



THE DOW CHEMICAL COMPANY

MIDLAND, MICHIGAN 48641

November 17, 1965



SUGGESTED HEADS OF PROPOSED AGREEMENT TO BE DISCUSSED WITH JOHNS-MANVILLE ON NOVEMBER 18, 1965

1. Dow has had 10 years experience on the radiation grafting of vinyl monomers to synthetic and natural polymers, operating under a license from the French government under the Magat Chapiro et al patent applications.
2. One of the more interesting systems studied is that of PVC-styrene for the following reasons:
 - a) styrene monomer acts as a temporary plasticizer to aid fabrication
 - b) a low dose of radiation can be used to cure the styrene and give a modified rigid PVC
 - c) cross-linking monomers, glass fibers, rubber particles, and other additives can be included.
3. It is our belief that such compositions might be useful for PVC pipe although we lack the necessary experience to evaluate this end use.
4. J-M has an enviable reputation in the production and sale of PVC pipe, and furthermore, a reputation for progressive R & D attitude in the field of PVC pipe.

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5. It therefore seems in order to consider an R & D agreement between J-M and Dow. The key elements in this agreement might be as follows:

- a) Dow to supply J-M under a secrecy agreement with its laboratory data on PVC-monomer systems.
- b) J-M to select some of the more likely systems for extrusion into pipe.
- c) Dow to radiate this pipe in its Co60 facility if J-M lacks such facilities.
- d) J-M to evaluate the irradiated pipe.
- e) This agreement to be exclusive in the field of PVC pipe - *other areas!*
for a fixed period of time.

6. If the results from this R & D program indicate to J-M the desirability of commercial exploitation, we would then proceed as follows:

- a) Dow to grant J-M a sublicense under the CNRS license, with terms agreed on beforehand.
- b) Dow to grant J-M a lead time of agreed-on duration for commercial exploitation.
- c) Dow to receive compensation for its know-how in one or both of two forms:
 - 1) Cash
 - 2) Long-term contract for PVC
 - 3) *Feed-back of know-how*
- d) Dow reserves the right to go into the manufacture of PVC pipe.

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