to be assured that we reliably fall below 10 f/ml maximum exposure during use. Due to the products' short and irregular periods of use, it seems unlikely that we would exceed the 2 f/ml, 8-hour time weighted average, OSHA standard with Attic Insulation or Masonry Insulation.

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All other products appear to be well below permitted levels, in most instances by a good margin. (See Appendix IV for representative test results.)

2. Harm to employees.

The present level of exposure for our Libby employees (up to 5 f/ml TWA), while materially better than the harmful exposures before the new wet mill, still represents concern to us. Therefore, we will be undertaking an employee education program as well as further reduction in the fiber levels to 2.0 f/ml, in order to reduce the risk of harm to our Libby employees' health.

The reduction to 1 f/ml in the expanding plants, which we expect to accomplish by mid-1978, should give us a comfortable margin of safety in concluding that there is very low risk to our employees in the expanding plant work environments.

The risk to expanding plant employees using South Carolina ore, as well as to the mine/mill employees in South Carolina, is negligible.

3. Product bans.

There is a high risk that our products will be banned in several significant uses.

We forecast that our vermiculite consumer products, namely Attic Insulation, Horticultural Vermiculite, and Pool Base, will eventually be banned by the Consumer Product Safety Commission, and this has been assumed in the 1980 financial projections (Appendix III). We place our chances at 50:50 of binding the tremolite such that we could effectively argue that no fibers will be released during use.

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There is also a high risk (30%) during the next 18 months that MONOKOTE fireproofing will be considered to fall within the ban in selected states (California, New York, Minnesota, Massachusetts, and Illinois) of fireproofing products containing asbestos, although it would appear that this is an unintended ban. Legislators in those states simply failed to consider trace tramp minerals when wording the prohibition against a product containing any asbestos for sprayed applications. We are actively working on a vermiculite free fireproofing material for introduction in mid-1978.

4. Label requirements.

We believe that a decision to affix asbestos-warning labels to our products would result in substantial sales losses. This view is shared by Johns-Manville in the case of their labeled construction products. It is further supported by J-M's experience with their tremolite talcs.

Based upon advice from corporate counsel, our products do not require labels if the OSHA limits are not exceeded in their intended use. This is also J-M's position for their own products. We believe that all of our products fall below the limits established by OSHA and that we will be able to continue to fall below more stringent standards being projected, thus avoiding the need to label our products.

Secondly, any change in interpretation which would require a labeling of selected products, such as Masonry Insulation, can probably be avoided by redistribution of the cleaner South Carolina ore and withdrawal from selected isolated territories.

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Continued programs aimed at cleaning up the product should allow us to meet the projected tighter limits that may be imposed by OSHA in 1978 and 1980.

5. Increasingly restrictive standards and higher capital requirements to meet the more stringent future standards.

We believe there is a very high risk that standards will become more restrictive requiring additional capital for continued operation of Libby and of expanding plants using Libby ore. In addition to the 1.9 million dollars which we propose to spend between now and mid-1978 to comply with asbestos fiber safety standards, an additional one million dollars is expected to be needed by 1980 in order to meet a projected OSHA standard of .5 f/ml.

There is a risk, which we place at less than a 20% chance, that additional investment of up to 10 million dollars would be required in order to reach a level of 1 f/ml at Libby ($3.7 MM) and .1 f/ml at expanding plants using Libby ore ($6.3 MM). Such a development would probably result in a decision to close Libby and the retrenchment of our business to a regional basis supplied entirely out of South Carolina. (See Appendix III, Case C for details of the financial impact of a decision to close Libby.)

6. Adverse publicity

There is a risk that Grace will attract adverse publicity from national media concerning the presence of asbestos in vermiculite. This

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information is already being circulated within government agencies, such as OSHA and has been reported on a local basis in connection with the Louisa County dispute over the mining of vermiculite ore. Future steps, such as the development of a case for continued sale of Attic Insulation to the Consumer Product Safety Commission, will increase the risk of widespread adverse publicity.

7. General liability to employees, customers, and the public.

Liability to employees is limited by the Workmen's Compensation Laws. However, we should expect increased Workmen's Compensation rates in Libby as the number of disabilities increase among employees who have been exposed in the past to the high fiber concentrations of the old dry mill. Liability among expanding plant employees and the South Carolina mine/mill employees appears minimal.

