

COMPANY CONFIDENTIAL

1473

DIELECTRICS

Product Summary

Aroclor 1016 will continue to account for at least 99.6% of our PCB capacitor fluid volume in 1973 in U.S.A. and Canada. The replacement of Aroclor 1242 by Aroclor 1016 in other export areas serviced from our W.G.K. plant is expected to continue. In Europe and in world areas serviced by MCL we will not offer Aroclor 1016 but will continue with Aroclor 1242 although penta and hexachlorobiphenyl levels will be kept below the levels of previous U.S. production. Our Inerteen line of transformer fluids will continue but we will have to reformulate Pyranol A13B3B-2 once more -- this time due to Hooker's discontinuation of TTCB.

Market Summary

We came through 1972 better than expected. Fortunately all the positive factors we forecast in the 1972 Marketing Plan held true but not all the negative factors came to pass. In 1972 we were able to compensate for sharply higher costs by getting prices up world-wide. In certain world areas we were helped by the discontinuation of Japanese production. As a result world-wide pricing is stronger than for several years. Prospects for making 1973 budget look better than did those for making 1972. The longer-term future for PCBs, however, in dielectrics, particularly capacitors, continues cloudy.

The positive factors in the outlook for PCB dielectrics are:

1. We have retained all significant customers in spite of our requirements for Hold Harmless agreements in U.S.A. and Canada and signed warning letters overseas. In the U.S.A. and Canada customers who were approved under insurance coverage are renewing coverage when the insurance expires.
2. European PCB producers have acknowledged that restrictive sales action on non-dielectric uses had to be taken and have begun to follow Monsanto's voluntary policies.
3. In the U.S.A. the government's PCB task force completely supported MICC's actions in restricting sales only to dielectric uses.

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4. In Canada the outlook is favorable that their PCB working party will follow the U.S. Task Force recommendations.
5. ANSI C-107 guidelines are expected to be published early in 1973 and this will be helpful in informing authorities involved in PCB controls on the responsible way in which Monsanto and its customers are acting. Hopefully this will lead to a more rational approach to the PCB issue.

On the other hand, there are negative factors:

1. The Japanese restrictions on PCBs are so tight that suppliers of equipment containing PCB capacitors to Japan (e.g. IBM, Xerox, etc.) are searching for non-PCB substitutes. As a result U.S. capacitor producers are searching for PCB substitutes at a more accelerated pace than might have been expected following clarification of the U.S. government's attitude on PCBs. If they are successful in finding replacements for export markets, the future of PCBs in domestic markets would be very much open to question.
2. OECD countries so far are avoiding the extreme restrictions imposed by the Japanese and are supporting use of PCBs in dielectrics. At the same time, small PCB capacitors are not of such importance overseas as they are in U.S.A. and so OECD might well declare small capacitors a non-essential use, putting further pressure on U.S. capacitor manufacturers to find a PCB replacement.
3. PCBs may be a problem for us but an opportunity for others. Suppliers of competitive impregnants or capacitor designs will use PCBs as an opportunity to oust Monsanto from its dominant position as a fluid supplier. Our insurance program of trying to develop PCB dielectric substitutes is therefore subject to competitive as well as environmental pressures.
4. Although we have tried to educate governmental agencies, customers and some dielectric users in U.S.A., Canada, Mexico, Argentina, Brazil and Europe on the PCB situation and Monsanto's intentions, this message may not yet have reached key specifying influences particularly for askarel transformers. More will be required of us in this area in 1973.

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5. Hooker will discontinue TTCB in mid-1973 but will still have TCB available. Although we fully expect that the problems caused by this will be minimal, the inconvenience to customers in approving new formulations could be "one more nail in ---" unless well-handled.
6. We hear that Prodelec plans to propose a world-wide ban on Aroclor 1248/1254 in capacitors some time late in 1973. This means that MCL will have to develop a lower pentachlorobiphenyl Aroclor 1242 to avoid being at a competitive disadvantage in Europe. It also means that we must consolidate our position on Aroclor 1016 in export areas so that we maintain a competitive edge.

