

COMPATIBILITY OF EXPLOSIVES WITH POLYMERS (II)

(An Addendum to Picatinny Arsenal  
Technical Report 2595)

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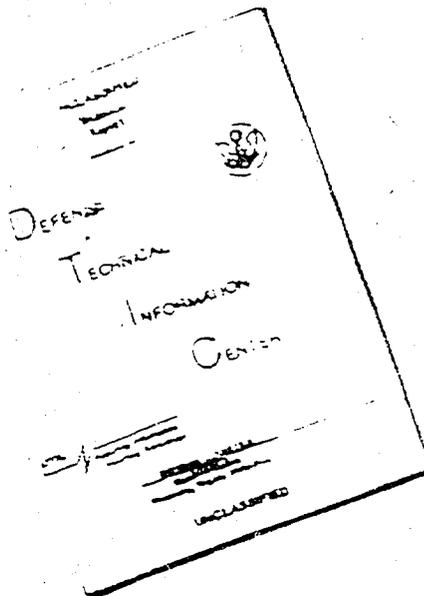
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**PLASTEC REPORT 33**

**COMPATIBILITY OF EXPLOSIVES WITH POLYMERS (II)**  
**(An Addendum to Picatinny Arsenal Technical Report 2595)**

by

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**APRIL 1968**

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## ABSTRACT

A roundup of data on the compatibility of explosives with polymers was made by Miss Marjorie St Cyr in the years immediately prior to 1959. This work was reported as PATR 2595, dated March 1959.

The work herein reported covers the explosives/plastics compatibility data from 1959 through 1967. The effort has been to include all available hard data from the United Kingdom, Canada, Australia and these United States.

The present study is given simplified form: in alphabetical order (first) by trade name or generic name of the plastic and (second) by explosive. By this means the reader can tell (first) what explosives a plastic is compatible with and (second) what plastics can be used safely with a particular explosive.

For this report, the search was stretched to include adhesives and elastomers.

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## NOTICES

### ORGANIZATION:

This report consists of two parts. PART ONE gives a relatively full tabulation of the total compatibility data, arranged alphabetically by polymer or elastomer involved. PART TWO gives the essential parts of the same data, but arranged alphabetically by explosive or propellant. In consulting PART TWO, the reader should remember that the more completed data can be found in PART ONE, listed under the plastic material that is involved. For example, in the citation "Composition B... Polyester, Meta Seal 19V5...Negligible", the reader could turn to "Polyester, Meta Seal 19V5" in order to find how "Negligible" the reaction was.

### SOURCE MATERIALS:

Copies of the source materials upon which this report is based are being permanently retained at PLASTECH. These will be held immediately available, in case the reader has need for additional information from the original report.

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## INTRODUCTION

### BACKGROUND

In the years immediately prior to 1959, Miss Marjorie St Cyr of the Plastics and Packaging Laboratories (Picatinny Arsenal) made a roundup of data on the compatibility of explosives with polymers. This study was published as Picatinny Arsenal Technical Report No. 2595 (AD 310 262), March 1959.

Compatibility data have continued to accrue, at this Arsenal and elsewhere. The size of this report suggests that the time had arrived at which another summarization was in order. The need for this was pointed out by the Tripartite Technical Cooperative Panel; and an appeal was made to the United Kingdom, Canada and Australia for hard data with which to enrich this report. In addition, other USA sources of data were solicited.

Appendix A lists all sources used in this study and gives examples of the method of identification for each source, as used in this report.

### LOCAL HISTORY OF COMPATIBILITY TESTING

Explosives compatibility testing at Picatinny Arsenal started in the early years of World War II. The concept was brought about by the fortuitous concurrence of (1) a need to know what had happened to certain ordnance material and (2) the development of a test which, under closely controlled conditions, could tell if something (breakdown) was happening. As an illustration, something did happen to a particular lot of grenades. It was found that the grenades had rusted internally prior to their loading, and that they were loaded with WC ball powder (a single base propellant grain with a nitroglycerine coating). Through a series of reactivity tests (as described in Appendix B) of the iron rust in contact with all of the main ingredients of the WC ball powder, it was discovered that nitroglycerine and iron rust (surprisingly) are extremely unhappy when in contact.

From this detective-type work, it was a short and logical step to require preknowledge of the compatibility of explosives with the inert materials with which they were designed for contact. Many, many materials are compatible; only very few are extremely unfriendly. However, unless there is back-up information in considerable quantity and variety, it is unsafe ever to assume satisfactory compatibility behavior for any combinations involving explosives or propellants. To illustrate, two fairly well behaved materials are amatol and hydrocarbon wax. Put them together and they will fire in 20 minutes at 100 C.

It is the middle ground which is of greatest concern to the design engineer; the decision as to how much reaction between explosive and inert material can be tolerated in ammunition designed for 10 to 20 years of shelf life or storage.

## TEST METHODS

The test methods used by the installations from whom these data were collected are briefly described in Appendix B.

The Vacuum Stability Test was used by the larger number; by Picatinny Arsenal, Australia and Indian Head. Australia also used other tests normally associated with propellants or explosives stability (Heat Test, Silvered Vessel Test, etc.). As quite an interesting departure, Crare used the modification of the Henkin test, a time-to-explosion test intended primarily for explosives.

The amounts of materials tested, particularly in the Vacuum Stability Test, varied according to (1) the wishes of the engineer requesting the work, (2) the sometimes limited supply of the materials to be tested, or (3) the limitations of the amount of explosive that is safe to test. It is recognized that this matter of amount or ratio of contact materials is influential on the outcome of the test; however, it is also recognized that there is no fixed, slide-rule relationship between the amount of materials tested and the volume of gas reactivity. Therefore, this study has intentionally separated "weight" and "volume" in its reporting. The body of the work shows that a certain volume of gas of reactivity is produced by contact of the materials for a certain length of time at a certain temperature, as reported in AL-S-xx-xx. If the reader wishes to know what weights were involved in the particular test, he must turn to Appendix C and look up AL-S-xx-xx.

## PRECAUTION

The pieces of information given herein are in general only significant for one side of the compatibility picture, showing concern for either (1) the stability of the explosive when in long term contact with the polymeric or elastomeric materials, or (2) the durability of the polymeric or elastomeric material when in long term contact with the explosive.

The reader must keep in mind that only the work reported by ERDE covers the physical testing of the polymeric or elastomeric materials after storage. All other efforts involve the testing of mixtures, and are thus mostly indicative of the behavior of the explosive.

