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CURRENT GOVERNMENT ACTIVITIES AFFECTING THE RESILIENT FLOOR COVERING INDUSTRY

For Presentation
at the
Committee Meetings
Resilient Floor Covering Institute
Monterey, California
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RFCI Report
August 1980

ASBESTOS

Asbestos Substitutes Conference

The Environmental Protection Agency and the Consumer Product Safety Commission, under the auspices of the Interagency Regulatory Liaison Group (IRLG), sponsored a three-day conference/workshop July 14-16 on the technical and health aspects of asbestos substitutes. The purpose of the workshop was to provide the health and safety agencies with some of the information needed for making regulatory decisions about limiting the use of asbestos. The agencies are anxious to gather information relating to the availability and costs of substitutes, and plan to consider these data in regulating asbestos.

Both EPA and CPSC view the conference as a success. Although costly and time-consuming to arrange, the meeting provided the two agencies with much useful information and the opportunity to meet with representatives of many industries on an informal basis, according to staff members. Those attending the conference are also likely to have benefited from some portions of the exchange, as there seemed to be something for everyone.

Users of asbestos and asbestos-containing products were briefed by industry representatives on the advantages and availability of newly developed asbestos substitutes and replacement products. Manufacturers were provided room to display and hand out promotional materials about these products. Also, the scientists did not hesitate to challenge the primarily preliminary findings presented by their peers on the health effects of asbestos substitutes. With alacrity, they debated the appropriateness of the scientific method and nomenclature used in the studies.

The agency staff members may have gotten more out of the conference than was anticipated by industry representatives. One staff member told GRC that it's now clear that substitutes exist for every use of asbestos. This staff member made no distinction between the performance and cost of the substitutes and asbestos, despite the fact that this point was emphasized by those still dependent on asbestos for their products. Industry representatives said that more time is needed to develop adequate substitutes at a reasonable cost. If alternatives were economically and technologically available, industry would have already eliminated the use of asbestos in most products, according to one speaker.

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At this point, the government appears likely to force the switch to alternatives by limiting asbestos use through regulation. Both EPA and CPSC announced in October 1979 advance notices of proposed rulemaking that they will consider the costs, performance and health effects of asbestos substitutes before regulating. Despite the announcement, it has become clear that these considerations are likely to have little impact on regulatory action. One reason is that neither agency is bound by economic factors in selecting regulatory options, so long as it shows that the rule is reasonably necessary to prevent unreasonable risk to health. Secondly, The potential health hazards of the substitutes are unknown because most of the information available is inconclusive. Finally, staff members still claim that little economic data has been made available to them. The conference was not successful in eliciting this type of information because "industry clams up when it comes to giving us economic data", a staff member contended. "Without it, we will have to make 'guesstimates'", he added. Most likely, the 'guesstimates' will support the agency's objective.

In all, the conference appears to have been of use, albeit limited, to EPA and CPSC. The agencies did get the information they were seeking on the development and availability of asbestos substitutes. It is likely they will use this information in setting new regulatory priorities after the rulemaking proceedings on asbestos are completed.

On the negative side, the agencies were not able to fill the gaps in their knowledge on the economic and health effects of substitutes. Although this lack of data will not stop EPA and CPSC from eventually limiting asbestos use, it will definitely prolong the regulatory process, providing industry with time to eliminate asbestos use voluntarily in some cases.

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OSHA

The recent U.S. Supreme Court decision overturning the Occupational Safety and Health Administration's revised standard on benzene, a carcinogen, will have a considerable impact on OSHA's efforts to tighten the asbestos standard. Lowering the existing two fiber limit on workplace exposure to asbestos could create the same situation that precipitated the benzene case. The Court threw out the revised benzene standard because OSHA failed to demonstrate that the lower limit was reasonably necessary to protect worker health.

In the benzene rulemaking, OSHA relied upon its theory that no safe level of exposure to carcinogens exists. The agency lowered the standard from ten parts per million of air to one part per million. OSHA based its action on the assumption that a reduction in exposure might reduce the risk of leukemia associated with benzene exposure, according to the Court.

The Court held that OSHA must show, on the basis of substantial evidence, that a significant risk to health exists at the higher level of exposure. In the case of asbestos, this ruling imposes on OSHA the burden of demonstrating a significant risk to health at the two fiber limit and that a lower level is reasonable and necessary to eliminate or lessen the risk. However, OSHA is not bound by the decision to support with scientific certainty a finding of significant risk. A demonstration that significant risk to health is more likely than not to occur at the higher level of exposure is sufficient, according to the Court.

Also, OSHA is not required to demonstrate that the costs of the standard bear a reasonable relationship to the expected benefits, because the Court deferred a ruling on the controversial cost/benefit question. That issue will be addressed in the case of Republic Steel v. OSHA next session, which begins in October.

What the benzene ruling means is that OSHA can no longer rely on its theory that exposure to carcinogens at any level is unsafe. This approach in OSHA's carcinogen policy, the basis for revising the current asbestos standard, must be changed to reflect the Court's directive on a finding of significant risk. Thus, OSHA cannot automatically lower the permissible exposure limit on asbestos to the lowest feasible level simply because asbestos is a carcinogen. Instead, the agency must provide substantial evidence demonstrating the need for the new level.

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The Court's instructions on what evidence is required for a finding of significant risk were unclear, but OSHA's attorneys have made a preliminary determination that a good study is all that is needed. The study they envision would assess the risks of asbestos exposure in a workplace setting where exposure levels are known. (This was not the case with the benzene standard, according to OSHA.) From the known exposure levels, OSHA could extrapolate the risk to other exposure levels under the ruling, the attorney said.

An example of what OSHA perceives to be an acceptable standard under the Supreme Court ruling is the part of the OSHA cotton dust standard applicable to textile manufacturing and non-textile industries. The sections applicable to cotton classing and warehousing industries were suspended by OSHA July 29 because, upon examination, the basis for these sections may not be adequate in light of the benzene ruling, OSHA decided.

In an attempt to respond to the court case in developing the asbestos standard, OSHA staff members are in the early stages of a quantitative risk assessment, and a regulatory analysis has been contracted out to the Research Triangle Institute. The fourth draft of the regulatory analysis will be reviewed by OSHA next month, and a final analysis may be completed by October.

It is unlikely that OSHA will issue its proposal on asbestos by this fall, as announced last April. OSHA will take time to carefully review the decision on benzene to get a clear understanding of its obligations in any new rulemaking. This is not likely to be an easy task, because OSHA's interpretation must be accurate enough to withstand inevitable legal challenges to the asbestos standard and to other future rulemakings.

In view of the current anti-regulatory mood of Congress and the impact of the Supreme Court's decision, OSHA must tread a thin line to satisfy its many critics and still achieve its objective of limiting exposure to carcinogens to the lowest feasible level.

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CPSC

The Consumer Product Safety Commission finally approved the general order on asbestos on May 29, 1980, but it has not yet been issued. The issuance of the order, in the works since August 1979, has been stalled by numerous problems, and they may not be over yet. For one thing, the General Accounting Office still must approve the order before it can be issued.

The general order would require 1200 manufacturers, importers, and private labelers of certain consumer products containing asbestos (primarily home appliances) to provide the commission with information on the uses of asbestos, and the firm's marketing and distribution patterns. The order would not apply to the resilient flooring industry, but the information requested is an example of the kind of data the CPSC might require in the future should asbestos in flooring become a regulatory target. The CPSC does not consider this use as a high priority at this time.