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General Strategy

To meet our 1973 sales budget and to plan for our future participation in the dielectric fluid business we must be active in four main areas: market intelligence from field sales; PCB product line changes; customer and ultimate user education; and a research program on PCB replacement. We will be active in these areas by means of the following:

Market Intelligence

1. We will be alert to competitive fluids through contacts in R&D and marketing at all major accounts.
2. We will also be alert to competitive equipment designs that could reduce or eliminate PCBs as the dielectric.
3. We will monitor customers' attitudes on PCBs by contacts with key executive management.
4. We will seek to determine how real a factor fire resistance is in the face of pollution control.
5. We will monitor pollution/toxicity legislation as they affect PCBs at state, federal and OECD levels.

Customer/User Education

1. We will circulate relevant information on PCBs (e.g. ANSI C-107 guidelines/MICC presentations to U.S./Canadian PCB Task Forces) for field marketing use in getting authorities in non-PCB manufacturing countries; key customers, key dielectric equipment users, and key specifying agencies to take a rational approach on the PCB issue.
2. We will seek to set up personalized MICC presentations to key customers, key dielectric industry trade groups and specifying agencies where these will be useful in eradicating confusion on the PCB issue.

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PCB Product Line Changes

1. We will follow sales policies world-wide that are consistent with satisfying those customers who buy ex-U.S.A. with Aroclor 1016 and those who buy ex-U.K. with low pentachlorobiphenyl Aroclor 1242.
2. We will work through CIGRE to ensure that both U.S. and U.K. production of capacitor fluid meet any specifications set by that body on penta and higher chlorobiphenyls.
3. We believe Prodelec will propose some time in 1973 to eliminate the use of Aroclor 1248/1254 type fluids in capacitors. We will seek to avoid being caught at a disadvantage.
4. We will reformulate Pyranol A13B3B-2 when Hooker's TTCB becomes unavailable in mid-1973.
5. We will be alert to the need to balance Aroclor 1254 usage in transformer fluids with Aroclor 1016 production so that production costs are kept down.

Replacement Programs

1. We will continue our testing of PCB substitute fluids for capacitors so that we remain a major capacitor fluid supplier.
2. We will concentrate on fluids where MICC will have a proprietary position or at least a competitive manufacturing cost.
3. We will utilize secrecy agreements with key customers so that we can control the development of these fluids to our best advantage.
4. We will actively follow changing technology with regard to fluids and equipment so that we can predict our future role in dielectric fluids in both transformers and capacitors.

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1973 GOALS

1. Meet the following dielectric budgets:

	<u>Capacitor Fluids</u>		<u>Transformer Fluids</u>		<u>Total</u>	
	<u>M lb.</u>	<u>\$M</u>	<u>M lb.</u>	<u>\$M</u>	<u>M lb.</u>	<u>\$M</u>
Domestic	20,410	4,186	12,415	2,578	32,825	6,764
U.S. Export	3,352	683	4,436	960	7,788	1,643
Ex-U.S. Mfr.	<u>6,749</u>	<u>1,350</u>	<u>3,202</u>	<u>681</u>	<u>9,951</u>	<u>2,031</u>
World-Wide	30,511	6,219	20,053	4,219	50,564	10,438

2. Retain Westinghouse U.S.A. on Inerteen 54201CM as opposed to Aroclor/TCB blends.
3. Reformulate Pyranol A13B3B-2 to eliminate Hooker's TTCB and retain all present customers.
4. Convert all Monsanto capacitor customers world-wide to Aroclor 1016 or MCL Aroclor 1242.
5. Establish regular contact with marketing managers of major capacitor and askarel accounts world-wide so that up-to-date trends in dielectric fluid can be obtained.

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