The risk of liability to customers is heightened by the decision not to label our products. Under the strict liability criteria, we may be liable to customers who can demonstrate they (1) were exposed to asbestos fibers and (2) sustained personal harm. Based on advice of corporate counsel, this risk is categorized as moderate. Moreover, it seems unlikely that bona fide cases of personal harm could be well documented considering the pattern of use and exposure levels of our customers.

General public liability, stemming from the sale of consumer products, is a low-level risk with very high potential liability if it develops. While we have no evidence of any adverse effect of our products on consumers, neither can we offer convincing evidence that they are ab-

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solutely safe. Making such a case is handicapped by the number of "experts" who claim that there is no safe level with the inference that any exposure is potentially hazardous. This leaves us open to liability without a good defense over a broad range of alleged hazards. A decision to label our consumer products would eliminate the risk of future liability, while exacerbating the risk of claims (mostly not bona fide) from past use of the product.

E. S. Wood

ESW/CGR
Attachments

EXHIBIT 7

IN THE UNITED STATES COURT OF APPEALS, FOURTH CIRCUIT

CITY OF GREENVILLE, Plaintiff	:	
v.	:	C.A. No. 86-2096
W. R. GRACE & COMPANY, Defendant.	:	

Transcript of Argument

Before

HONORABLE ROBERT F. CHAPMAN
HONORABLE JAMES D. PHILLIPS, JR.
HONORABLE SAM J. ERVIN, III

DATE: April 8, 1987

LOCATION: United States Courthouse Building
10th and Main Streets
Richmond, Virginia

APPEARANCES:

EDWARD J. WESTBROOK, Esquire
Blatt & Fales
Charleston, South Carolina
Counsel for the Plaintiff

GRIFFIN B. BELL, Esquire
King & Spalding
Atlanta, Georgia
Counsel for the Defendant

Audio-Visual Reporting Services, Inc.
Court Reporters & Videographers
8003 Franklin Farms Drive, Suite 116
Richmond, Virginia 23229

804 / 285-3877
SPOTSWOOD BUILDING
THE ROGER CENTER - WEST

Respond To:
POST OFFICE BOX K-113
RICHMOND, VIRGINIA 23288

matter. They make this product in 35, 36 plants, and they kept selling it as long as they could. And there's nothing -- no law anywhere that they couldn't nor that it was dangerous.

Dr. Setiloff [sic] up in New York was worked up about it, and he should have been, because they could see people spraying it on these girders in buildings all over Manhattan Island, getting it in the air, and he was objecting to that.

And our people, one of them said we needed to study whether we could take asbestos out and said it was -- good ethics required that we do it, and I think that was right. I think -- and they did it. I think that speaks well for Grace, instead of condemning them, for having done that.

The reference to Judge Wilkin's decision in South Carolina, that was in this same case, and it was on a motion for summary judgment. There had been no facts put in. I think -- we're back where I was a little bit ago -- that this kind of a case ought to be left in warranty and not to -- not tort.

One last word, and that's about Dr. Crump. Dr. Crump was a statistician, and they have been trying to get him in to show the absurdity of what they call the linear extrapolation, where you take known

danger, known figures, and then you can show so many deaths by extrapolating.

And they wanted to show that on nitrites in diet soda, peanut butter, which has a toxin in it called aflatoxin, but they've never been able to get any judge to listen to them, and to tell you the truth, I don't much blame the judges for not paying any attention to it.

It reminds me of a story, and I'll close on this, of a -- there was a judge in Cartersville, Georgia, who made a study of the sharp increase in the prison population in Georgia, and the increase was greater than the general increase in the population. And I was a young lawyer at the state bar, and he made this great announcement that according to his figures, in the year 2011, everyone in Georgia would be in prison. And that's about what these statistical figures tend to do.

Thank you very much, Your Honor.