As a guide for the reader, the following tabulation has been constructed:

<u>Primary Concern</u>	<u>Reference Number (within report)</u>
Polymer and elastomer behavior	ERDE 9/M/53 ERDE 7/M/85 WAM/172/01
Explosives behavior	All Others

PART ONE - COMPATIBILITY OF PLASTICS WITH EXPLOSIVES

Herein (under RATING): Excess = "excessive"; Mod. = "moderate"; Neglig. = "Negligible";  
 Comp. = "compatible"; Not comp. = "incompatible"; n/a = "not applicable".  
 Also, NT = "no test".

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
ABS - Acrylonitrile/butadiene/styrene; see also "Cycolac"						
ABS	Propellant NH	-	1 yr	60	None/ slight	WAM/172/01; ERDE 70/M/65
"	Propellant NQ	-	1 yr	60	Severe	"
"	RDX/TNT	-	1 yr	60	Mod.	"
"	TNT	-	1 yr	60	"	"
Acetal - see "Delrin"						
Acrylic, Zefran fiber	Propellant T36	11+	20	100C	Excess	AL-S-99-63
Acrylic/rayon blend	Propellant M6, OKLA 32410	-0.39	40	100	Neglig.	AL-S-14-63
Acrylafil G40/35	Composition C4	0.05	40	100	Neglig.	AL-S-43-65
Activator A (for epoxy)	Potassium chlorate/ aluminum (60/40)	-0.10	40	100	"	AL-S-36-59
"	"	0.22	40	100	"	"
Acrylonitrile rubber gasket, w/brass contact	Propellant NH, vapors	-	3-7 mo	60	Not rec- ommen- ded	ERDE 9/M/53
"	Propellant NQ, vapors	-	3-7 mo	60	"	"
Acrylonitrile/Styrene	Propellant NH	-	1 yr	60	None/ slight	ERDE 70/M/65
"	Propellant NQ	-	1 yr	60	Severe	"
"	TNT	-	1 yr	60	Mod.	"
"	RDX/TNT	-	1 yr	60	"	"
Adhesive - see also "Armstrong... "Bondmaster", "Bostik", "cement", "Epon", "epoxy", "Fulle 7003"						
Adhesive (3M) PAPD 2595	Explosive sheet, EL-506C	0.08	40	100	Neglig.	AL-S-50-62
Adhesive 43D-D16 (cured) (Dewey & Almey Chem)	Composition B	0.25	40	100	"	AL-S-76-66
" (uncured)	"	0.08	40	100	"	"
Adhesive, 828/140* (ground fine)	"	4.32	40	100	Mod.	AL-S-67-62
" (as received)	"	0.12	40	100	Neglig.	"
*See also "Epon... Versamid"						
Adhesive, AK21D (cured 2 hr @ 350 F)	Composition B	0.51	40	100	Neglig.	AL-S-100-62
"	Composition B (stored 6 mo @ 51 C)	-0.30	40	100	"	"
"	Octol (75/25)	-0.19	40	100	"	"
"	Octol (75/25) (stored 6 mo @ 50 C)	-0.49	40	100	"	"
Adhesive, Angier SW 608	Propellant M7	0.55	40	90	"	AL-S-5-64
" (grey enamel)	"	0.02	40	90	"	"
Adhesive, Bostik 1816-541	DATB/Teflon (94/6)	11+	16	120	Excess	AL-S-30-63
"	"	-1.02	40	100	Neglig.	"
Adhesive, Eastman 910 (uncured)	Propellant M2	-0.45	40	100	"	AL-S-26-66
" (cured)	"	0.92	40	100	"	"
"	Propellant M8	3.83	40	90	Mod.	AL-S-41-63
" (uncured)	RDX	-0.94	40	100	Neglig.	AL-S-179-67

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Adhesive, EC 826 (3M)	Propellant, ball powder	0.99	40	90	Neglig.	AL-S-34-61
"	Propellant HEX-12	2.92	40	90	Mod.	"
"	Propellant LFT-1	-0.53	40	90	Neglig.	"
"	Propellant M5	11.	16	90C	Excess	AL-S-65-60
"	Propellant M9	-2.27	40	90	Neglig.	AL-S-34-61
"	Propellant MDB-7	1.68	40	90	"	"
"	Propellant T16	1.46	40	90	"	"
Adhesive, EC 826 (3M) Lot 15M2B	Propellant T16	11+	40	90	Excess	AL-S-44-64
Adhesive, EC 826 (3M)	RDX	11+	40	100	Excess	AL-S-13-62
Adhesive, EC 870 (3M)	Composition B	0.19	40	100	Neglig.	AL-S-36-63
"	Composition B4	0.10	40	100	"	"
"	Tetrytol (70/30)	11+	40	100	Excess	AL-S-37-63
Adhesive, EC 880 (3M)	Black powder/fuze powder (50/50)	-0.39	40	90	Neglig.	AL-S-118-63
"	Lead styphnate	-0.66	40	90	"	"
Adhesive, EC 1022 (3M)	Propellant M17	1.05	40	90	"	AL-S-129-64
"	Propellant T28	0.74	40	90	"	"
Adhesive, EC 1099 (3M)	Black powder, Lot DuP-36-1	-0.14	40	100	"	AL-S-35-62
"	Black powder, Lot DuP-36-2	-0.61	40	100	"	"
"	Black powder, Lot KPC-4-14	-0.57	40	100	"	"
"	Composition A3	-0.38	40	100	"	AL-S-110-62
"	Composition B	-0.78	40	100	"	"
"	Composition C4	-0.82	40	100	"	"
"	Cyclotol (70/30) Lot 51-9	0.15	40	100	"	AL-S-76-67
Adhesive, EC 1099 (3M) (EC 1099/benzene, 95/5)	Lead azide, dextrinated	-1.27	40	90	"	AL-S-116-64
"	Potassium chlorate, Gr A, Cl 2	-2.01	40	90	"	"
Adhesive, EC 1099 (3M)	Propellant M17	1.73	40	90	"	AL-S-129-64
"	Propellant T16	0.70	40	90	"	AL-S-44-64
"	Propellant T28	1.53	40	90	"	AL-S-129-64
"	Propellant T36	1.82	40	90	"	AL-S-116-62
Adhesive, EC 1099 (3M) polyurethane	Propellant T36	-0.37	40	90	"	"
Adhesive, EC 1099 (3M)	Tetrytol (70/30)	11+	16	100	Excess	AL-S-37-63
Adhesive, EC 1099 (3M) (EC 1099/benzene, 95/5)	Tetryl, Gr 1, Cl A	0.54	40	90	Neglig.	AL-S-116-64
Adhesive, EC 1126 (3M)	Tritonal (80/20)	0.20	40	100	"	AL-S-2-66
Adhesive, EC 1359 (3M)	Propellant M17	1.36	40	90	"	AL-S-129-64
"	Propellant T28	-0.04	40	90	"	AL-S-129-64
"	Propellant ARP	2.40	40	90	"	AL-S-76-61
Adhesive, EC 1386 (cured 1 hr @ 360 F)	Composition B	0.34	40	100	"	AL-S-100-62
"	Composition B (stored 6 mo @ 50 C)	0.57	40	100	"	"
"	Octol (75/25)	0.03	40	100	"	"
"	Octol (75/25) (stored 6 mo @ 50 C)	0.45	40	100	"	"
Adhesive, EC 1838 B/A (3M)	Propellant M7	11+	22	90	Excess	AL-S-35-65
Adhesive, EC 2086 (as received)	Composition B	0.21	40	100C	Neglig.	AL-S-67-62
Adhesive, EC 2086 (ground fine)	"	5.79	40	100C	Excess	"
Adhesive, EC 2186 (as received)	"	0.76	40	100C	Neglig.	"
Adhesive, EC 2186 (ground fine)	"	11+	40	100C	Excess	"
Adhesive, EC 2186-1 (3M) (cured)	Composition B-4	11+	40	100	Excess	AL-S-99-64

