

advisory

New York Adopts Combustion Toxicity Tests; Initial Impact Will Be on Vinyl Products

New York has become the first state to require combustion toxicity testing of certain building products, a controversial program which may cause builders to limit the use of PVC and other plastics in commercial construction. Similar programs are under consideration in at least eight other states, according to government affairs officials at the Society of the Plastics Industry.

New York's decision to adopt the long-pending program came in a 15-0 vote of the state's Uniform Fire Prevention and Building Code Council on October 23. The regulations require manufacturers of certain building materials to file the results of small-scale laboratory toxicity tests with the state. Specifiers will be encouraged to consult this data bank when selecting building products, but will not be required to do so.

The new program phases in the testing requirements over a period of three years, beginning with electrical conduit and wire insulation on November 25, 1987, followed by pipe duct and thermal insulation one year after that, and interior finish in the third year. The tests will have to be performed by an independent laboratory using the method devel-

oped at the University of Pittsburgh. SPI estimates that the cost of one test will be about \$2,500.

Final Version Less Onerous

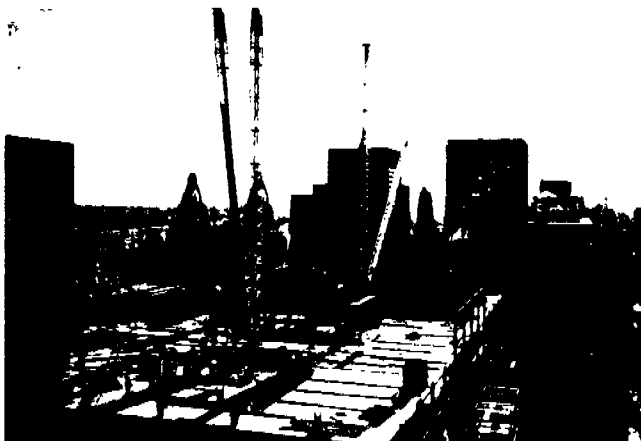
Although the Vinyl Institute and SPI expressed their disappointment that New York decided to promulgate the regulation, the final package is not as onerous as it might have been, according to Roger Bernstein, director of state governmental affairs for SPI.

"We managed to significantly modify the final package," says Bernstein.

"One key modification is the allowance of classification testing of similar products by a single test. This should greatly mitigate the cost of compliance. The final package also includes an amendment requiring the council to issue a disclaimer with any information they release. The disclaimer states that the toxicity test results do not by themselves define the safety or hazard of materials under actual fire conditions.

While the new regulation ultimately will affect a wide range of plastic materials, the immediate impact will be felt

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Plastics industry officials fear that New York's new regulations may cause builders to limit the use of PVC and other plastics in commercial construction.

New York . . . continued

primarily by makers of vinyl products. Electrical conduit and wire insulation, the products that come under the scope of the regulation in the first year, represent two of the largest construction markets for vinyl.

The Wrong Approach

The basis of the plastics industry's opposition to this regulation is that materials-based hazard assessment can lead to the wrong conclusions about the fire risks of different building products.

"We continue to believe that small-scale toxicity testing, by itself, is not an accurate indication of the hazard presented by building materials in a real fire situation," says Roy Gottesman, executive director of the Vinyl Institute.

"Unless the toxicity data are integrated with other factors such as how fast the material burns, how much smoke it generates, and how high its ignition temperature is, users of building materials can be led to incorrect — even dangerous — decisions," he adds. "Safer materials might actually be excluded from buildings by this testing."

Court Upholds EPA on Vinyl Chloride

A federal appeals court on November 4, upheld a decision of the Environmental Protection Agency relating to emission standards for vinyl chloride. In a 2-1 decision, the appeals court decreed that whenever the health effects of different levels of air pollutants are uncertain, the EPA may take into account the cost to industry and the technological feasibility of complying.

The court said that because the benefits of setting lower levels for vinyl chloride were unknown, the EPA was entitled to consider factors other than public

health, including a form of cost-benefit analysis. The Natural Resources Defense Council, the group which challenged EPA's handling of the regulations, argued that the Clean Air Act makes health the only factor that can be considered by EPA in setting standards.

"This is a significant decision for producers of vinyl chloride and PVC," says Roy Gottesman, VI executive director. "We believe EPA is pursuing the proper course in considering both cost and technical feasibility in setting clean air standards."

Sacramento Rejects Plastic Pipe Ban

An effort to ban plastic pipe and conduit in Sacramento, California, has suffered a serious setback. The city's Toxic Substances Committee, which had been asked to advise city council on the proposed ban, voted 7-3 on December 15 to recommend against banning plastic pipe. Following a series of three public hearings and a review of

many studies, the committee said that there were no grounds for banning plastic pipe for installation in potable water distribution systems, building sewers, or conduit in electrical installations within buildings. According to SPI, the recommendation makes it unlikely that proponents will seek to bring the matter to a vote in council.

PVC Pipe Wins Acceptance in Miami

PVC pipe is now being used in new sewer lines laid in the metropolitan Miami, Florida, area, following a study that concluded that vinyl is an acceptable — even preferable — material for sanitary sewer pipe.