Re: City of Greenville v. W. R. Grace & Company

I, Maxine H. James, Court Reporter, do hereby certify:

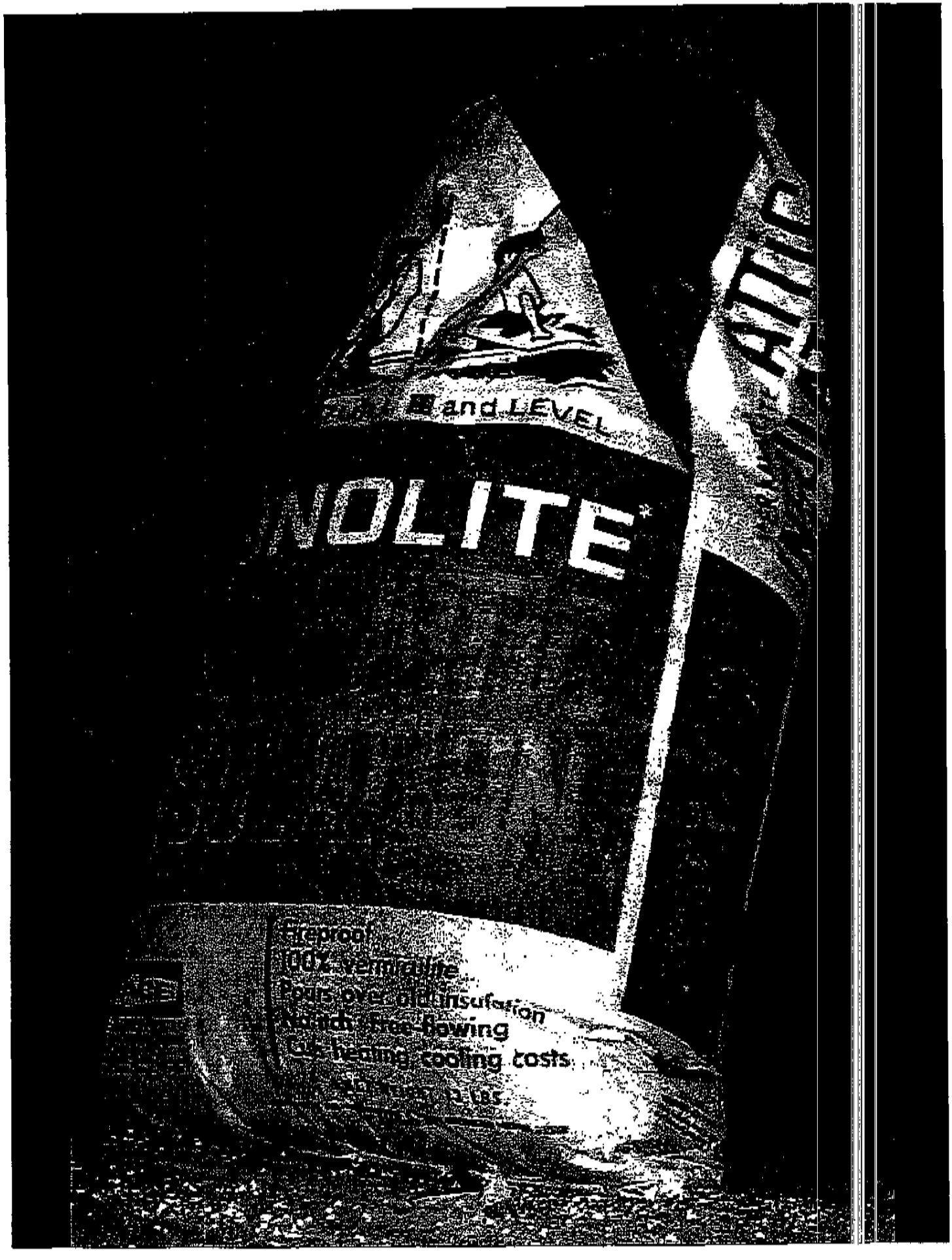
THAT to the best of my ability I have faithfully and accurately transcribed the aforesaid proceedings from an audio tape received from the Fourth Circuit Court of Appeals;

THAT, further, I am employed solely for the purpose of reporting these proceedings and have no interest in the action or its outcome: nor am I related to, or in the employ of, any of the parties or their counsel.