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Adhesive, EC 2186-2 (3M) (cured)	Composition B-4	2.65	40	100	Neglig.	AL-S-99-64
Adhesive, EC 2216 (3M) A & B (uncured)	RDX	11+	40	100	Excess	AL-S-73-65
"	PETN	3.63	40	100	Mod.	"
Adhesive, R86020 (as received)	Composition B	0.36	40	100	Neglig.	AL-S-67-62
" (ground fine)	"	2.62	40	100	Mod.	"
Adhesive, Edge Tak	Propellant T28	0.00	40	90	Neglig.	AL-S-129-64
"	Propellant M17	0.02	40	90	"	"
Adhesive, Formula 3548-74-10pbw, w/catalysi MPDA/LP-235pbw	Composition B	11+	40	100	Excess	AL-S-114-60
Adhesive, MIL-A-388A, Type 2	Composition B4	-0.04	40	90	Neglig.	AL-S-118-62
Adhesive, Paisley (polyvinyl acetate water emulsion, dry)	Photoflash powder (Mg/Al/KClO <sub>4</sub> )	-0.05	40	100	"	"
Adhesive, plastic trim	Photoflash powder (Mg/Al/KClO <sub>4</sub> )	-0.19	40	100	"	AL-S-79-61
Adhesive-coated fabric tape; Phoenix (Japanese)	Propellant M8	1.66	40	90	"	AL-S-41-63
"	RDX	-	-	100	Comp.	DSL, Australia (Method M240/61)
"	TNT	-	-	100	"	"
Adiprene L 100	Black powder A5/fuze powder	-0.27	40	90	Neglig.	AL-S-93-63
"	Composition B	0.42	40	100	"	AL-S-97-63
Adiprene	Composition C-4	0.07	40	100	"	AL-S-66-64
Adiprene L (MOCA-AGE)	HMX-AL-Nylon	1.38	40	100	"	AL-S-103-60
"	HTA-3	-0.06	40	100	"	AL-S-55-61
Adiprene L 100	Lead styphnate	-0.47	40	90	"	AL-S-93-63
"	Red phosphorus, SRP	0.26	40	100	"	AL-S-97-63
Alathon 3120	Igniter material	3.16	40	120	Mod.	AL-S-22-67
Alathon 7040, polyethylene	Propellant M9, Lot 18820	0.08	40	90	Neglig.	AL-S-103-67
Alkyd resin, Plaskon 2201	Lead azide	-0.01	40	100	"	AL-S-183-67
"	RDX, MIL-R-398C	-0.44	40	100	"	"
Alkyd enamel, priming paint, MIL-P-22332 (uncured)	Tritonal (80/20) + 1% calcium silicate	-0.26	40	100	"	AL-S-94-67
"	"	-0.03*	40	100	"	"
" (cured)	"	-0.24	40	100	"	"
"	"	0.73*	40	100	"	"
"	* Plus thinner					
" (uncured)	Tritonal (80/20) + 50% calcium silicate	-0.53	40	100	"	"
"	"	-0.32*	40	100	"	"
" (cured)	"	-0.52	40	100	"	"
"	"	0.06*	40	100	"	"
"	* Plus thinner					
Alkyd enamel, priming paint, MIL-P-22332 (cured) with inert sealing compound, MIL-S-3105	Tritonal (80/20) + 1% calcium silicate	-0.42	40	100	"	AL-S-142-67
Alkyd enamel, priming paint, MIL-P-22332 (cured) with inert sealing compound, MIL-S-3105	Tritonal (80/20) + 10% calcium silicate	-0.29	40	100	"	AL-S-142-67
"	"	-0.37	40	100	"	"
"	TNT + 10% calcium silicate	-0.41	40	100	"	"
Amberlite resin	Black powder A5	0.10	40	100	"	AL-S-104-60
Araldite 6005 (25pbw), hardener (957pbw)	Composition B	1.92	40	100	"	AL-S-114-60
Armstrong A4 Epoxy Resin (uncured)	Potassium chlorate/aluminum (80/40)	-0.13	40	100	"	AL-S-36-59
"	"	-2.36	40	100	"	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Armstrong A4, Epoxy (cured)	Potassium chlorate/ aluminum (80/40)	0.16	40	100	Neglig.	AL-S-36-59
Armstrong A4	Spotting composition 080	0.81	40	100	"	AL-S-93-60
Armstrong A12, Part A (uncured)	Composition A5	11+	25	100	Excess	AL-S-99-66
Armstrong A12, Part B (uncured)	"	11+	1/2	100	Excess	"
Armstrong A12, Parts A and B (uncured)	"	11+	16	100	Excess	"
Armstrong A12, Parts A and B (cured)	"	4.83	40	100	Mod.	"
Armstrong A12	Cyclotol (70/30) Lot 51-9	5.55	40	100	Excess	AL-S-76-67
Armstrong epoxy C-7 (cured w/Armstrong activator H-47)	Cyclotol (75/25)	11+	16	100	Excess	AL-S-54-66
Astraceram	Boron/potassium nitrate (2 R pellets)	-0.80	40	90	Neglig.	AL-S-51-62
"	Propellant HEX-12	-0.72	40	90	"	"
Bakelite ERL 2795	Boron/potassium nitrate (pellets, type 2R)	0.15	40	90	"	AL-S-132-63
"	HEX-12	11+	1	90	Excess	"
"	LF-3	1.72	40	90	Neglig.	"
Bituminous coating - see "Quaker Koat"						
Bondmaster BU 1200 (100pbw), catalyst Part II (40pbw)	Composition B	0.22	40	100	"	AL-S-114-60
Bostik - see also "adhesive...."						
Bostik cement (United Shoe Machinery)	RDX/Kel F (90/10)	0.07	40	100	"	AL-S-39-63
Brollite (Epoxy A423 + thinner T252)	Lead azide, RD 1333	-0.11	40	100	Excess	"
"	RDX, Class A-HOL-SR- 54-64)	11+	16	100	Neglig.	AL-S-34-67
Buna-N w/DAG-154	Propellant AHH (XM 548 (PPS 502C)	2.06	40	90	Excess	"
Buna-N w/DAG-210	Propellant AHH (XM 548 (PPS 502C)	2.28	40	90	Neglig.	AL-S-10-66
Butyl rubber, gasket, w/brass contact	Propellant NQ, vapors	-	3-7 mo	60	Longest service life	ERDE 9/M/53
"	Propellant NH, vapors	-	3-7 mo	60	Super- ior service life	"
Cab-0-S11 - see "Composition #1 (Part II)						
Cab-0-S11	Lead azide, RD-1333	-0.10	40	120	Neglig.	AL-S-84-60
"	Lead azide, PVA	0.18	40	120	"	"
Casting resin RCM-2, curing agent S (4 hrs @ 65 C)	Composition B, Grade A	11+	23	100	Excess	AL-S-202-67
" (8 hrs @ 65 C)	"	11+	23	100	Excess	"
Cellophane, DuPont	Propellant M8	0.72	40	90	Neglig.	AL-S-56-60
Celluloid	Propellant NQ	-	1 yr	60	Mod.	WAM/172/01
Cellulose acetate	Composition B	-0.29	40	100	Neglig.	AL-S-144-65
"	Composition H6	0.07	40	100	"	"
"	HTA-3	-0.38	40	100	"	"
"	Octol, 75/25	-0.19	40	100	"	"
Cellulose acetate (film)	Photoflash composition (Atomized aluminum and potassium perch- lorate)	-0.14	40	100	"	AL-S-107-64
Cellulose acetate, sheet #1, Celanese run	Propellant AHH	-0.52	40	90	"	AL-S-94-62

