

Review 16.

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Review 10/6

REPORT ON THE INTRODUCTION OF MCS 1016 IN EUROPE

I. SITUATION

The Markets

1. UK
- . Market - 1300 tons/year/ \$ 623 m 1972/ (Monsanto has 100%)
 - . Pollution issue of national concern.
 - . Government legislation unlikely; prefer to rely on voluntary control.
 - . Has now a separate ministry of the environment.
 - . All major users sampled with MCS 1016 - but they are reluctant to test unless pushed hard.

2. Scandinavia

- Sweden
- . Market - 400 tons/\$ 140 m 1972 (Monsanto has approx. 40%)
 - . Pollution issue of national concern.
 - . Will legislate against PCB's 1st January 1972.
 - . Department environment protection will allow use Aroclor 1242 in capacitor / transformers under special renewable licences.
 - . If alternative product available which is practical and more environmentally acceptable, than Aroclor, licences for 1242 use would be withdrawn in favor of this new product.
 - . Capacitor manufacturer (only one that used Aroclor) Liljeholmens reluctant to test MCS 1016 until they have to. Concerned over costs of tests and additional cost of product. Has been sampled.

- Finland
- . Market - 700 tons/year/ \$ 230 m 1972 (Monsanto has 100 %)
 - . Government expected to follow lead of Sweden on pollution issue.
 - . Capacitor manufacturer (Nokia) very concerned and will test MCS 1016. Has been sampled.

3. Rest of Europe

Western Europe	- 530 tons/year/\$ 170 m	- Monsanto 1972 budget
Eastern Europe	- 400 tons/year/\$ 140 m	- Monsanto 1972 budget
ROW	- 180 tons/year/\$ 75 m	- Monsanto 1972 budget

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3. Rest of Europe (cont'd)

We believe our competitors are not ready or even keen to introduce alternative products to Aroclor 1242. However, in major industrialized countries we can expect government pressure to follow trends established in USA/UK/Scandinavia.

The Product

1. As MCS 1016 is so similar to Aroclor 1242 in its electrical and functional properties, we can assume that all competent capacitor manufacturers will be able to use it if so inclined.
2. Biodegradation work now shows clear advantage of MCS 1016 over Aroclor 1242.
3. MCS 1016 not yet shown to be completely biodegradable.
4. USA studies indicate additional cost of producing MCS 1016 over Aroclor 1242 to be 1¢/lb (this looks low!).

SUMMARY

Market

1. European manufacturers are reluctant to test MCS 1016 unless motivated by:-
 - (a) Awareness of pollution problem and likelihood of the banning of use of Aroclor long term.
 - (b) Governmental pressure.
 - (c) The knowledge that MCS 1016 is the answer, i.e. completely biodegradable.
2. MCS 1016 will have an advantage in the European market place which can be capitalized by:-
 - (a) Gaining a higher price - or/and
 - (b) Gaining new customers.
3. Our major European competitors, Bayer and Prodelec, are technically competent. They have the capability to set up manufacture of MCS 1016 as quickly as we, in fact, Prodelec may already have sufficient fractionation equipment installed. However, they are well behind us on biodegradation work and hence the ability to prove that their MCS 1016 type product is as acceptable as ours.

SUMMARY (cont'd)

4. Eventually we will all be forced to find an environmentally non-persistent alternative for Aroclor 1242.
5. It will probably take most of our customers 3-6 months to test MCS 1016; but some may require up to one year.

Monochlorobiphenyl Market

1. We are no nearer to identifying a major market in Europe for Aroclor 1221. We only know of its use with the chlorinated Terphenyls in plasticizer applications. The Geigy/Ciba company do not appear interested, although Geigy have a relatively large use as a dye carrier in the USA. Ciba have some new undisclosed use for substantial quantities of Biphenyl starting from 200 tons/year 1972 to 2,000 tons/year by 1976. This may be related. Initial market research report (May 1971) indicates a declining need for Biphenyl based materials in the dye industry, but further investigation necessary.

Manufacturing

1. Construction time for MCS 1016 facilities 18 months from authorization.
2. Column should be sized to process all the Newport Aroclor 1242 production plus an estimate of other possible fractionation requirements.
Short term we should take a figure for total Electrical Aroclor 1242 sales at approx. 3,000 tons/year. Therefore a 5,000 ton/year column would allow for growth plus any other fractionation requirements, such as Aroclor 1221. Longer term our 1980 LRP for Aroclor 1242 type product sales is 7600/tons, thus a 10,000 ton/year column would allow for fractionation of other related products.

RECOMMENDATIONS

1. Prepare CAR for production of MCS 1016 at Newport. Justification based on:-
 - (a) Pollution control - preserving existing sales profits.
 - (b) Marketing advantage over competition realizing additional sales/profits.

RECOMMENDATION

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2. Continue biodegradation studies. Gain government support for program and product, particularly in UK and Scandinavia.
3. Get all major customers in UK and Scandinavia to set up life tests using MCS 1016.
4. When Newport plant on stream switch all UK customers to MCS 1016; raise price over Aroclor 1242.
5. When Newport plant on stream, obtain licence for MCS 1016 for use in Scandinavia. Get Aroclor 1242 and similar product licences withdrawn.
6. Selectively offer MCS 1016 to other country areas, where there is a need and a strategic advantage to be gained.

PJA
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Brussels
June 14, 1971

DISTRIBUTION

RA BAXTER	- Ruabon
PG BENIGNUS	- St. Louis
HS BERGEN	- St. Louis -
CR COLEMAN	- Ruabon
HN DAHLSTROM	- Brussels
JR FALLON	- St. Louis
TL GOSSAGE	- St. Louis
RM KOUNTZ	- St. Louis
WR RICHARD	- St. Louis
JR SAVAGE	- St. Louis
HA VODDEN	- Ruabon
EV WEEKES	- Brussels
JN HAGGART	- Brussels
A ARPINO	- Brussels

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