The asbestos general order, which survived a turf battle with the Environmental Protection Agency and a CPSC debate over the economic information to be required, was originally sent to GAO on June 10 for the statutorily required review. The GAO returned the order due to certain CPSC omissions, such as an estimate of the time required for compliance with the order and information on CPSC consultations with EPA and industry. The commission has now provided the required information and has resubmitted the order to GAO.

The GAO published a notice in the July 31 Federal Register requesting comments on the reporting and recordkeeping aspects of the general order. Specifically, the comments should address any duplication or excessive burden imposed by ~~the~~ order. The comment period ends August 18, 1980. The GAO will then have ~~until~~ September 8, 1980 to approve or disapprove the order.

Whether disapproval would have any impact on the agency's ability to issue the order is a matter of debate. The GAO and CPSC appear to be diametrically opposed on the issue of the commission's authority to issue the order in the face of a GAO disapproval. However, GAO disapproval is highly unlikely; only three such denials have ever been issued. In most cases, the GAO and agency in question have been able to resolve the problems that arise.

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Until the order is issued, probably in mid-September, CPSC staff members will continue their preliminary efforts to develop a proposed regulation on asbestos. A proposal is not likely to be issued before 1981, and a final regulation is not likely to be promulgated until late 1981.

Staff members will await the information to be submitted in response to the general order before completing the asbestos proposal. The products targeted for regulatory action and the approach (generic or product-by-product) used will depend upon the information gathered and the analyses prepared by the staff. Priorities for regulation will be determined on the basis of the number of consumers exposed and the potential for asbestos fiber release. The type of action to be taken will depend on the economic impact of regulating and the nature of the risk.

The commission's ability to regulate asbestos and other substances is affected by the U.S. Supreme Court's decision on OSHA's benzene standard. The CPSC already is required by its mandate to demonstrate the unreasonable risk posed by a product before regulating. But CPSC General Counsel Andrew Krulwich told GRC that more evidence will be needed, under the Supreme Court ruling.

The amount of evidence needed to justify regulating exposure to carcinogens was not made clear by the Court, Krulwich said. However, he indicated that there was nothing in the decision to prevent the CPSC from controlling exposures to low levels of a substance if the risk could be established.

The impact on the flooring industry of eventual CPSC action on asbestos is unclear, because the commission has not yet decided which products to regulate and how. It is possible that the CPSC may not regulate asbestos in flooring, because potential exposure risks occur only during removal. But this of asbestos nevertheless has aroused the suspicion of CPSC staffers because of the high volume of asbestos used in flooring products, according to one CPSC staff member. It is conceivable that the industry could accomplish a switch to asbestos substitutes before the CPSC can promulgate final regulations affecting this particular use of asbestos.

*JFR.
Note Armstrong
may be out of asbestos
by late 1981.*

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EPA

The Environmental Protection Agency's next step in the regulation of asbestos will be to propose a rule under Section 8(a) of the Toxic Substances Control Act (TSCA). The proposal, due to be published in October 1980, would require miners, millers, processors, and importers of asbestos fiber and asbestos products to submit detailed information on asbestos fiber and asbestos products to submit detailed information on asbestos use.

The proposal, about to undergo EPA's lengthy review process, is designed to obtain information on the amount of asbestos used, how it is used, workplace exposures to the substance, and disposal practices for asbestos waste. Specific questions in the form to be filled out by respondents will address:

A. Asbestos Consumption

1. The total amount of bulk asbestos fiber used.
2. The production quantity of items made from bulk asbestos fiber and asbestos products.

B. Workplace Exposure

1. The number of employees exposed to asbestos, divided into categories for each plant.
2. A summary of workplace exposure by time-weighted average for each plant.

C. Disposal

1. The form and quantity of asbestos waste.
2. An inventory of pollution control equipment and its operating efficiency.
3. The amount of asbestos emitted into the atmosphere.

The information to be gathered under the Section 8(a) rule, will not be used to develop a proposal for regulating asbestos under Section 6 of TSCA. Chances are that the 8(a) rule won't even be made finally before the Section 6 rule is proposed in late December or early January.

EPA's purpose in promulgating the 8(a) rule specifically addressing asbestos use is for confirmation of the information it already has, according to EPA.

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The industry reports will be used to further support and clarify EPA's anticipated action under Section 6, unless the information is significantly different from the agency's data already in hand. In the latter case, the final Section 6 regulation would be modified on the basis of the new data, according to an EPA staff member.

The current shape of a Section 6 regulation on asbestos appears to be a ban on all non-essential uses of the fiber. Such a ban would probably provide for a long lead time to permit a phasing in of alternatives by industry. Essential uses of asbestos would likely be determined by an exemption process, in which industries would apply for an exemption to the ban. It appears that EPA plans to use the reports submitted under the Section 8(a) rule to help it in assessing these exemption applications.

This approach appears to address many of EPA's concerns. It would reduce the economic impact of regulation by providing time for industry to switch to substitutes. At the same time, asbestos could still be used in cases where it is essential, or where there are no practical alternatives. Further, the processing of exemption applications, which EPA has viewed as resource intensive, would be aided by the information submitted under Section 8(a).

The shape of the proposal may change as EPA continues its development. But whatever the outcome, the proposal is likely to emphasize the role of the marketplace in controlling asbestos use. The theory is to set quotas or limits and then let the marketplace influence the designation of asbestos uses that are essential. The specific market-based system selected will likely depend upon the ease of its implementation by EPA.

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**RESILIENT
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COVERING
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November 17, 1980

TO: Associate Members
SUBJECT: Government Affairs Report

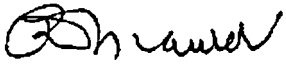
Please find enclosed a report on government activities prepared by the Government Research Corporation. We feel certain that most of the items discussed are of interest to all of you. As these reports are developed by GRC, we plan to forward them to you on a continuing basis.

In this particular report, we invite attention to the "outlook" given at the end of each subject discussed, such as on page 4 which gives some insight that EPA does not intend to "trace the companies responsible for selling or installing the asbestos materials" in its school ceiling asbestos detection program.

Dale Lawson, GRC Labor Policy Analyst, takes a comprehensive look at asbestos compensation legislation and what lies ahead. Renee Tacket-Hull calls attention to the phthalate esters investigation at CPSC which has picked resilient flooring as its first target (see page 11).

Hazardous wastes and the superfund are addressed by Virginia Burdick who most of you have met at the Associate Member Meetings.

RFCI's Board of Directors wish to take this opportunity to say "thank you" for your continuing support throughout the year, and that 1981 will be a most productive one for you!


Robert D. Maurer
Managing Director

RDM:tm
enclosure

cc: Board of Directors

Successor To
Resilient Tile Institute

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CURRENT GOVERNMENT ACTIVITIES AFFECTING THE RESILIENT FLOOR COVERING INDUSTRY

For Presentation
at the
Resilient Floor Covering Institute
Quarterly Meeting
Absecon, New Jersey
October 30, 1980

By

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GENERIC RULEMAKING ON ASBESTOS

Renee Tackett-Hull

The Environmental Protection Agency is running behind schedule with its strategy for generic asbestos regulation under the Toxic Substances Control Act. EPA's next step in the regulation of asbestos, delayed primarily because of EPA's adjustment to a new chain of reviews, is to propose a rule under Section 8(a) of TSCA. The proposed rulemaking, which was to be published this month, will not be promulgated until the end of November or the beginning of December.

