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EXPLOSIVES RESEARCH LABORATORY
BRUCETON PENNSYLVANIA
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CARNEGIE INSTITUTE OF TECHNOLOGY

OPERATING UNDER THE SUPERVISION OF THE
NATIONAL DEFENSE RESEARCH COMMITTEE

29 May 1945

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Dr. M. F. Roy
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RECEIVED

DEC 21 1998

OSTI

Dear Max:

It turns out that neither Hercules nor duPont have any information concerning the compatibility of PETN with various plastics. However, it turns out that Picatinny Arsenal has done a considerable amount of work on this subject. They have put out a report, Technical Report No. 1376 dated 11 January 1944, entitled "Effects Produced Upon Stability of Explosives by Contact with Plastics". I believe that this report has all of the information which you need, but I believe that Picatinny has done additional work since issuing the report.

Since this report may not be available to you, and since it may take some time for you to obtain it, I am listing below the plastics which have been tested by Picatinny and found to be satisfactory when in contact with PETN. For many of the plastics, several members of a given type which varied in type and amount of plasticizer, etc., were tested. However, in the list below, only the main class names are given.

- Phenol-formaldehyde, molded and cast
- Urea-formaldehyde, molded
- Melamine-formaldehyde, molded
- Cellulose acetate
- Cellulose acetate-butyrate
- A plastic based on ethyl cellulose and oil
- Polyvinylidene-vinyl chloride (Saran)
- Polyvinyl chloride-acetate
- Polyvinyl acetate
- Polymethyl methacrylate
- Polystyrene
- Nylon
- Polymerized allyl alcohol

CLASSIFICATION CANCELLED
PER DOC REVIEW JAN. 1973

VERIFIED UNCLASSIFIED

MWR 1/13/81
Rf 5-8-78

PUBLICLY RELEASABLE
LAW Classification Group

DEC 04 1997

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Dr. M. F. Roy

29 May 1945

If the material which you wish to use does not happen to be in the above list, I would say you are most unlucky.

With best regards,

Cordially yours,


D. P. MacDougall
Deputy Research Director

DPM:bph

6/5/45 copy to [unclear]

CLASSIFICATION CANCELLED
PER DOC REVIEW JAN. 1973

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