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Cellulose acetate, sheet #2, Celanese pilot run	Propellant ANH	-0.55	40	90	Neglig.	AL-S-94-62
Cellulose acetate, sheet #3, Tennessee Eastern Standard Black	"	0.52	40	90	"	"
Cellulose acetate	Propellant NQ	-	1 yr	60	Mod.	WAM/172/01
Cellulose acetate	Propellant HUK	-	1 yr	60	Severe	WAM/172/01
Cellulose acetate, sheet #1, Celanese run	Propellant OUK	0.17	40	90	Neglig.	AL-S-94-62
Cellulose acetate, sheet #2, Celanese pilot run	Propellant OUK	-0.09	40	90	"	AL-S-94-62
Cellulose acetate, sheet #3, Tennessee Eastern Standard Black	Propellant OUK	0.57	40	90	"	"
Cellulose acetate	RDX	-0.20	40	100	"	AL-S-144-65
"	Tritonal (80/20)	0.09	40	100	"	"
Cellulose acetate/fiber glass tape/epoxy	Propellant MDH-7 (Expt 5685)	11+	16	90	Excess	AL-S-75-61
Cellulose acetate/fiber glass tape/epoxy	Propellant MDB-7 (Expt 6585)	0.60	40	90	Neglig.	"
Cellulose acetate/fiber glass tape/Selectron 8119	Propellant MDB-7 (Expt 5685)	1.58	40	90	"	"
"	Propellant MDB-7 (Expt 6585)	-0.28	40	90	"	"
Cellulose acetate butyrate	Composition B	-0.22	40	100	"	AL-S-144-65
"	Composition H6	0.15	40	100	"	"
"	HTA-3	-0.33	40	100	"	"
"	Octol (75/25)	-0.21	40	100	"	"
"	RDX	-0.16	40	100	"	"
"	Tritonal (80/20)	-0.06	40	100	"	"
"	White phosphorus	-0.04	40	90	"	AL-S-171-64
Cellulose nitrate, base, Type 2 cement (Can A)	Composition B4	0.63	40	100	"	AL-S-62-63
" (Can B)	"	0.55	40	100	"	"
" (Can C)	"	0.24	40	100	"	"
Cement, conglomerate (Black Mastic)	Propellant ARP	4.12	40	90	Mod.	AL-S-78-51
Chemglaze, white gloss, (Hughson Chemical)	Composition B, Lot HOL-7-1879	0.11	40	100	Neglig.	AL-S-122-66
Chlorinated hydrocarbon - see "hydrocarbon, chlorinated"						
Chlorinated polyether - see "Denton"						
Coating compound, MIL-C-450, type 1 (cured)	Minol-3 (40/40/20)	1.71	40	100	"	AL-S-185-67
"	"	1.48	40	100	"	"
"	Minol-2 (40/40/20), modified	1.32	40	100	"	AL-S-184-67
Coating MIL-C-450 (cured) plus asphalt hot melt, MIL-C-3301	TNT/AL Meg Aluminum alloy granules EXXO-30 (80/20)	-0.37	40	100	"	AL-S-165-67
"	"	-0.40	40	100	"	"
Coating, asphalt hot melt, MIL-C-3301 plus AL Meg Aluminum granules, EXXO-90-30	TNT, Grade 1	-0.37	40	100	"	"
"	"	-0.29	40	100	"	"
Cobalt naphthenate, accelerator for polyester	RDX, Grade 1A	-	-	100 120 150	Comp. Comp. Not comp.	DSL, Australia Method M240/61
Conap 2510/Conacure AH-19 (50/50), after set-up PIF-21E	Propellant HEN-12	11+	16	90	Excess	AL-S-62-66
Combustible case - see also "nitroglycerine,..."						
Cycloac, ABS	Propellant M9, Lot 18820	-2.02	40	90	Neglig.	AL-S-103-67