According to the Dallas-based Uni-Bell PVC Pipe Association, the Miami-Dade Water and Sewer Authority reports no substantial problems after one year of use of PVC pipe.

The Miami-Dade Authority began specifying PVC pipe after evaluating the findings of an independent engineering report it commissioned. The study, conducted by Black & Veatch, found that

PVC pipe has a number of advantages, including excellent flow characteristics, resistance to the various abrasives found in wastewater, and invulnerability to rust, galvanic corrosion and root intrusion. Perhaps the most compelling finding was that PVC pipe has a life-cycle cost of 4 to 23 percent less than clay pipe.

Uni-Bell, the technical and education association representing the gasket joint, PVC pipe industry, says it expects PVC pipe to account for an increasing percentage of sanitary sewer pipe in the Miami area. The Vinyl Institute is working with Uni-Bell on a joint educational program.

Viewpoint

A Regulatory Tempest Over PVC Packaging

A senior partner in the law firm of Keller and Heckman in Washington, D.C., Jerome H. Heckman has served as general counsel to the Society of the Plastics Industry for over 30 years. His work on behalf of SPI recently earned him a place in the Plastics Hall of Fame (see VI People, this issue). Here, he discusses the latest developments at the Food and Drug Administration concerning PVC packaging regulations.

The use of polyvinyl chloride for food and beverage packaging has endured more than its share of bureaucratic slings and arrows and is once again in the eye of a regulatory tempest. This latest brouhaha revolves around the alleged environmental impact of a proposed Food and Drug Administration rule confirming the long-established safety of PVC for all food-contact uses.

The importance of this proposed rule to the fate of the PVC liquor bottle and the vindication of PVC's good name in all food-contact uses can hardly be exaggerated. Until recently, its finalization within a reasonable period of time seemed a virtual certainty. Unfortunately, an unexpected flurry of belated and ill-founded comments, primarily with respect to the disposal of PVC waste, threatens to push FDA into a posture where it might be forced to conclude that a full-blown environmental impact statement (EIS) must be prepared. According to some FDAers, this could delay final action on the proposal for three to five years.

Back One Year Ago

Backtracking to put things in perspective, on February 3, 1986, FDA published a proposal to reaffirm the clearance of PVC packaging for all food-contact applications. In April, we filed comments which generally supported the proposal.

In accordance with the requirements of the National Environmental Policy Act, FDA prepared an Environmental Assessment of the PVC proposal in 1985 and concluded that it would have no significant impact on the human environment. On the basis of this conclusion, FDA correctly determined that an EIS was not required.

By the June 5, 1986 comment deadline, not a single public interest group had submitted adverse comments on



the PVC proposal. Based on the filed comments and statements by the FDA staff, the proposal appeared destined for finalization by the end of the year. But then the Environmental Protection Agency submitted comments which, while endorsing the basic proposal, questioned the thoroughness of the reasoning underlying FDA's conclusion that the new rule would have no significant environmental impact. The EPA comments prompted FDA to solicit comments from environmental groups and state solid waste officials. The number of critical comments grew from a trickle to a flood. By mid-December over 300 late comments had been submitted, virtually all alleging that the PVC proposal would have a significant impact on the human environment and calling for FDA to prepare an EIS.

Allegations Are Misplaced

Despite the clamor of the EIS proponents, their allegations of environmental impact from promulgation of the PVC proposal are misplaced. Many of the

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About Very Important People...

Jerome H. Heckman, general counsel to SPI for the past 32 years, has been inducted into the Plastics Hall of Fame. Heckman has devoted virtually his entire professional life to representation of the plastics industry, serving as counselor and advisor to every chief executive officer of SPI in its history. A senior — and founding — partner of the Washington, DC, law firm of Keller and Heckman, he has been instrumental in shaping and implementing the Society's mission to promote and protect the plastics industry in the United States.

Steven W. Schaefer, chairman of the

Vinyl Institute, has been appointed executive vice president-Plastics & Polymers for Occidental Chemical Corporation. He had been senior vice president of the unit.

David H. Hall, president of BFGoodrich's Geon Vinyl Division, has been elected treasurer of the Vinyl Institute. He succeeds Todd Walker.

William Shoun, marketing manager of Dow Chemical USA, has been elected secretary of the Vinyl Institute, succeeding Charles W. Montgomery of Georgia Gulf Corp. who retired on December 31.

in brief

✓ The Institute's new market development committee has announced the organization of an ad hoc task force that will focus on expanding the use of vinyl in packaging. The committee is inviting producers of vinyl additives to join the Institute in this effort. An organizational meeting of this task force took place December 9, and Carrie Solin of Rohm and Haas was chosen to head a small group that will develop the initial program.

✓ As a result of the efforts of the Vinyl Institute, a policy change that would have banned PVC carpeting or underlayment in New York's World Trade Center has been withdrawn by the building's management, the Port Authority of New York and New Jersey, and is to undergo further study. The decision came after discussions with VI executive director Roy Gottesman and technical committee chairman Michael O'Mara.