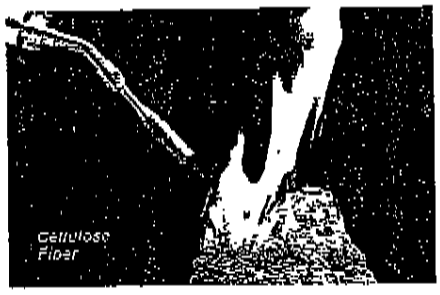
Given on this 16 day of [illegible], 1987.

[illegible]
COURT REPORTER

EXHIBIT 8


and LEVEL
NOLITE
Fireproof
100% vermiculite
Pours over old insulation
Free-flowing
cooling costs

Zonolite®—the SAFE Attic Insulation



Zonolite Attic Insulation Passes the Torch Test . . . A hot chimney or electrical wire can spark a tiny flame in your attic. If your attic insulation isn't 100% fireproof, that flame can smolder and grow into a dangerous and costly fire. The Torch Test proves that Zonolite Attic Insulation is 100% fireproof.

You can give yourself and your customers peace of mind knowing they've chosen *the* safe attic insulation.

With the rising cost of heating fuel and critical shortages across the country, millions of homeowners are seeking advice on attic insulation. As a retailer, you should be prepared to offer advice. Your customers are naturally concerned about cost, but they're also concerned about the safety and security of their families and homes. Because Zonolite Attic Insulation is completely fireproof, you can recommend it to your customers without hesitation.

Zonolite is easy to install. It is an ideal, do-it-yourself product that is light, pours easily and requires no special tools.

The unique features speak for themselves . . . Zonolite is the:

- insulation that can be poured over existing, ineffective insulation to seal all heat-leaking voids
- insulation that is permanently fireproof*
- pourable insulation that requires no special tools for installation
- non-settling insulation that will last the life of your home
- non-irritating insulation
- all mineral vermiculite insulation that won't attract or support animal life

*Underwriters' Laboratories, Inc. Fire Hazard Classification for Zonolite Vermiculite Attic Insulation:

Flame Spread	0
Fuel Contributed	0
Smoke Developed	0

The supply of Zonolite Attic Insulation is plentiful, thus ensuring immediate availability to fill your needs.

Because of the growing demand for attic insulation and the importance of the safety and convenience of your customers, W. R. Grace & Co. has prepared pamphlets and posters to help you answer your customers' questions. The promotional booklet includes instructions for conducting an Attic Safety Test and can be used as an in-store handout or mailed as an enclosure.

Protect your business by protecting your customers.

ZAI 002446

Zonolite® Attic Insulation

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CONSTRUCTION PRODUCTS
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Printed in U.S.A. 3/77

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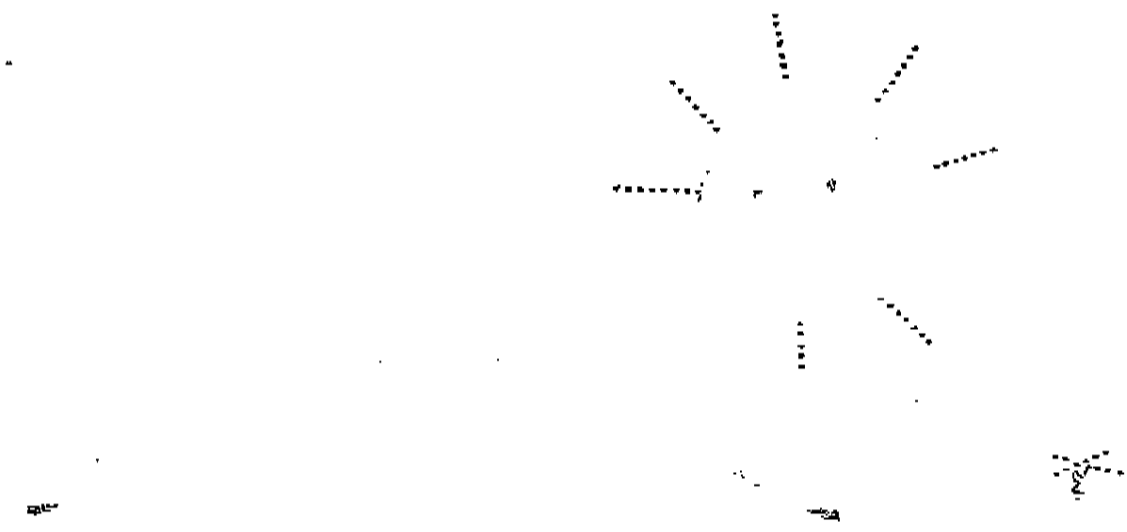
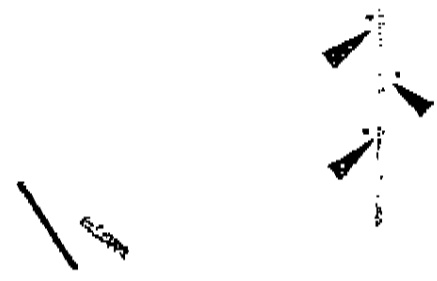
ZONOLITE