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Cycloac LTN 8008	Propellant M1	-0.21	40	100	Neglig.	59-M1-10
"	Propellant M6	-1.61	40	100	"	"
"	Propellant M17	0.80	40	100	"	"
"	Propellant M18	1.40	40	100	"	"
Cycloac T (ABS) (Marbon)	Composition B	1.52	40	100	"	AL-S-80-64
Cycloac C-14	Spotting composition 580	-0.07	40	100	"	AL-S-93-60
Dacron	Propellant M9 HEP 37360	-0.37	40	90	"	AL-S-26-63
Dapon resin	Baratol (67/33)	-0.41	40	100	"	AL-S-23-67
"	Composition B4	0.39	40	100	"	"
"	Tetryl	0.03	40	100	"	"
Delrin	Black powder A5	-0.32	40	120	"	AL-S-27-66
"	Composition B	-0.06	40	100	"	AL-S-79-60
"	Composition C4	-0.03	40	100	"	"
"	Delay composition	-0.26	40	120	"	AL-S-27-66
"	First fire composition	-0.39	40	120	"	"
"	Igniter composition	-0.50	40	120	"	"
"	Illuminant composition	-0.57	40	120	"	"
"	Lead azide	-0.15	40	120	"	AL-S-79-60
"	PETN	-0.64	40	100	"	"
Delrin X	Propellant OM22, IB 7470	-0.25	40	90	"	AL-S-30-67
"	"	-0.30	40	90	"	"
Delrin	Tetryl	-0.09	40	100	"	AL-S-79-60
"	TNT	1.69	40	100	"	"
"	White star pellets (uncoated)	-0.51	40	120	"	AL-S-27-66
Delrin 50, polyacetal	Propellant M9, Lot 18820	0.41	40	90	"	AL-S-103-67
Delrin 500 (in presence of equal amount of Polybag)	Propellant M10, RAD 60310	-0.68	40	90	"	AL-S-139-67
Delrin 500	Composition B, Lot HOL-71879	0.07	40	100	"	"
"	Composition A5, Type 1	-0.13	40	100	"	"
Devcon	Composition B	0.04	40	100	"	AL-S-23-64
"	RDX	-0.09	40	100	"	"
Devcon (coated with acid proof paint)	Composition B	0.68	40	100	"	AL-S-12-64
"	RDX	0.07	40	100	"	"
Devcon A/Devcon flux/ Ciba 951/Ciba 502	Composition C4	2.88	40	100	Mod.	AL-S-124-62
Devcon B	Boron/potassium nitrate (2R pellets)	-0.42	40	90	Neglig.	AL-S-51-62
"	Propellant HEX 12	11+	21	90	Excess	"
Devcon B Liquid Type and Hardener	Cyclotol (75/25)	2.41	40	100	Slight	AL-S-61-66
Devcon, lead	Octol (75/25)	3.73	40	100	Mod.	AL-S-25-65
Devcon mix (9/1)	Composition B	11+	16	100	Excess	AL-S-11-64
"	RDX	11+	16	100	Excess	"
Diallyl phthalate - see "Dapon"						
Diallyl phthalate	HTA-3	3.14	40	100	Mod.	AL-S-66-67
Dow Corning A-4000	Spotting comp 580	-0.69	40	100	Neglig.	AL-S-93-60
Diallyl phthalate/glass molding compound - see "RX-1300", "FS-4"						
Durestos - see "resinated asbestos"						
Durez	Composition H6	-0.09	40	100	"	AL-S-79-61
"	RDX	-0.14	40	100	"	"
Durez D1	Propellant M2	1.07	40	90	"	AL-S-128-66
Durez D2	"	0.42	40	90	"	"
Durez 26080	Propellant M2 *(Materials in direct contact)	4.11	40	90	Mod.*	AL-S-46-67