Section 8(a) of TSCA states that EPA can require recordkeeping and reporting of information about any aspect of manufacturing and processing of a substance. The rule on asbestos would require miners, millers, processors and importers of asbestos fiber and asbestos products to submit to EPA detailed information on asbestos use. The purpose of the proposal is to obtain information on workplace exposures to asbestos, disposal methods for asbestos waste and how much asbestos is used and how.

The information gathered under the Section 8(a) rule will be used to confirm and update data EPA already has about asbestos use. The data will not be used to develop a proposal for regulating asbestos under Section 6 of TSCA. Section 6 enables EPA to restrict chemical processing, limit quantities that can be used, require appropriate labels and mandate recordkeeping. Chances are that the Section 6 rule will be proposed in late spring or early summer, before the 8(a) rule has even been made final.

There has not been a final decision on the shape of a Section 6 regulation on asbestos, but EPA is considering three possible approaches. First, and most likely to be approved, is a ban on all non-essential uses of the fiber. Second is a ceiling on fiber use and last, a labelling requirement in conjunction with one of the other two options.

Any of these options probably would include a long lead time to allow phasing in of alternatives by industry. Should the first option be enacted, as is likely, essential uses of asbestos would be determined by an exemption process, allowing industries to apply for an exemption to the ban. EPA plans to use the information submitted under the 8(a) rule to help in assessing these exemption applications. Exemptions from the 8(a) rule will fall in areas in which EPA already has an adequate data base or under the small business definition.

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The non-essential ban is seen as the best bet for both EPA and industry for several reasons. It would reduce the economic impact of the regulation by providing time for industry to switch to substitutes, and asbestos still could be used in cases where it is essential or where there are no practical alternatives. Also, the processing of exemption applications would be accelerated by data submitted under 8(a).

Outlook

The thoroughness EPA is displaying has put its rulemaking on asbestos behind schedule. However, EPA is placing the emphasis on the initial steps in this rulemaking, attempting to achieve with the other agencies regulations that are comprehensive yet nonduplicative. So, although the rulemaking is off to a slow start, EPA hopes its thoroughness will pay off and both rules will speed through the remaining steps once they are proposed.

The thrust of the final rulemaking will give industry an active role in determining asbestos use, both by contributing to and updating information EPA already has about asbestos and by participating in the exemption process.

*Also of interest: Before the end of the year, EPA hopes to have available a conference report on the Asbestos Substitutes Conference held in July by EPA and the Consumer Product Safety Commission.

ASBESTOS IN SCHOOL CEILINGS

Renee Tackett-Hull

The Environmental Protection Agency and the Department of Education September 17 proposed a school asbestos inspection, notification and record-keeping program. EPA initiated the rulemaking under Section 6 of the Toxic Substances Control Act after determining that its Technical Assistance Program (TAP), a voluntary inspection program for asbestos in school ceilings, had not been wholly effective. Asbestos, a major component of resilient floor covering, has been the subject of widespread controversy because of its use as a flame retardant and insulator in the ceilings of the nation's schools.

Because possibly 40 percent of the nation's schools have not yet taken steps to identify friable asbestos-containing materials under TAP, officials have determined that regulatory action is necessary. EPA's proposed rules are to be used in conjunction with regulations proposed by the Department of Education which outline procedures for state and local school authorities to follow in qualifying for financial assistance and in carrying out the inspection and notification program.

EPA has divided its asbestos school regulatory program into two parts to expedite the elimination of asbestos in the classroom. The identification and notification program proposed last month is part one. EPA intends to proceed with rulemaking on part two, an assessment and abatement program, before part one is completed so school authorities can take corrective actions where necessary without delay. EPA had expected promulgation of part two before the end of this year; however, because of some tough questions that have yet to be resolved, this probably will be delayed several months into 1981.

Promulgation of an abatement rule is awaiting completion of EPA's investigation into several technical issues relating to corrective actions for friable asbestos-containing materials. By the time the schools have completed the identification stage of their asbestos programs -- which could take up to nine months because of the limited availability of analytic laboratories and because of the time constraints under which schools operate -- EPA will have completed its technical investigations and be ready to roll with part two of the program.

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EPA's cost estimate for the identification and notification program is \$5.2 million, to be paid by the school districts until the Department of Education can set up and get funds for its 50 percent subsidy grant and loan program, authorized by Congress last May under the Asbestos School Hazard Detection and Control Act of 1980.

Outlook

Efforts will not be made to trace the companies responsible for selling or installing the asbestos materials, although an earlier advance notice had suggested this action. EPA explained that determining which companies installed, sold or purchased the asbestos materials installed in more than 10,000 schools between 1954 and 1973 would present insurmountable difficulties.

EPA does not anticipate any rulemaking within the coming year to extend its investigative and corrective measures to cover asbestos used in ceilings of buildings other than schools. Although the extent of asbestos used in other public buildings already is being studied, further action, if any, will not be taken until the conclusion of the school asbestos program.

ASBESTOS STANDARD

Dale Lawson

The Supreme Court decision on the benzene standard could affect both the nature and the timing of the asbestos standard. The Supreme Court in the benzene ruling argued that before OSHA can act to change a standard it must be able to demonstrate that significant risk exists in the old standard and benefits will result from the new standard. The OSHA carcinogen policy theory that there is no safe exposure to a carcinogen, which is the basis for the asbestos standard, will probably have to be reconsidered in view of the courts findings.

OSHA sources indicate that they plan to issue an advance notice of proposed rulemaking in November. The comments generated by the notice and existing data will then be used to develop a proposed standard. OSHA sources suggest that in view of the court ruling, it may not be possible to set the exposure standard at the lowest level feasible (.5 fiber per cc). Although the lack of dose-response data at the existing two fiber level is viewed as a problem, OSHA believes enough data from high exposure levels and other sources will enable the agency to lower the existing standard.

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ASBESTOS COMPENSATION LEGISLATION

Dale Lawson

The latest effort to promote asbestos disease compensation legislation resulted in a bill, S 2847, sponsored by Gary Hart, D-Colo., which was politely although not too seriously, received by the Senate Labor and Human Resources Committee during August hearings on coverage of three single occupational diseases (O/D). Committee Chairman Harrison Williams, D-N.J., an opponent of the single disease approach to O/D compensation, reportedly held the hearings out of courtesy to the bill's sponsors rather than out of genuine interest in pursuing disease-specific compensation.

The bill was largely the product of Hart's staff and of representatives of Johns-Manville, one of the largest asbestos manufacturers. Also working on the measure was the leadership of the Asbestos Workers, one of the smallest unions representing asbestos-exposed workers. Although little criticism was heard from other unions and employers who disagreed with the bill, their silence was largely due to confidence that the bill would not move significantly forward at this time.

The bill would ease somewhat the eligibility standards for claimants, establish minimum, indexed benefit levels, provide for apportionment of liability and prohibit third party suits. It could have a serious financial impact on RFCI members by making the last employer of an asbestos exposed worker, regardless of the length and degree of exposure, responsible for the base compensation award, with no right of subrogation. Other provisions which increase benefit levels and facilitate eligibility would have the overall impact of adding costs to the system.

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Outlook

An Asbestos Bill. Although those involved with drafting the Hart bill are working on technical and minor amendments in hopes of making it more palatable, it is not likely to move much farther in the legislative process. The Senate Labor and Human Resources Committee does not plan further activity on the subject this Congress, and there is still no sponsor for a House version. As for the next Congress, there is some doubt that Hart would press his bill if he wins reelection. Most of organized labor has serious problems with the Hart bill but has refrained from criticizing Hart, a strong labor ally, prior to his closely contested election. Occupational disease legislation is essentially labor legislation and will not succeed without labor support.

