

ORGANIC CHEMICALS DIVISION
SALES INFORMATION BULLETIN

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TO N. W. Touchette
Res-JFQ

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MONSANTO TRADE LITERATURE SUBJECT AROCLORS IN POLYOLEFINS
PERMANENT FILE

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As you know, the Development and Sales Departments have been promoting the use of Aroclor compounds as flame retardants in polyolefins. Some concerns have reported good results with these products, while others have not been successful in utilizing them.

We are sure your polyethylene processors will be extremely interested in an article which appeared in the August 29 issue of "The Oil, Paint & Drug Reporter", concerning flash fires caused by putting insufficient water in a polyethylene waste basket to put out a fire. This should stimulate a lot of interest in reevaluating Aroclors to make flame-retardant polyethylenes.

The article is quoted below:

" Polyethylene producers, nervously remembering the recent plastic bag scare that cost them about \$800,000 in a safety-education campaign, are moving fast these days to head off another panic.

"The latest fright has to do with the erratic, flash-fire possibilities that are, it suddenly develops, inherent in molded polyethylene products.

"Awareness of the plastic's danger -- which only breaks out under freak circumstances -- came about recently in a fire in a polyethylene waste basket at the University of Minnesota hospital.

"Doused with just the right quantity of water (it must be a small quantity) the burning waste basket caused vaporization of the water and a sudden, blinding flash of flames that shot better than twelve feet high.

"Knowing that polyethylene containers -- bowls, pans, garbage cans, pails, etc. -- are to be found in nearly every home and institution in the country these days, the danger in such flash possibilities immediately became apparent to many people. Among them were officials at the hospital, fire department officers, safety experts, and, of course, the plastics industry itself.

"The National Safety Council got wind of the accident at the Minnesota hospital. Last week council officials told OPD they had immediately put the wheels in motion for a through probe.

"The plastics people did not lag. They were quick to take -- and are still taking -- steps to overcome the danger. Their spokesman -- says they will need more time to lick the problem completely.

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"The best line of attack, declare the plastics makers, is to reformulate moldable polyethylene so that it is fire-retardant. The difficulty here is that if they make their product fireproof, it becomes difficult to mold. On the other hand, if they make it easily moldable, it becomes increasingly flammable.

"On all fronts, SPI pointed out in a special conference with OPD editors last week, the industry is moving with vigor against the problem.

For instance:

"After the hospital fire, plastics makers were advised of the happening by university officials, and the Minneapolis Fire Department scheduled a burning waste basket demonstration during a safety program. Dow Chemical Company, U. S. Industrial Chemicals Company and Union Carbide Corporation hastened to send their top polyethylene scientists to the demonstration. SPI experts joined them.

"Carbide at that time took the opportunity to demonstrate its flame-resistant polystyrene as a possible alternative to materials already in use.

"W. R. Grace & Co., since December 1958, has had several grade of flame proof polyethylene (OPD, 12/21/58). Grace boasts that it is the first to have made a workable flameproof polyethylene -- either high or low density.

"Other companies, and the Society for the Plastics Industry itself, are working on the program, determined to head off anything similar to the plastic bag scare.

"The ironic part of the whole situation is that half a cup or so of water will cause a flareup, but a quart of water will put a fire out. Strangely, it takes just the right amount of water.

"G. W. Frawley, director of services and supply for the University of Minnesota hospital, told OPD last week: 'We've had a number of troublesome fires.'

"However, he emphasized that the hospital wasn't about to chuck all 2,500-3,000 baskets out. What he did say was that as soon as the industry comes up with a solution to the problem, he would be glad to phase in new fire-retardant wastebaskets.

"We're sure not going to buy any more of the type we have now, 'Mr. Frawley said, and 'we're going to replace the present ones with fire-retardant plastic as soon as possible."

Now is the time to discuss Aroclors again with polyethylene and polypropylene molding compound producers!

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