for Electric Heat and Air-Conditioning

PLAINTIFF'S EXHIBIT P-831

ZAI 0014 26

ZONOLITE

04512422

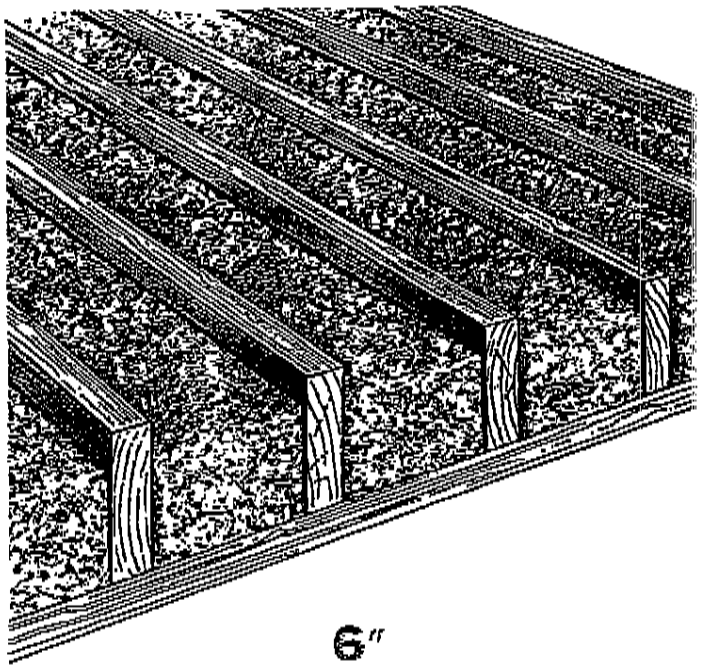
INSULATING FILL

for CEILINGS

Zonolite vermiculite Insulating Fill is a free-flowing granular material well-suited to horizontal areas, such as attics. When installed to proper thicknesses, it affords sharp reduction in electric heating and cooling costs, and added comfort for occupants.

Zonolite Insulating Fill can be poured over existing insulation which has settled, or which was applied at insufficient thickness. It will fire-protect underlying combustible materials and fill voids along attic joists, around pipes, wiring, or braces.

Zonolite vermiculite is packed in 4-cubic foot bags weighing only 20-25 lbs. Its lightness aids in easy transporting and installation.



6"

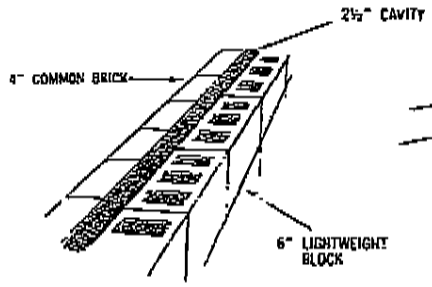
● MINIMUM RECOMMENDED THICKNESS

MASONRY FILL

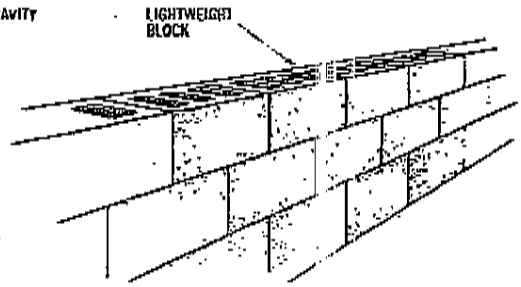
for BRICK and BLOCK WALLS

Zonolite water-repellent Masonry Fill is a patented* insulating material designed to fill cores of concrete blocks or cavities in brick and tile constructed walls.