Some business supporters of S 2847 are already searching both Houses for alternate sponsors of the asbestos disease approach. The search will likely be difficult, however, because the sponsorship role could be politically hazardous. Heavy criticism was addressed to Millicent Fenwick, R-N.J., who in 1979 sponsored another bill which protected asbestos manufacturers from liability. The Hart bill has privately come under even harsher criticism from unions. Employer groups will have a hard time finding sponsors since most of the business community and their Congressional allies oppose federal involvement in workers compensation regardless of the disease.

Another possible source of asbestos compensation legislation is Rep. George Miller, D-Calif., an outspoken critic of the asbestos industry. Miller has indicated an interest in introducing asbestos compensation legislation but has not discussed its content except to say that his bill will allow third party suits against manufacturers. Given Miller's pro labor voting record and on-going feud with Johns-Manville, his bill can be expected to facilitate claimant success at the expense of the major manufacturers.

Still another source of asbestos compensation legislation could come from the efforts of a coalition of unions, academics, and attorneys closely associated with the victims of asbestos-related diseases. Legislation likely to be developed by this group would focus on developing federal standards which would open up the compensation system to asbestos disease claimants and eliminate, to the extent possible, the adversary system. Sources indicate that this group is leaning away from third party suits in exchange for the reforms just mentioned. Congressional sponsors have not yet been sought because this effort is still in the formative stages, but finding sponsors will not be difficult once the effort gets

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underway.

Comprehensive Legislation. Single disease bills are expected to be introduced next year but are unlikely to succeed in the near future because key congressional and labor supporters remain opposed to the piecemeal approach. It is possible, though unlikely, however, that another year of failure to make progress towards comprehensive legislation could force certain unions and members of Congress to reexamine the practicality of the comprehensive efforts.

The most likely direction of congressional action in the next Congress is toward federal involvement in the compensation of all occupational diseases. Legislation proposed in both bodies over the last eight years have included federal standards for compensating both occupational disease and traumatic injuries. Efforts may be limited to O/D in 1981. Eliminating traumatic injury would reduce the costs of federal standards, possibly soothe state worker's compensation (W/C) administrators, and target the most serious failure of the state W/C system, e.g. occupational disease. This possibility will depend on both Chairman Williams and House Education and Labor Subcommittee on Labor Standards chairman Ed Beard, D-R.I., returning to their respective positions.

On the House side, Beard's staff is preparing draft legislation which would federalize the O/D compensation system rather than establish federal standards for state systems. Beard believes that states are both unable and unwilling to adequately handle the O/D problem. The bill is still in the formative stages but is known to (1) establish a federal O/D administration, (2) create a central fund, partially financed by employers, from which claims would be paid, (3) establish a list of compensable diseases, and (4) allow the use of rebuttable presumptions. This proposal has only lukewarm union support at present but support is growing. Unions favor the ultimate federalization of the system but believe it is politically impractical given the fact that the less ambitious and controversial federal standards bills have not made it out of subcommittee in eight years. Federalization will be strenuously opposed by employer and insurance groups on states rights and other grounds. Beard may introduce a federal standards bill as a fall back position. Should Beard lose the election or his chairmanship, House efforts will probably be directed towards comprehensive federal standards.

Sen. Williams is considering introducing a federal standards bill for O/D only, which would leave program administration to the states. Other provisions

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would most likely follow the pattern of his earlier bills and liberalize eligibility requirements, raise benefit levels and streamline administration. Some of organized labor is trying to persuade the Senator to keep traumatic injury in his bill while others favor the focus on O/D. Should Sen. Williams lose his election or chairmanship, efforts will most likely shift back to comprehensive federal standards legislation.

Legislative activity is likely to begin as early as the first session of the next Congress, but it is not likely to be completed until the economy recovers. The extremely high and unpredictable costs of any of the described proposals would add to inflation at a critical time. The Carter White House, at OMB's urging, is not encouraging any kind of federal legislation and has, in fact, restricted high level Labor Department participation in developing proposals. A Reagan administration or Republican leadership of Congressional Committees would hamper efforts to establish a federal role in the W/C -O/D system.

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CPSC

Renee Tackett-Hull

Asbestos

The Consumer Product Safety Commission still has not issued its general order on asbestos, although the Commission approved the order last May. In the works for well over a year now, the order has been stalled by numerous problems. The latest hang-up has been with the General Accounting Office's statutorily required review.

As required, GAO published a notice in the Federal Register in July seeking comments on CPSC's order. When the comment period was over, CPSC had 45 days to respond to comments. Apparently the task was too great to complete in the given time, so CPSC and GAO stopped the clock on the project. CPSC's review of the comments was given to GAO only this month.

CPSC expects GAO to accept the review this time around, although a few minor changes may have to be made. Still, the general order on asbestos should be published in the Federal Register before the end of the year.

The general order would require 1200 manufacturers, importers and private labelers of certain consumer products containing asbestos (primarily home appliances) to provide the commission with information on the uses of asbestos in their products and the firms' marketing and distribution patterns. CPSC is not concerned with the use of asbestos in resilient floor covering at this time, but the information requested, were it to become a regulatory target, would be the same.

The information CPSC gathers under the general order will be used to develop regulations in the future, probably of specific products. There is no effort afoot at CPSC to take EPA's "broad brush" approach to asbestos; a product-by-product approach is much more likely than any generic rulemaking by CPSC. However, the policy will not officially be set until information is returned under the general order.

Despite the hold-ups with the general order, CPSC expects to be putting its words into action long before EPA does anything concrete with its rule-making on asbestos. Already CPSC staffers are preparing a package on asbestos paper in response to a petition filed last April. A proposed rulemaking on asbestos paper is expected to be published before the end of the year.

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Outlook

Priorities for regulation will be determined on the basis of the number of consumers exposed and the potential for asbestos fiber release. The type of action to be taken will depend on the economic impact of regulation and the nature of the risk.

Right now, CPSC appears to be more concerned with the politics of getting its general order through the bureaucracy than with determining which products to regulate. Even when CPSC does begin the process of investigating specific products, the inert property of resilient floor covering probably will give CPSC cause to pass over it and look into household appliances which directly expose consumers to asbestos fibers.

Phthalate esters

CPSC soon will be taking a close look at the use of plasticizers in the resilient floor covering industry. Phthalate esters, used to make many plastic products (including flooring) flexible, are on CPSC's priority list for 1981.

Although not much information is in yet, CPSC suspects that some of the 10 different kinds of esters may be carcinogenic. Of the two esters that already have been tested, one is not clearly carcinogenic and the other has been found to be carcinogenic in male and female rats and mice. Testing already has begun on the other eight esters.

Major consumer product uses of esters include vinyl flooring, food wraps, tubing for intravenous injections and insulation on electric wiring. Polyvinyl chloride is made pliable by means of the esters, which is probably the main reason that CPSC has chosen floor covering as its first target.

Although CPSC has not settled on additional studies following the tests for carcinogenicity, sometime within the next year CPSC hopes to determine whether the esters in consumer products can be released in large enough amounts to pose a risk to the public or whether the large, cumbersome particles can be released at all. On the bright side for RFCI, esters are designed not to be released in order to maintain a product's pliability.