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Durez 26080	Propellant M2 **(Materials in proximity, separated by glass wool)	9.03	40	90	Neglig.	AL-S-46-67
Dutral - see "ethylene-propylene"						
EC 612 (3M) EC - see also "adhesive...." Eastman - see "adhesive...."	Composition B	0.55	40	100	Neglig.	AL-S-115-60
Eccobond 56C (cured)	Igniter mix T61	-0.23	40	90	"	AL-S-154-63
Eccobond cement (uncured)	PVA lead azide	0.43	40	120	"	AL-S-108-60
Eccobond cement (cured)	PVA lead azide	0.24	40	120	"	"
Eccobond solder (including catalyst)	Octol (75/25)	3.78	40	100	Mod.	AL-S-52-67
Elastic compound, No. 155.2	Tritonal (80/20)	0.18	40	100	Neglig.	AL-S-44-66
Elastomer XD-38	Propellant M30	3.40	40	90	Mod.	AL-S-19-66
Elastomer 7D-10	"	2.31	40	90	Neglig.	"
Elastomer S-133	Propellant T36	2.03	40	90	"	AL-S-112-63
Elastomer S-133-B	"	2.32	40	90	"	"
Elastomer S-54DE-F2	"	3.41	40	90	Mod.	"
Elastomer S-55-F4	"	4.27	40	90	"	"
Elastomer S-135	"	0.95	40	90	Neglig.	"
Elastomer S-136	"	2.44	40	90	"	"
Elastomer B-8-P	"	1.76	40	90	"	"
Elastomer M75E2 F1.	"	1.99	40	90	"	AL-S-2-63
Elastomer Z110CE2F3	"	5.09	40	90	Excess	"
Elastomer Z118CIF4	"	2.59	40	90	Neglig.	"
Elastomer Z46E	"	11+	40	90	Excess	"
Elastomer 510	"	4.37	40	90	Mod.	"
Elastomer Z103	"	3.03	40	90	"	"
Elastomer S54BDEF2	"	4.99	40	90	"	"
Elastomer 455-1	"	2.00	40	90	Neglig.	"
Elastomer N117	"	4.48	40	90	Mod.	"
Elastomer I19	"	2.49	40	90	Neglig.	"
Elastomer I51EF	"	1.55	40	90	"	"
Elvax liner (vinyl)	Propellant T36	0.44	40	90	"	AL-S-136-65
Epibond - see "phenoxy"						
Epiphen 825A	HMX/A1/Nylon	1.26	40	100	"	AL-S-61-60
Epiphen ER-825A	Spotting composition 580	0.06	40	100	"	AL-S-93-60
Epiphen 825A, (140pbw); modifier, (12pbw); converter, (16pbw)	Composition B	11+	30	100	Excess	AL-S-114-60
Epocast	Composition C4	11+	16	100	Excess	AL-S-2-65
Epocast N4S-066 Mod 1A	Composition B	11+	16	100	Excess	AL-S-28-65
Epon 31-59 (uncured)	Composition B	3.20	40	100	Mod.	AL-S-68-67
Epon 31-59, Part A/Part B (100:72 by wt.) (anhydrite cured) 7 days @ 75 F)	"	-0.37	40	100	Neglig.	"
Epon 31-59	Cyclotol (70/30)	-0.37	40	100	"	AL-S-26-67
"	HTA-3	0.28	40	100	"	AL-S-39-62
Epon 31-59 (cured)	PETN	-0.52	40	100	"	AL-S-57-65
Epon 31-59 (uncured)	"	-0.33	40	100	"	"
Epon 31-59, Part A (uncured)	"	3.20	40	100	Mod.	"
Epon 31-59, Part B (uncured)	"	2.14	40	100	Neglig.	"
Epon 31-59 (cured)	RDX, Class A	-0.14	40	100	"	"
Epon 31-59 (uncured)	"	0.76	40	100	"	"
Epon 31-59, Part A (uncured)	"	11+	16	100	Excess	"
Epon 31-59, Part B (uncured)	"	0.16	40	100	Neglig.	"
Epon X-81 (100pbw); catalyst Z (22pbw); Bentene (30pbw)	Composition B	11+	22	100	"	AL-S-114-60
Epon 815	Octol (75/25)	11+	40	100	Excess	AL-S-25-65
Epon 820	Composition B	-0.05	40	100	Neglig.	AL-S-72-65
Epon 820/TETA	"	11+	16	100	Excess	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Epon 820	TETA	-0.03	40	100	Neglig.	AL-S-72-65
Epon 820/Versamid 140 (70/30), Adhesive A	Composition B	11+	16	100	Excess (50/50)	AL-S-9-62
"	"	11+	40	100	Excess (10/90)	"
Epon 820/Versamid 140 (70/30)	"	11+	16	100	Excess	AL-S-1-62
"	DATB	-0.34	40	100	Neglig.	AL-S-39-63
"	DATB/Lexan (94/6)	-0.35	40	120	"	"
"	DATB/Lexan (94/6)	-0.23	40	100	"	"
"	DATB/Viton (94/6)	-0.08	40	120	"	"
"	DATB/Viton (94/6)	-0.09	40	100	"	"
"	DATB/Viton (94/6)	-0.21	40	120	"	"
Epon 820/Versamid 140 (70/30), Adhesive A	HMX	-0.03	40	100	"	AL-S-9-62
Epon 820/Versamid 140	HMX-A1-Nylon	0.59	40	100	"	AL-S-106-60
Epon 820-125	HTA-3	11+	16	100	Excess	AL-S-39-62
Epon 820-125 HC	"	11+	16	100	Excess	"
Epon 820-250	"	11+	16	100	Excess	"
Epon 820-250 HC	"	11+	16	100	Excess	"
Epon 820-140	"	11+	16	100	Excess	"
Epon 820-140 HC	"	11+	16	100	Excess	"
Epon 820/Versamid 140 (70/30), adhesive	"	11+	16	100	Excess	AL-S-30-62
Epon 820/Versamid 140 (70/30), Adhesive A	"	11+	16	100	Excess (50/50)	AL-S-9-62
"	"	4.96	40	100	Mod. (10/90)	"
"	HTA-3M	11+	16	100	Excess (50/50)	AL-S-9-62
"	"	4.06	40	100	Mod. (10/90)	"
Epon 820-310	HTA-3	11+	16	100	Excess	AL-S-39-62
Epon 820-310 HC	"	11+	16	100	Excess	"
Epon 820/913B-A-1-5B (adhesive)	"	0.27	40	100	Neglig.	AL-S-29-62
Epon 820-2000	"	11+	16	100	Excess	AL-S-39-62
Epon 820-2000 HC	"	11+	16	100	Excess	"
Epon 820/Versamid 140 (70/30), Adhesive A	Octol	11+	16	100	Excess (50/50)	AL-S-9-62
"	"	3.68	40	100	Mod. (10/90)	"
"	Octol M	11+	16	100	Excess (50/50)	"
"	"	3.85	40	100	Mod. (10/90)	"
Epon 820/Versamid 140	Octol (75/25)	11+	40	100	Excess	AL-S-32-65
Epon 820/Versamid 140	PETN	2.08	40	100	Neglig.	AL-S-149-60
Epon 820 (cured)	Potassium chlorate/aluminum (60, 40)	-0.02	40	100	"	AL-S-36-59
Epon 820 (uncured)	"	-0.26	40	100	"	"
"	"	-0.02	40	100	"	"
Epon 820/Versamid 140	RDX	11+	16	100	Excess	AL-S-149-60
Epon 820/Versamid 140 (70/30), Adhesive A	"	4.16	40	100	Mod.	AL-S-9-62
Epon 820/Versamid 140 (70/30)	RDX/Kel-F (90/10)	0.81	40	100	Neglig.	AL-S-39-63
"	"	11+	24	120	Excess	"
Epon 820/Versamid 140 (70/30), Adhesive A	TNT	11+	19	100	Excess	AL-S-9-62
Epon 826, with fiber glass	HTA-3 explosive	0.48	40	100	Neglig.	AL-S-23-65
"	"	2.78	40	120	"	"
"	H-6 explosive	0.69	40	100	"	"
"	"	1.85	40	120	"	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Epon 828/Versamid 125 (50/50)	Black powder A5	0.13	40	100	Neglig.	AL-S-70-66
" (55/45)	"	0.08	40	100	"	"
" (60/40)	"	0.28	40	100	"	"
Epon Resin #828	Casting Powder, ABL 1408 * Includes gas produced by the plastic	<4.41*	40	90	Slight/mod.	USNOS-IH
Epon 828	Composition B	0.06	40	100	Neglig.	AL-S-50-67
Epon 828/Versamid 125 (uncured)	"	- *	1/10	100	*Explo- ded	"
" (cured)	"	9.11	40	100	Excess	"
Epon 828	Cyclotol (75/25)	11+	16	100	Excess	AL-S-68-66
"	Cyclotol w/1% boric acid added	11+	16	100	Excess	"
Epon 828/Versamid 125 5%/5% (uncured)	Emite, Lot X2676 (ball powder)	-0.13	40	100	Neglig.	AL-S-15-67
" (cured)	"	-0.13	40	100	"	"
Epon 828/Cardolite 6885/ Epon Acc. Z/Kaolin	H6	0.63	40	100	"	AL-14-59
Epon 828-125	HTA-3	11+	16	100	Excess	AL-S-39-62
Epon 828-125 HC	"	11+	16	100	Excess	"
Epon 828/EM-550	"	0.37	40	100	Neglig.	AL-S-29-62
Epon 828/Versamid (cured)	"	0.78	40	100	"	AL-S-67-60
Epon 828	Photoflash powder Ca/Al/KClO <sub>4</sub> (30/20/50)	-0.13	40	100	"	"
"	Photoflash powder, Type III, Class A (40/30/30)	-0.07	40	100	"	"
Epon 828/Versamid 140	Photoflash comp., (EDSP of simulator, gun flash M110)	-0.37	40	100	"	AL-S-15-66
Epon 828/Versamid XD-140 (70/30) (cured)	Photoflash powder, (40/30/30), Type III, Class A	-0.12	40	100	"	AL-S-74-60
" (uncured)	"	-0.05	40	100	"	"
" (cured)	Photoflash powder, (30/20/50) Ca/Al/KClO <sub>4</sub>	-6.03	40	100	"	"
" (uncured)	"	-0.02	40	100	"	"
Epon 828/Versamid 125 (uncured)	Propellant AHH	11+	16	90	Excess	AL-S-4-62
" (cured)	"	11+	16	90	Excess	"
Epon 828	Propellant M5	11+	40	90	Excess	AL-S-117-62
Epon 828/Versamid 125 (50/50) (cured)	Propellant M9	11+	16	90	Excess	AL-S-138-67
Epon 828/Versamid 140 (50/50) (cured 3 hours)	Propellant M9, flake (EDSP-Sig I11, Grd Para Green Star M19A)	11+	16	90	Excess	AL-S-42-66
" (cured 24 hours)	"	11+	16	90	Excess	"
" (uncured)	"	11+	16	90	Excess	"
Epon 828/Versamid 140 (70/30) (cured 24 hours)	"	11+	19	90	Excess	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Epon 828/Versamid 140 (70/30) (cured 3 hours)	Propellant M9, flake (EDSP-Sig I11, Grd Para Green Star M19A)	11+	16	90	Excess	AL-S-42-66
" (uncured)	"	11+	16	90	Excess	"
Epon 828/Versamid XD-140 (cured)	Propellant M9	6.93	40	90	Excess	AL-S-2-62
"	"	11+	16	90	Excess	"
Epon 828/TETA #3, graphite filled	Propellant M17	11+	16	100	Excess	59-H1-430
Epon 828/TETA #3, asbestos filled	"	11+	16	100	Excess	"
Epon 828/Versamid 125	Propellant T28	6.71	8	90	Excess	AL-S-88-64
"	"	11+	16	90	Excess	"
Epon 828/Versamid 125	Propellant T28E1	11+	16	90	Excess	"
"	"	11+	0.5	90	Excess	"
Epon 828/Versamid 125 (uncured)	Propellant T28E1	11+	40	90	Excess	AL-S-116-66
" (cured)	"	6.61	40	90	Excess	"
Epon 828/Versamid 140 (70/30)	Teflon/DATB (6/96)	-0.41	40	100	Neglig.	AL-S-39-63
Epon 829	Composition C-4	-0.27	40	120	"	"
Epon 901-B-1	Composition C-4	2.94	40	100	"	AL-S-66-64
"	HMX/Al/Nylon (66/25/9)	5.16	40	100	Excess	AL-S-113-60
"	HMX/TNT/Al (54/25/21)	11+	16	100	Excess	"
Epon resin #911S	HTA-3 Composition Casting powder, ABL 1852	1.13*	40	90	Neglig.	USNOS-IH
"	"	1.54*	40	90	"	"
"	*Mixture only					
Epon 913 (cured)	Cyclotol (75/25)	5.87	40	100	Excess	AL-S-104-64
Epon 913	Composition B	0.22	40	100	Neglig.	AL-S-38-62
Epon 913 (uncured)	Cyclotol (70/30)	2.93	40	100	"	AL-S-23-66
Epon 913 (cured) (rasped to 40 mesh)	"	3.30	40	100	Mod.	"
Epon 913-A-1-6A	HTA-3	0.48	40	100	Neglig.	AL-S-29-62
Epon 913	Octol (75/25)	0.31	40	100	"	AL-S-38-62
Epon 913 (cured)	"	2.63	40	100	"	AL-S-104-64
Epon 919	Composition B	0.10	40	100	"	AL-S-37-62
"	HTA-3 Propellant	0.11	40	100	"	"
"	Octol (75/25)	0.10	40	100	"	"
Epon 934 (cured)	PETN	-0.30	40	100	"	AL-S-57-65
Epon 934 (uncured)	"	1.31	40	100	"	"
Epon 934, Part A (uncured)	"	2.51	40	100	"	"
Epon 934, Part B (uncured)	"	burned	8 min	100	Excess	"
Epon 934 (cured)	RDX, Class A	2.42	40	100	Neglig.	"
Epon 934 (uncured)	"	11+	16	100	Excess	"
Epon 934, Part A (uncured)	"	11+	16	100	Excess	"
Epon 934, Part B (uncured)	"	explod.	5 min	100	Excess	"
Epon 946 A and B (uncured)	Propellant T28E1	-1.40	40	90	Neglig.	AL-S-116-66
Epon 946 A and B (cured)	"	1.34	40	90	"	"
Epon adhesive, Shell 948 (cured)	Tritonal (80/20)	-0.21	40	100	"	AL-S-115-66
Epon adhesive, Shell 948	"	-0.10	40	100	"	"
Epon adhesive, Shell 953	"	-0.20	40	100	"	"
Epoxy M1 & Epocure 69	Cyclotol (75/25)	11+	16	100	Excess	AL-S-61-66
Epoxy M1 & Epocure S-9	"	11+	16	100	Excess	"
Epoxy, ERL-2774 Batch 1697, Assay 194	Photoflash composition (EDSP of simulator, gun flash M110)	-0.42	40	100	Neglig.	AL-S-15-66
Epoxy resin - see "Epiphen"						
Epoxy - See also "activator for...", "Devcon", "Epocast", "Epoxy", "Epon", "Fuller 7003", "MCS-33-2", "nylon epoxy laminate", "Stycast"						
Epoxy adhesive - See "Tra-Bond"						