It fills the need for an insulation that will greatly increase over-all thermal efficiency of masonry walls. Heat transfer is reduced up to 50% — *and more* — with Zonolite Masonry Fill in the walls (See "U" value tables at right).



12" BRICK & BLOCK CAVITY WALL



LIGHTWEIGHT BRICK

ZAI 0014[illegible]7

FEATURES:

CUTS HEATING COSTS—Doubles insulation value of masonry walls.

SAVES ON AIR CONDITIONING — Lowers cooling costs, often saves on initial equipment.

ADDS COMFORT — Provides better temperature control in summer and winter.

EASILY INSTALLED — Flows freely into cores or cavities.

WATER-REPELLENT — Will not permit moisture to be transmitted across cavity or through cores.

NON-SETTLING—Supports its weight with no problem of settlement.

*U.S. Patent No. 2,824,022 CANADIAN No. 569,677

4512423

for electric heat and air-conditioning

24 POINTS of SUPERIORITY

THERMAL CONDUCTIVITY — An efficient heat barrier, proved in over 35 years of field usage.

ITS FUEL COSTS — Savings up to 40% in annual heating costs have been reported.

WERS COOLING COSTS — Saves in operating costs of air conditioning. Often permits use of smaller cooling units.

UNIFORM, TAMPER-PROOF DENSITY — Same density on the job as when it leaves factory. Every square foot of surface properly insulated.

MPLETE FILL — Fits solidly against joists, flows freely around wiring, braces, or other obstructions, eliminating heat leaks.

N-IRRITATING — Install it without fear of skin irritation common with other insulations.

AL COVERAGE — Cannot be "stretched" or fluffed.

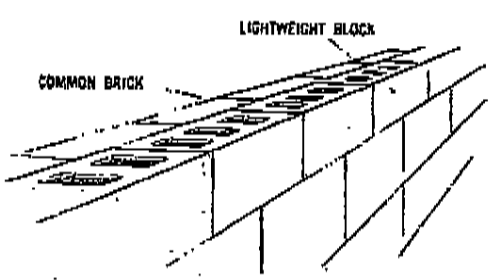
MOTES COMFORT — Provides better temperature control.

AL FOR "RE-INSULATION" — Can be poured easily over existing insulation to increase thickness or fill uninsulated areas — a necessity when converting from conventional heat to electric heat.

10. **NO WASTE** — Nothing to cut, trim, or throw away.
11. **EASILY INSTALLED** — Just pour from the bag and level.
12. **LIGHTWEIGHT** — Approximately 5 lbs. per cubic foot.
13. **FIREPROOF** — Processed at 2,000°F. Cannot burn.
14. **ROTPROOF** — All mineral.
15. **VERMINPROOF** — Affords no food value for vermin, rodents, termites.
16. **PERMANENT** — Will outlast any building. Never needs replacing or replenishing.
17. **NON-HYGROSCOPIC** — Less than 1% moisture content. Not any attraction for airborne moisture.
18. **UNIFORM QUALITY CONTROL** — Rigid standards mean Zonolite is the same wherever and whenever purchased.
19. **READY AVAILABILITY** — Processed in over 40 plants in the U.S. and Canada for prompt service to any locale.
20. **DIELECTRIC** — Will not conduct electricity. Protects against fire caused by short circuits in attic wiring.
21. **ODORLESS** — Will not absorb or give off odors.
22. **STERILE, INERT** — A clean material to put in the home. Contains no harmful chemicals.
23. **CUTS DECORATING COSTS** — Prevents streaking of ceilings caused by uneven temperatures.
24. **PROVEN SATISFACTORY IN MORE THAN ½ MILLION INSTALLATIONS IN LAST 5 YEARS.**

USE OF INSULATION BETWEEN SLEEPERS

Either Zonolite Insulating Fill or water-repellent Masonry Fill may be employed as fill between wood sleepers over concrete floors. Consult your Zonolite office for proper material and correct placement of vapor barrier. Ideal for gymnasiums, auditoriums, cafeterias, bowling alleys. Affords sound-deadening and insulation benefits.