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HAZARDOUS WASTE

Virginia M. Burdick

As one of its final acts before adjournment in October, Congress approved and sent to President Carter long-delayed legislation (S 1156) reauthorizing the Resource Conservation and Recovery Act (RCRA). The reauthorization measure contains several important amendments to the hazardous waste regulation program adopted earlier this year by the Environmental Protection Agency. Many of these amendments are aimed at making the hazardous waste regulations less burdensome for industry.

One amendment in particular is likely to affect some members of RFCI. This amendment pertains to regulation of on-site pits, ponds and lagoons that are used to treat or dispose of hazardous waste. Many of these lagoons were installed to comply with the Clean Water Act.

When EPA first proposed its hazardous waste regulations under RCRA, the agency would have required costly retrofitting of pits, ponds and lagoons to make them watertight. Industry argued that it was unfair to make the requirements more stringent for these facilities after issuing permits for them under the Clean Water Act. This dispute arose primarily because the Clean Water Act applies only to surface waters, while RCRA is aimed at protecting groundwater. Lagoons installed to comply with the Clean Water Act sometimes are not sufficiently watertight to prevent discharges into groundwater because they were only designed to prevent discharges into surface waters.

In response to industry's objections, both the Senate and House versions of the RCRA reauthorization legislation eased up on the retrofitting requirements for industrial pits, ponds and lagoons. The final version approved by House-Senate conferees represents a middle ground between the House and the Senate versions. The conference agreement requires the EPA administrator to distinguish between new and existing pits, ponds and lagoons when regulating these facilities under RCRA. What this means is that new pits, ponds and lagoons will have to be made watertight, but existing lagoons will not necessarily be subject to this requirement across the board.

Outlook

According to congressional sources, the conference report language will clarify that retrofitting of pits, ponds and lagoons should not be required unless there is evidence that leakage is causing damage to groundwater.

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The legislation and the accompanying report language, therefore, could substantially ease the impact of the RCRA regulations on RFCI companies that use pits, ponds and lagoons for waste disposal or treatment. The extent of the relief will, of course, depend on the way EPA interprets and enforces the amendment.

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SUPERFUND

Virginia M. Burdick

Congress has made substantial progress on superfund legislation in recent months, but many important issues remain to be resolved. Therefore, it is extremely unlikely that Congress will be able to complete action on a superfund bill during the lame duck session after the election. That means that the new Congress will start out fresh on this controversial issue.

Superfund legislation would have an important, if indirect, impact on RFCI members because of the new costs it would impose on the chemical industry. These increased costs would be passed down to manufacturers (such as the members of RFCI) and ultimately to consumers.

The superfund bills being considered by Congress would create industry-supported funds to pay for clean-up and victim compensation costs associated with oil spills, hazardous chemical spills and abandoned hazardous waste site discharges. In addition, the bills would impose new liability burdens on industry.

Here is a brief rundown of the current status of superfund legislation in the House and Senate.

- HR 85, which would establish a \$750 million fund to deal with oil spills and hazardous chemical spills, was approved by the House on September 19 by a vote of 288-11 and is now pending in the Senate.
- HR 7020, establishing a \$1.2 billion superfund to take care of abandoned hazardous waste sites, was passed by the House, 351-23, on September 23. It, too, is pending in the Senate.
- S 1480, the Senate's version of superfund legislation, is now pending before the Senate Finance Committee. Earlier it was approved by the Senate Environment and Public Works Committee. This bill would create a \$4.2 billion fund to deal with abandoned waste sites and hazardous chemical spills and is far more stringent than either of the House bills mentioned above.

Outlook

There is little likelihood that the Senate will be able to complete action on S 1480 during the lame duck session. The Senate Finance Committee has asserted jurisdiction over the funding provisions of the bill (as did the House Ways and Means Committee) and has agreed to finish its markup by November 21. Even if Finance meets this deadline, that would leave little

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time for Senate floor action and subsequent action by a House-Senate conference committee. So it looks as though superfund legislation will be off to a fresh start next year, in what could well be a substantially more conservative political climate. GRC is predicting that superfund legislation eventually will pass, but in 1982 at the earliest.

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Johns-Manville

Internal Correspondence

To: ALL SALES REPS.

Date: July 8, 1980

From: J. E. Connor - WHQ 2-1342c.

Copies: Ed Day - Jeffrey
W. J. Plichta - Research

Subject: RFCI
WORK PRACTICES

Attached is a copy of their announcement.

We have ordered additional copies and will mail one to you when we receive our supply.


J. E. Connor

Attach.

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RESILIENT FLOOR COVERING INSTITUTE

1030 15th Street NW • Suite 350
Washington DC 20005

202 833 2635

RFCI-15
For Immediate Release

RFCI ISSUES INSTALLERS WORK PROCEDURES MANUAL

Washington, D.C., July 1, 1980 - The Resilient Floor Covering Institute has just published its "Recommended Work Procedures for Resilient Floor Coverings." The manual covers asbestos-containing products produced by RFCI member companies and outlines important information for installers in handling the products on the job.

"The work procedures outline the safety precautions which should be taken when installing and removing resilient floor coverings." said RFCI President Jack Clegg, Vice President of Kentile Floors, Inc. "We emphasize proper removal of vinyl asbestos tile, asphalt tile and sheet vinyl products with asbestos backings," continued Clegg. "We do not recommend sanding of these products, nor dry-scraping of asbestos felt," he concluded.

Single copies of the "Recommended Work Procedures For Resilient Floor Coverings" are available free from the Resilient Floor Covering Institute, 1030 15th St. NW, Suite 350, Washington, D.C. 20005.

-30-

Successor To
Resilient Tile Institute

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Johns-Manville

Internal Correspondence

To: ALL SALES REPS.

Date: July 8, 1980

From: J. E. Connor - WHQ 2-1347c.

Copies: Ed Day - Jeffrey
W. J. Plichta - Research

Subject: RFCI
WORK PRACTICES

Attached is a copy of their announcement.

We have ordered additional copies and will mail one to you when we receive our supply.


J. E. Connor

Attach.

Bcc:
Note to R.J.H.

I sent the announcement
and a copy of the
manual to Jack
Wilkinson

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JUL 3

RESILIENT FLOOR COVERING INSTITUTE

1030 15th Street NW • Suite 350
Washington DC 20005

202 833 2635

RFCI-15
For Immediate Release

RFCI ISSUES INSTALLERS WORK PROCEDURES MANUAL

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Successor To
Resilient Tile Institute

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Johns-Manville Corporation

Ken-Caryl Ranch
Denver, Colorado 80217
(303) 979-1000

Executive Offices

May 27, 1980

Mr. Robert D. Maurer
Resilient Floor Covering Institute
1030 15th St., N.W.
Suite 350
Washington, D.C. 20005

Dear Bob:

Thought the attached might be of interest to your members. The only interpretation that I can make of EPA's statements on pages one and two is that they have omnipotently decreed that the use of vinyl asbestos floor tile does not present a hazard.

I would suggest that your members manufacturing asbestos-containing floor tile advertise that it is not a hazardous product as judged by EPA. Unfortunately manufacturers of floor tile using substitutes cannot make this statement.

Best regards.