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Epoxy A31	Photoflash comp (EDSP of simulator, gun flash M110)	-0.06	40	100	Neglig.	AL-S-15-66
Epoxy A1177B1 (uncured)	Composition B	-0.11	40	100	"	AL-S-71-65
Epoxy 31B	Propellant T28E1	11+	16	90	Excess	AL-S-87-64
Epoxy 437	Propellant M5	5.35	40	90	Excess	AL-S-117-62
Epoxy 9:53H1494	Propellant T28E1	11+	16	90	Excess	AL-S-87-64
Epoxy 907, adhesive (M. S. Co.)	Lead azide, dextrinated	-0.58	40	90	Neglig.	AL-S-116-64
"	Potassium chlorate, Grade A, Class 2	-0.87	40	90	"	"
"	Tetryl, Grade 1, Class A	0.66	40	90	"	"
Epoxy 907, adhesive	Yellow smoke pellet (EDSP Pellet, Smoke, f/Mine AP, Practice M8A1)	-0.15	40	90	"	AL-S-16-66
Epoxy 907, adhesive (EDSP, Pellet, Smoke, f/Mine AP, Practice M8A1)	Yellow smoke comp	-0.34	40	90	"	"
Epoxy 1210	Propellant T28E1	11+	16	90	Excess	AL-S-87-64
Epoxy H-1863	Propellant M5, flake	-0.54	40	90	Neglig.	AL-S-52-63
Epoxy resin 2215B	Cyclotol (75/25)	11+	16	100	Excess	AL-S-69-66
Epoxy resin, 2500 Black, (Epoxy Products Inc.) plus 44 hardener 1:1	"	11+	16	100	Excess	AL-S-54-66
Epoxy resin 2611	"	11+	16	100	Excess	AL-S-69-66
Epoxy, liquid resin - see "Bakelite ERL 2795"	Fuses	1.33	40	100	Neglig.	AL-S-18-65
Epoxy ERL 2774/Versamid 125 (2.5/1)	Photoflash powder (26/34/40) Al/Mg/potassium perchlorate	0.04	40	100	"	AL-S-18-65
Epoxy ERL 2774	Sodium nitrate, Lot 8729 (Davies Nitrate Co.)	-0.23	40	100	"	AL-S-18-67
Epoxy	Nitrocellulose comp.	-0.11	40	90	"	AL-S-126-60
Epoxy (amine cured) (60/40)	Propellant, cast double base (5% aluminum)	-	48	100	Comp.	DSL, Australia (Explosion test)
Epoxy (amine cured) Epon 946, Parts A & B (Shell Chemical)	"	-	500	80	"	DSL, Australia (Silvered Vessel)
Epoxy (amine cured, 40/60)	"	-	500	80	"	DSL, Australia (Silvered Vessel)
Epikote 828, (Shell) with hardener Versamid 140 (General Mills)	"	-	48	100	"	DSL, Australia (Explosion Vessel)
Epoxy (anhydride cured) Epon 25-149, Parts A & B, (Shell Chemical)	"	-	500	80	"	DSL, Australia (Silvered Vessel)
Epoxy resin	Propellant HUK	-	1 yr	60	None/ slight	WAM/172/01
Epoxy adhesive 25-149 (cured) (Unfilled 31-59)	Combustible case, Standard, Lot WPP-3-3	-0.19	40	90	Neglig.	AL-S-101-67
Epoxy adhesive (cured)	LFT-1 (PI-F-510) (Gas generator)	0.09	40	90	"	AL-S-142-60
Epoxy adhesive (uncured)	"	0.20	40	90	"	"
Epoxy adhesive 24-149, (cured) (unfilled 31-59)	Nitroglycerine-dipped combustible case, 1B7843 F-1	-0.50	40	90	"	AL-S-101-67
Epoxy adhesive, Alloco (Alloco Products)	Octol (75/25)	11+	16	100	Excess	AL-S-109-64
Epoxy adhesive, M5 (Miller Stephenson)	"	11+	16	100	Excess	"
Epoxy adhesive, 3M, #77	"	0.21	40	100	Neglig.	AL-S-120-66