BRICK AND BLOCK WALL

LOW COST IN PLACE—Low in material and application cost — as little as ⅓ as much as other products.

PERMANENT — Retains its efficiency — indefinitely.

COEFFICIENTS OF HEAT TRANSMISSION

CONCRETE BLOCK WALLS

U VALUES—BLACK

Wall Thickness, inches	Type of Block	Uninsulated		Insulated		
		Block Only	1" Furring and Plaster	Block Only	Furring and Plaster* 1" Furring Uninsulated	Furring and Plaster* 1" Furring Insulated	Furring and Plaster* 2" Furring Insulated
6	Lightweight	.40	.24	.26	.18	.15	11
8	Lightweight	.32	.23	.17	.13	.11	09
8	Sand and Gravel	.62	.29	.36	.23	.18	13
12	Lightweight	.30	.20	.15	.12	.11	.09
12	Sand and Gravel	.47	.27	.33	.22	.17	.12

*½ in. gypsum lath and ½ in. of vermiculite-gypsum plaster

CAVITY WALLS — 2½" Cavity

U VALUES—BLACK

	4" Exterior Wythe		Face Brick	Common Brick	Concrete Block*
Interior Wythe	4" Concrete Block (Sand & Gravel)	Uninsulated	.32	.30	.31
		Insulated	.15	.14	.13
	4" Concrete Block (Cinder) or 4" Clay Tile	Uninsulated	.36	.27	.28
		Insulated	.13	.12	.12
	4" Concrete Block (Lightweight)	Uninsulated	.22	.24	.21
		Insulated	.12	.12	.11
	6" Concrete Block (Lightweight)	Uninsulated	.26	.23	.20
		Cavity Insulated	.12	.11	.10
		Block & Cavity Insulated	.10	.10	.09
	8" Concrete Block (Lightweight)	Uninsulated	.22	.21	.18
		Cavity Insulated	.11	.11	.10
		Block & Cavity Insulated	.08	.08	.08
	4" Face Brick	Uninsulated	.27	NA	NA
		Insulated	.14		
	4" Common Brick	Uninsulated	.33	.29	NA
		Insulated	.15	.14	

*Aggregate same as interior wythe.
NA — indicates figures not applicable

SOLID BRICK AND BLOCK WALLS

U VALUES—BLACK

	Exterior Wythe		4" Face Brick	4" Common Brick
Interior Wythe	6" Concrete Block (Lightweight)	Uninsulated	.34	.33
		Insulated	.15	.14
	8" Concrete Block (Lightweight)	Uninsulated	.29	.28
		Insulated	.14	.13
	8" Concrete Block (Sand & Gravel)	Uninsulated	.48	.37
		Insulated	.31	.28

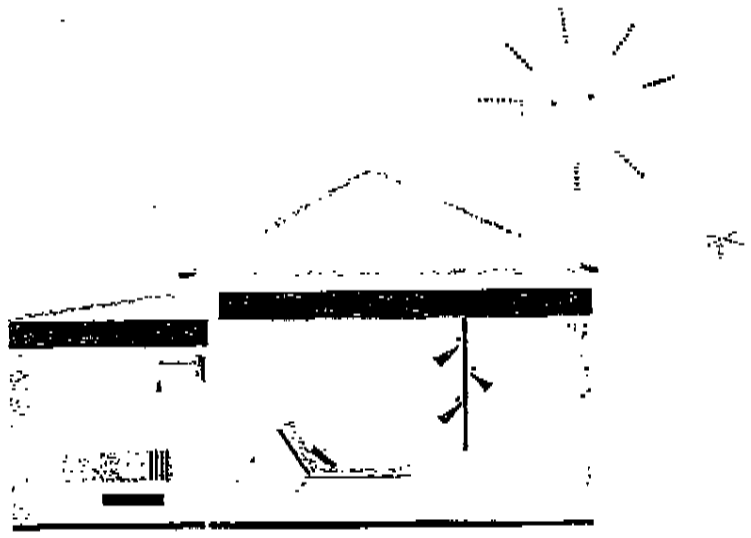
ZAI 001428

ROOM ADDITIONS

Where rooms are being added to existing homes, or porch and breezeway areas are being converted to year 'round living quarters, Zonolite Insulations provide comfort and heating economy.