Very truly yours,



James F. Reis
Director, Asbestos Policy

JFR:tw

Attachment

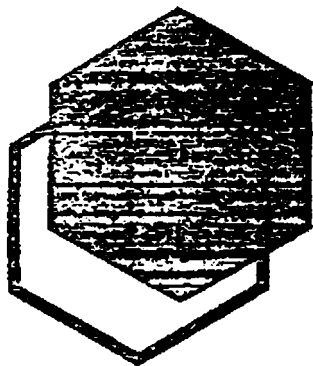
bcc: J. E. Connor
D. M. Kelleher

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Toxics Information Series



Asbestos

Asbestos was once considered a health risk only for asbestos workers. Now asbestos is known to be a potential hazard to the health of millions of people, on and off the job, who are routinely exposed to asbestos fibers in the air they breathe. Among those whose health may be endangered by asbestos are children, teachers and others in schools where asbestos was sprayed or troweled on ceilings, rafters, beams and other structural building parts for fire-proofing, insulation, sound-deadening or decoration. This Information Bulletin discusses the asbestos hazard and what the U.S. Environmental Protection Agency (EPA) is doing to help safeguard public health from the risks of asbestos.

Asbestos -- What Is It?

Asbestos is the common name for a group of natural minerals -- silicates -- that separate into thin but strong fibers. The fibers are chemically inert and heat resistant, and they cannot be destroyed or degraded easily. These characteristics have made asbestos very useful commercially. Asbestos is widely used for fire-proofing and insulating homes and all kinds of public and private buildings. Asbestos products include reinforced asbestos cement sheets and pipes, pipe insulation, roofing felt and shingles, floor tiles, patching and taping compounds, brake linings, clutch facings, insulating paper, and protective clothing. Some 800,000 tons of asbestos are mined or processed in the U.S. each year to make about 3,000 different products, two-thirds of which are used in the construction industry.

Why Is Asbestos A Problem?

Unless it is completely sealed into a product, as in asbestos floor tile, asbestos can easily break into a dust of tiny fibers. These fibers, much smaller and more buoyant than ordinary dust particles, float almost indefinitely in the air and can easily be inhaled or swallowed. Once the fibers enter the body, they can cause a number of serious diseases:

Asbestosis, a chronic disease of the lungs which makes breathing more and more difficult and can cause death.

Cancer. Breathing asbestos fibers definitely can cause lung cancer. Also, since some of the asbestos fibers are rejected by the lungs, move up to the throat, and are swallowed, breathing asbestos can also cause cancer of the esophagus, stomach, intestines, and rectum.

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Mesothelioma, a cancer of the membranes that line the chest and abdomen. Mesothelioma almost never occurs in people who have not been exposed to asbestos. It is always fatal.

Once asbestos gets into the body, it remains there indefinitely. It can move from the lungs to almost all other parts of the body, including the brain and the sex organs. Cancers can occur anywhere from 15 to 40 years after the first exposure. No safe limit or "threshold" of exposure is known. Any exposure to asbestos carries some risk to health, and people exposed to low levels of asbestos for a very brief period have later contracted mesothelioma. Finally, anyone exposed to asbestos who also smokes cigarettes has five times the chance of contracting lung cancer than a cigarette smoker who has not been exposed to asbestos.

What's The Government Doing About This Health Hazard?

The Occupational Safety and Health Administration has established limits for worker exposure to asbestos on the job. The Food and Drug Administration is responsible for making sure that foods, drugs and cosmetics are not contaminated with asbestos. And the Consumer Products Safety Commission (CPSC) regulates asbestos in consumer products; it has already banned the use of asbestos in ceramic logs in gas-fired fireplaces, in consumer clothing and in dry-wall patching compounds. CPSC is studying the extent of asbestos use in all consumer products and is considering banning all non-essential uses of asbestos in consumer products that can release asbestos fibers.

EPA, which among other authorities can regulate air and water contamination by asbestos, prohibited the spraying of asbestos materials for fire-proofing and insulation in 1973, banned the use of asbestos that can crumble in pipe and boiler coverings in 1975, and prohibited virtually all uses of sprayed asbestos materials in 1978.

In addition, EPA is investigating the cumulative effects on public health of exposure to asbestos -- from the time it is mined and milled, through processing and product manufacturing, use and disposal. And EPA is also considering banning all non-essential uses of asbestos and asbestos products. The prohibitions being considered would be phased in over a period of time and would exempt certain essential uses for which reasonable substitutes do not exist and which do not pose an unreasonable risk to health. One example of the possible exemption from the ban: fire-protection suits for firemen if the asbestos is totally enclosed, sealed, or

Not All Asbestos Products Are Hazardous!

Asbestos becomes a health hazard only when fibers are released into the air. This usually happens when the asbestos materials can be crumbled in the hand -- in technical language, when the asbestos material is "friable," as is asbestos insulation sprayed on a ceiling. In contrast, vinyl asbestos floor tile is not generally "friable." The asbestos fibers are firmly bound or sealed into the tile and can be released into the air only if the tile is cut, ground or sanded.

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bonded into the suit so that no asbestos fibers can be released into the air.

Under the Toxic Substances Control Act, EPA is required to ban or limit the use and disposal of any chemical substance that poses an unreasonable risk of injury to human health or the environment. Preliminary studies show that millions of people may indeed be facing the danger of unreasonable risk to their health from asbestos particles from an increasing number of sources. Thus the contemplated regulations to prevent and reduce unreasonable risks from asbestos.

What About Asbestos In Schools?

Between 1940 and 1973, hundreds of thousands of tons of asbestos were sprayed or applied on ceilings and other parts of many schools -- and other buildings, public and private -- for fire-proofing, sound-deadening, insulation, or decoration. Surveys indicate that 5-15 percent of the nation's public schools contain some asbestos materials.

Some of the asbestos material is now known to be damaged or deteriorating -- and releasing asbestos fibers into the air in the buildings.

The fibers can remain suspended in the air for hours. And fibers that settle to the floor can be stirred up into the air again as children walk or run through halls, classrooms, the gymnasium, the cafeteria. Thus, while the asbestos fibers may be released only sporadically from damaged insulation on a ceiling or pipe, there can be virtually continuous exposure to asbestos. Indeed, in some schools, asbestos levels in the air have occasionally exceeded the Federal safety standard for asbestos workers.

It seems likely that the dangers of asbestos exposure are particularly grave for children. Since they are exposed early in their lives, asbestos-induced cancers will have plenty of time to develop.

To safeguard the health of school children, teachers and others who work in schools, EPA has launched a school asbestos program. The purposes of this program are: to identify school buildings that contain asbestos materials, to inspect those buildings to see if asbestos fibers are being released into the air within the building, to remove or repair the damaged asbestos material, and periodically to inspect the asbestos materials left in the schools.

NOT For Schools Alone!

EPA's Asbestos Guidance Package is not just for public schools. Asbestos materials have been used in the construction or renovation of many private schools, colleges, universities, and office, commercial and residential buildings. The package can help any building owner identify and eliminate asbestos hazards. It's available, free, by calling, toll-free, 800-424-9065. In the Washington, D.C. area, the number is 554-1404.

EPA has prepared and made available to State and local governments and schools two manuals that explain, step by step, how asbestos problems can be identified and corrected. **PRODUCE**
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The manuals -- called the Asbestos School Guidance Package -- are available, free, from EPA.

A videotape outlining the procedures explained in the manuals is available from EPA's 10 regional offices. And a specially trained EPA asbestos coordinator in each regional office can provide additional technical assistance.

EPA's school asbestos technical assistance program has been voluntary, and many State and local governments have participated in the program. However, to make sure that the necessary steps are taken to reduce the risk of asbestos exposure, EPA plans to issue regulations requiring that elementary and secondary schools be inspected for the presence of asbestos and requiring that asbestos exposure problems be corrected.