✓ The VI executive board has approved the transfer of associate membership in the Institute from the Petrochemicals and Plastics Division of ICI Europe Ltd to European Vinyls Corporation. EVC is a recently established joint venture linking the PVC businesses of ICI and Italy's EniChem. Roberto Rovere, vice president of business development of EniChem Americas, is the new representative to the executive board.

✓ A new brochure about the Vinyl Institute combines a thumbnail sketch about vinyl and its uses with an overview on the Institute, its programs and accomplishments. Members may find the eight-page piece a good way to let customers know how they are working with the Institute to promote vinyl and vinyl products. Copies are available from VI headquarters.

✓ Vista Chemical Company has carried out an initial public offering of 4.4 million shares of common stock. The initial offering price was \$17 per share and the stock began trading on the New York Stock Exchange on December 11 under the symbol VC. Vista also announced that it has signed a letter of intent to acquire the PVC compounds business of BP Performance Polymers.

✓ Georgia Gulf Corporation has completed an initial public offering of four million shares of common stock. The price was \$19.50 per share. Georgia Gulf was organized in late 1983, the result of a leveraged buyout of the chemical businesses of Georgia-Pacific Corp.

✓ A proposed ordinance to permit the use of plastic plumbing pipe in Chicago was sent back to committee on November 13, probably ending any current chance for enactment. According to Dick Church, chairman of the Plastic Pipe and Fittings Association, the proposal fell victim to Chicago politics. Chicago thus remains the only major U.S. city that does not allow plastic pipe in either new construction or rehab work.

Viewpoint...continued

Comments on the proposed rule, including those submitted by EPA, seriously overestimate the proposal's likely impact on the environment. These overstatements are chiefly the result of false assumptions and factual errors regarding the present regulatory status of PVC and the effect of the new rule on existing market conditions.

The major fallacy expressed by many commenters is the notion that the proposed rule would authorize major "new" uses of PVC in packaging materials and significantly increase the number of PVC articles in the marketplace. The truth, of course, is that PVC food packaging materials have been used widely and continuously since the 1950s, and the market for such materials will be essentially unaffected by the proposed rule. The use of PVC to bottle distilled spirits is the only real change which finalization of

the proposal is likely to occasion assuming the liquor industry deems the package acceptable.

To date, FDA has only been hearing one side of the PVC environmental issue. We are preparing a comprehensive filing for early January which will correct the factual inaccuracies and erroneous conclusions which underlie nearly all the pro-EIS comments. Our filing will refute the three major position allegations about environmental impact, i.e., that FDA clearance of PVC will (1) create an added dioxin or furan air pollution problem; (2) add to phthalate, adipate, or epoxidized soybean oil exposure; and (3) jeopardize overall waste recycling and handling to the detriment of the public.

We are hopeful that these fuller comments, plus conferences with the FDA officials, will stem the rising tide in favor of an EIS and put the PVC proposal back on course for prompt final action. It is an action long overdue!

New HCl Research Shows Reduced Hazard

Two major research programs that further dispel misconceptions about the performance of PVC in fires are getting excellent coverage in the press, reports communications committee chairman George Snider. Stories have appeared in a number of publications serving the chemical, plastics and construction industries, he notes.

In the first study, researchers at the Southwest Research Institute (SWRI) in San Antonio, Texas, demonstrated in large-scale fire tests that hydrogen chloride gas quickly disappears from the air in the fire environment. The results were reported in an article co-authored by Christopher Bertelo (Tenneco), Bill Carroll (Occidental), Russell Gardner (Vista), Marcelo Hirschler (Goodrich), Greg Smith (Goodrich) and SWRI.

The tests showed that hydrogen chloride very quickly adsorbs onto nearby surfaces in a fire and is thereby removed from the air. The rate of adsorption is enhanced by increased humidity, greater air circulation, and the amount of surface area present. By contrast, other combustion gases such as carbon monoxide remain stable in the fire atmosphere and thus are likely to travel from the source of the fire to uninvolved portions of a building.

In the second program, research conducted by SWRI for the Federal

Aviation Administration has shown that hydrogen chloride is far less lethal and causes less physical impairment than previously thought. The study found that survivability limits for exposure to hydrogen chloride are far above the levels of HCl gas found in the typical fire.

Earlier research had suggested that as little as 300 parts per million of hydrogen chloride could incapacitate humans. But this theory was based on experimentation with rodents and certain incorrect assumptions about those experiments. The FAA study found that baboons — whose physiology more closely resembles that of humans — are able to function successfully in concentrations that were 50 to 100 times higher than what had been proposed as incapacitating.

The results of the FAA study were reported in an article co-authored by technical committee member Robert K. Hinderer and SWRI.

"Together," states technical committee chairman Michael O'Mara, "these studies provide even more compelling evidence that the presence of vinyl products in the fire environment does not present an unusual hazard to firefighters or building inhabitants. They offer strong independent evidence that hydrogen chloride is not a 'killer gas' in fires, as has been charged."



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