Zonolite Insulating Fill is recommended over ceilings in these remodeling projects. Either Zonolite Insulating Fill or Zonolite Masonry Fill should be used between wood floor sleepers, where porch floors are being brought up to the level of other rooms. Your Zonolite representative will advise the proper product to use.

He can also recommend proper insulation techniques for frame sidewalls. Zonolite Masonry Fill is the best insulation to use in masonry sidewalls.



04512424

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Los Angeles, California

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San Francisco, California

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Wichita, Kansas

ROBINSON INSULATION CO.
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P.O. Box 1419
Great Falls, Montana

P.O. Box 1782
Minot, North Dakota

SOUTHWEST VERMICULITE CO.
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Albuquerque, New Mexico

Route 3, Box 191 B
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2625 Powell Avenue
Nashville, Tennessee

TEXAS VERMICULITE CO.
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P.O. Box 6306
Dallas 22, Texas

P.O. Box 9114
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2303 N. Harding Avenue
Portland 12, Oregon

1318 N. Maple Street
Spokane 10, Washington

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Houston 8, Texas

WESTERN MINERAL PRODUCTS CO.
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Denver 23, Colorado

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P.O. Box 347
Beltsville, Md.

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Toronto 18, Ont., Canada

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ZAI 001429

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H1-108 Printed in U.S.A. Revised 1964

Keep the HOT out

Your house can be 15 degrees cooler this summer by using Zonolite® insulation in your attic before the HOT arrives. Insulate during the leisure hours of your weekend. It's a family type fun project that will pay off in comfort and savings.

and the COOL IN

Zonolite is easy to install — just pour it right from the bag between attic joists, on top of old insulation or where there's no insulation at all. Six inches of Zonolite will ensure you years and years of snug, comfortable living — summer and winter.

Besides keeping summer heat out and winter heat in, ZONOLITE does not burn or attract vermin. Economical, too . . . because savings in fuel and power costs can pay for the insulation in a few years. Get to your attic before the heat in your attic gets to you.

ZAI 002466

UNITED STATES GYPSUM

Keep the HOT out

COOL IN

with ZONOLITE®

ATTIC INSULATION

APPROXIMATE COVERAGE PER 3 CU. FT. BAG						
Thickness	2"	3"	†3⅝"	4"	5"	TT5⅝"
Sq. Ft.	20	13	11½	10	8	6½

† Nominal 4" †† Nominal 6"

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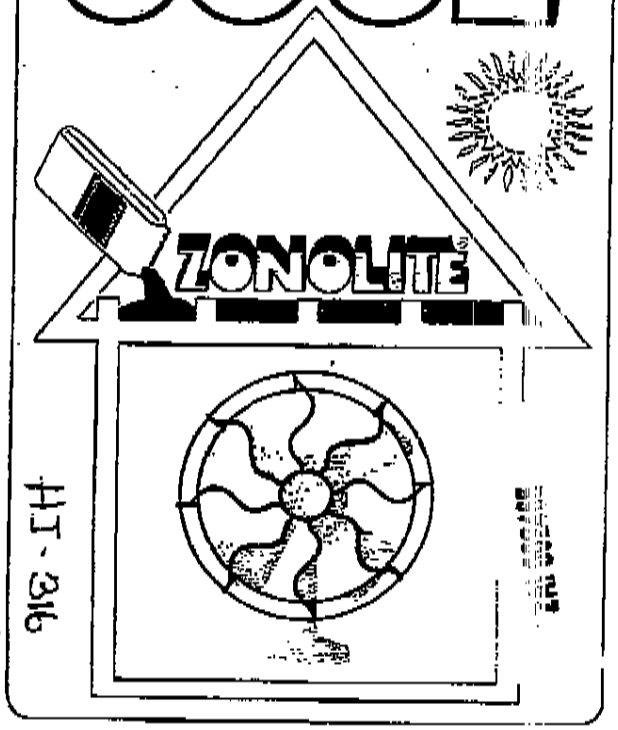
Keep the HOT out



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