In sum, EPA's school asbestos program has already helped some schools identify and reduce asbestos hazards and, when the regulations are issued, will require other schools to do so too.

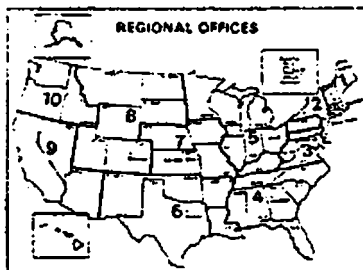
Meanwhile, students, parents, teachers and other concerned citizens can help rid the nation's schools of asbestos hazards by urging their school officials to take the necessary actions if they have not already done so.

Want More
Information?

Additional information on EPA's asbestos program is available from EPA headquarters in Washington, D.C. -- 800-424-9065 (554-1404 in the Washington area) -- or from EPA regional offices.

Additional information on the effects of asbestos on health is available from Asbestos, National Cancer Institute, Bethesda, Md. 20205. (Call 800-638-6694; in Maryland, 800-492-6600).

Additional information on asbestos in consumer products is available from the Consumer Products Safety Commission. Call 800-638-8326; 800-492-8363 in Maryland; 800-638-8333 in Alaska, Hawaii, Puerto Rico, Virgin Islands.



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Pest. & Toxic Substances Br.
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Recommended Installation Specifications for Vinyl Asbestos, Solid Vinyl and Asphalt Tile Floorings

This recommended installation procedure has been prepared by the member companies of the Resilient Floor Covering Institute listed on the back page. It is intended to be used as a general guide. If questions arise on any specific points it is suggested that the manufacturer of the tile to be installed be contacted. All manufacturers, as listed, have detailed installation instructions which cover in detail requirements that may not be included in this general guide. These are available from the individual manufacturer.

Material Specifications

1. Vinyl Asbestos Tile shall conform to the requirements of Resilient Floor Covering Institute Specifications, Types I (Smooth Surface) and II (Embossed Surface), or Federal Specification SS-T-312, Type IV. Under these specifications, Vinyl Asbestos Tile is available in 12" x 12" size and in nominal thicknesses of 1/8", 3/32", .080", and 1/16".
2. Solid Vinyl Tile shall conform to the requirements of Resilient Floor Covering Institute Specifications Type I (Smooth Surface) and Type II (Embossed Surface) or Federal Specification SS-T-312, Type III. Under these specifications, Solid Vinyl Tile is available in 12" x 12" size and in nominal thicknesses of 1/8", .080", 1/16", .050", and .039".
3. Asphalt Tile shall conform to the requirements of Resilient Floor Covering Institute Specifications, Types I (Smooth Surface) and II (Embossed Surface), or Federal Specification SS-T-312, Type I. Under these specifications, Asphalt Tile is available in 9" x 9" size and in nominal 1/8" thickness.
4. Adhesive—Vinyl Asbestos Tile and Asphalt Tile are usually installed with an Asphalt Water Emulsion Adhesive (RFCI Specification Type I, Class 1 or 2, and Federal Specification MMM-A-115) or an Asphalt Cut-Back Adhesive (RFCI Specifications Type II, and Federal Specification MMM-A-110), or with Water Based Latex.

Different types of Solid Vinyl Tile may require special adhesives. Consult the individual tile manufacturer for the recommended adhesive for a specific product and installation.

Adhesives (RFCI Specifications Type II).

CAUTION! Solvent-based adhesives, such as Asphalt Cut-Back, are flammable. Refer to instructions on container labels for precautions.

5. Lining Felt shall be 15 lb. fully saturated asphalt flooring felt. Follow the recommended suggestion of the manufacturer of the tile to be used as regards use of lining felt on the sub-floor to be covered. Linoleum Paste is usually specified for cementing lining felt to wood sub-floors.
6. Protective Edgings are used to prevent tripping and damage to the installed tile edges. They are available in a variety of shapes and materials. To function properly protective edgings shall be securely fastened to the sub-floor.

General Specifications—Installation

Vinyl Asbestos, Solid Vinyl and Asphalt Tile are thermoplastic materials and will follow the contour of the sub-floor to be covered. The smoother the sub-floor, the better the finished tile floor.

1. Installation shall not begin until the work of all other trades has been completed and the area cleared of extraneous materials. If job requirements are such that the tile must be installed before other trades have completed their work the installed tile shall be covered with heavy paper, or other suitable protective coverings, excluding asphalt-saturated felt.

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2. All rooms, tile and adhesive shall be maintained at a minimum temperature of 70°F. for at least 48 hours before, during, and 48 hours after application of the tile.
3. Spread adhesive ~~evenly~~ and at the rate of coverage recommended by the tile manufacturer using a notched steel trowel or other devices as may be specified by the manufacturer of the tile and adhesive. When cut-back adhesives are used, the proper safety measures regarding ventilation, open flames and other precautionary requirements noted on the container label must be followed.
4. Tile shall be laid starting at the center of the room and working toward the walls. By the preferred practice, tile is laid starting at the center of the room, working toward the walls; however, other acceptable commercial practices can be substituted as the starting point. The starting point shall be adjusted as required to provide a border width equal to at least a half tile width. Border tile shall be scribed to the wall, cut and fitted into place after the field tile has been applied.

Concrete Sub-Floors (Suspended, On-Grade, or Below-Grade)

Vinyl Asbestos, Solid Vinyl and Asphalt Tile shall be installed directly to concrete sub-floors without the use of lining felt. Concrete sub-floors shall be of a standard mix as recommended by the Portland Cement Association.

Radiant Heated Floors

Vinyl Asbestos, Solid Vinyl and Asphalt tile may be installed over radiant heated concrete floors provided that the heating system is properly controlled to give a maximum temperature of 85°F. measured directly over the heating pipes. In addition, all furniture must be equipped with the proper load bearing devices (casters, glides, furniture cups) as specified by the Resilient Floor Covering Institute.

New Concrete Sub-Floors

New concrete sub-floors which are on or below grade require a drying time of at least 4 to 6 weeks. On this type of construction, the use of a waterproof membrane, such as a 4 or 6 mil polyethylene membrane, installed between the concrete and ground is recommended.

Suspended concrete floors require a drying time of at least 3 weeks after the concrete forms are removed. If the suspended concrete has been installed over metal decking, additional drying time will be needed.

The floor shall be steel trowelled to a smooth, plane surface, free from score marks, grooves or depressions, scraped free of all foreign material and brushed clean.

CAUTION: Concrete curing and tilt up parting compounds are not recommended. If the use of such compounds are specified, the tile manufacturer must be consulted in advance. Some compounds can prevent proper tile adhesion to the floor or may cause long-term installation failure.

Old Concrete Sub-Floors

(a) Old concrete sub-floors shall be clean and free of oil, grease, wax or dust. Oil base paints must be removed from old on or below grade concrete floors. An effective way to do this is with a drum sander followed by a thorough rinsing with clear water. After rinsing the floor must be allowed to dry before installing Vinyl Asbestos, Solid Vinyl or Asphalt Tile. If the floor has been painted with a rubber base paint the paint need not be removed provided it is well bonded to the concrete sub-floor.

If the type of floor paint is unknown a simple test may be made using a solution of one (1) tablespoon of household lye in a cup of warm water. Place small puddles of the lye solution at various spots on the painted floor. If the paint has not dissolved, softened, blistered or peeled from the floor in 30 minutes Vinyl Asbestos Tile or Asphalt Tile may be installed without removing the paint. *When preparing and using a lye solution, be sure to read and carefully follow the instructions and precautionary measures on the lye container.*

(b) For the installation of tile over existing floor coverings, consult the tile manufacturer's recommendations. Existing floor coverings having a foam cushion or cushion layer and/or an embossed surface must be removed.

(c) Rough or uneven concrete floors above, on or below grade must be smoothed before tile application. A two part patching compound commonly identified as latex underlayment is recommended. If the area to be smoothed is excessively large contact the tile manufacturer for suggestions as to the best way to do this at the lowest cost.

Light Weight Concrete with a density of less than 100 lbs. per cubic foot is not a satisfactory sub-floor for Vinyl Asbestos Tile or Asphalt Tile. Light weight concrete of less than the required density must be covered with 1" layer of standard concrete mix.

Wood Sub-Floors—Suspended

Wood sub-floors over which Vinyl Asbestos, Solid Vinyl or Asphalt Tile are to be installed must be solid, well nailed at joists and free from springiness. All wax, grease, dirt and dust shall be removed to insure proper adhesive bond.

Vinyl Asbestos, Solid Vinyl or Asphalt Tile shall not be installed over wood sub-floors in contact with the ground. Wood sub-floors which are located over a crawl space are satisfactory if the crawl space has a minimum of 18 inches of cross ventilated air space between the ground and the floor joists. Note: A moisture barrier (heavy asphalt saturated felt paper or polyethylene film) laid on the ground with overlapped widths or lengths is effective in controlling high humidity due to ground moisture. The moisture barrier is not a substitute for cross ventilation.

(a) Double Wood Sub-Floors

Loose or broken boards shall be renailed or replaced and the floor sanded to correct irregularities such as warped or cupped boards. Install 15 lb. asphalt saturated felt paper on suspended double wood floors with top boards less than 3" wide. Cement the felt paper across the boards using linoleum paste. Butt the edges of the felt (do not overlap) and roll with a 150 lb. roller, rolling from center to edges to insure a good bond and to eliminate trapped air.

If the double wood floor is in poor condition, which sanding will not correct, or if the top boards are more than 3" wide install Underlayment Grade plywood* (fully sanded—1/4" minimum thickness) with face grain perpendicular to board joints or use underlayment hardboard. In areas that may be subjected to excessive surface moisture use Underlayment Grade plywood bonded with exterior glue of C-C plugged and sanded exterior grade plywood.

If specifically recommended by the tile manufacturer 1/4" Service Class (Underlayment grade) Hardboard meeting the requirements of U.S. Product Standard PS58-73 may be used instead of 1/4" plywood. Unless otherwise recommended by the tile manufacturer the hardboard shall be installed smooth side up.

Install the plywood or hardboard underlayment with cross joints staggered at least 16". Use ring grooved (annular) nails, screw nails, or divergent staples, spaced 6" on center throughout the board and spaced 3" apart along the edges. Fasteners shall penetrate at least 1-1/4" into the sub-floor. Nail center of board first working out to the edges. Leave a space between underlayment sheets equal to the thickness of a dime. Drive fasteners flush or set not more than 1/16" below the surface. It is necessary to fill nail holes if fasteners are below the surface of the underlayment. Lightly sand any roughness particularly at joints and around nails.

Follow tile manufacturer's instructions regarding the use of 15 lb. asphalt saturated flooring felt paper over plywood or hardboard underlayment.

(b) Single Wood Floors

Single wood floors shall be covered with 1/4" minimum thickness Underlayment Grade plywood where the sub-floor boards are 4" or less in width. If the sub-floor boards are more than 4" wide install 1/2" Underlayment Grade plywood. The plywood face grain shall be perpendicular to the joists. Follow the same nailing procedure as outlined in (a) above.

(c) Open Wood Joists

Install 5/8" Underlayment Grade plywood where joist spacing is 16" or less. For joist spacing up to 24" use 3/4" plywood. Blocking or bridging is required under the plywood along the edges perpendicular to the joists. Face grain of the plywood shall be perpendicular to the joists. Nail with ring grooved (annular) nails, screw nails or divergent staples which will penetrate 1-1/4" into the joists. Space nails 6" apart over the joists and 3" apart along the edges. Drive the nails flush or set not more than 1/16" below the surface.

(d) 2-4-1 (1-2-3) Plywood Installation

"2-4-1" Tongue and Groove plywood** is a combination underfloor and underlayment plywood panel. No blocking or bridging is required when properly installed over open wood joists spaced 48" or less on center. 2-1/2" ring grooved (annular) or screw type nails or divergent staples spaced 3" on center at all bearings shall be used. Drive the nails flush or set not more than 1/16" below the surface. It is necessary to fill nail holes if fasteners are below the surface of the underlayment.

Note: This specification is not intended to cover the use of tempered hardboard, particleboard or any underlayment boards other than those specified above.

*Note: Plywood shall meet the requirements of U.S. Product Standard PS 1-74. See "Guide to Plywood Grades" published by American Plywood Association for further details on recommended plywood underlayment.

**Note: 2-4-1 plywood shall meet the requirement of U.S. Product Standard PSI-74. See "Guide to Plywood Grades" published by American Plywood Association for further details on 2-4-1 plywood.

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GENERAL RECOMMENDATIONS

(a) Prevention of Indentation

All metal domes shall be removed from the legs of furniture and equipment. Suitable protective devices as recommended by the Resilient Floor Covering Institute shall be used on furniture or equipment to protect against indentation. (Copies of the RFCI recommendations are available upon request.)

(b) Maintenance

The frequency with which a floor should be swept, scrubbed, buffed or waxed will vary with the amount of traffic. To insure proper maintenance, recommendations of the tile manufacturer should be followed. These are available upon request from all manufacturers. The Resilient Floor Covering Institute has literature on maintenance featuring no-wax and regular maintenance procedures. Copies are available upon request.

(c) Floor Finishes

Many of the newer types of floor polishes being marketed today form tough moisture impermeable films. These films are not readily removed by normal means. While this may be desirable from a maintenance point of view, it can create conditions detrimental to the tile.

Continued use of these "tough film" polishes without periodic stripping will result in an accumulation of a thick layer of polish on the tile surface. In some cases, this film is strong enough to cause the tile edges to curl.

Planned stripping of polish coatings is an important part of floor maintenance. Floors should be stripped after every three or four polish applications. This can be best accomplished by adding a cup of household ammonia to a bucket of water with the recommended floor cleaner, followed by thorough rinsing of the floor.

Stripping old polish regularly, will prevent such problems as yellowing and dirt build-up in the polish coating.

(d) Use Out-of-Doors

Vinyl Asbestos Tile or Asphalt Tile shall not be used out-of-doors. Some types of Solid Vinyl Tile are recommended for outdoor installation. Consult the individual manufacturer for recommendations as to product and adhesive.

(e) Magnesite Sub-Floors

Consult the tile manufacturer for specific instructions if Vinyl Asbestos, Solid Vinyl and/or Asphalt Tile is to be installed over magnesite sub-floors.

TILE PRODUCING MEMBERS OF RESILIENT FLOOR COVERING INSTITUTE

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American Bitrite, Inc.

AZROCK FLOOR PRODUCTS
Uvalde Rock Asphalt Company

KENTILE FLOORS, INC.

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