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Epoxy adhesive (amine cured); Epophen ET-2-A and EL-5 with hardener EHR-1 (Leicester, Lovell)	Propellant, case double base	-	500	80	Comp.	DSL, Australia (Silvered Vessel)
Epoxy, Marasette	Octol (70/30)	6.16	40	100	Excess	AL-S-42-65
Epoxy resin	Igniter mix T61	-0.15	40	90	Neglig.	AL-S-154-63
Epoxy, Thermostat Plastics #101 (epoxy #101, hardener #101) (1:1) (cured)	Composition B	11+	40	100	Excess	AL-S-68-67
Epoxy system (uncured)	Propellant M9, Lot PE-46-11C	11+	40	90	Excess	AL-S-81-67
Epoxy system (cured)	Propellant M9, Lot PE-46-11C	0.97	40	90	Neglig.	"
Epoxy resin/ball powder, M6 (90/10)	Propellant M9, RAD-PE-162-17	11+	40	90	Excess	AL-S-102-67
"	Propellant M26E1, RAD-PE-162-22	5.16	40	90	Excess	"
Epoxy/ball powder, M6, bonded	Ignition mix (AXP-90933)	-1.07	40	100	Neglig.	AL-S-82-60
Epoxy/ball propellant (M6)	Propellant T28	5.54	8	90	Excess	AL-S-88-64
"	"	11+	16	90	Excess	"
Epoxy/propellant M6	Propellant T28E1	11+	7	90	Excess	"
Epoxy/ball propellant (M6)	"	11+	16	90	Excess	"
Epoxy/fiberglass impreg.	Comp B w/calcium silicate	-0.23	40	100	Neglig.	AL-P-180-64
Epoxy/glass laminates	RDX/TNT	-	1 yr	60	None/slight	WAM/172/01
Epoxy/phenolic, MIL-C-52232	Lead azide, RD-1333	-0.14	40	100	Neglig.	AL-S-176-67
"	RDX	-0.16	40	100	"	"
Epoxy-phenolic laminates	Plastic explosive (PE)	-	1 yr	60	None/slight	WAM-172/01
Epoxy/polyamide, (clear) MIL-C-22750	Lead azide, RD-1333	-0.26	40	100	Neglig.	AL-S-176-67
Epoxy/polyamide (OD) MIL-C-22750	"	-0.21	40	100	"	"
Epoxy/polyamide (clear) MIL-C-22750	RDX	3.46	40	100	Mod.	"
Epoxy/polyamide (OD) MIL-C-22750	"	11+	21	100	Excess	"
Epoxy/polyethylene glass tape	Propellant WC-660	-0.08	40	90	Neglig.	AL-S-1-66
EPT - ethylene-propylene terpolymer	TNT	-	1 yr	60	Slight/mod.	WAM/172/01
EPT	Propellant NQ	-	1 yr	60	Slight/mod.	WAM/172/01
Ethafoam (expanded polyethylene) (Dow)	Propellant T16	2.22	40	90	Neglig.	AL-S-65-64
Ethyl cellulose	Propellant HUK	-	1 yr	60	Mod.	WAM/172/01
Ethylene acrylate (BLU 26/B)	Cyclotol (75/25)	-0.08	40	100	Neglig.	AL-S-25-66
"	Composition B	-0.11	40	100	"	"
Ethylene propylene	Propellant T36	11+	40	90	Excess	AL-S-99-62
Ethylene propylene, polymer	Propellant M7	2.54	40	90	Slight	AL-S-87-66
Ethylene propylene rubber	Astrolite G	2.52	40	100	Neglig.	AL-S-122-67
Ethylene propylene gum rubbers (Dutral N, EPR, S, and EPIM (Montecatini))	RDX, Grade 1A	-	-	100	Comp.	DSL, Australia (Method M240/61)
EVA - ethylene vinyl acetate	CE	-	1 yr	60	None/slight	WAM/172/01
EVA	Propellant NQ	-	1 yr	60	Mod.	WAM/172/01
"	TNT	-	1 yr	60	Slight/mod.	WAM/172/01

Plastic	Explosive	Gas (mi)	Hrs	Temp (°C)	Rating	Report No.
FM-4005 (Fiberite Corp.)	Octol	-0.04	40	100	Neglig.	AL-S-50-64
FS-4 (Mesa Plastics)	"	-0.43	40	100	Neglig.	"
FS-4	HTA-3	-0.09	40	100	"	AL-S-81-61
Fiberglass/polyester (FD-12-59)	Propellant M5, Lot RAD-38141	0.09	40	90	"	AL-S-153-60
Fiberite	H6	6.23	40	100	Excess	AL-S-19-62
"	RDX	1.41	40	100	Neglig.	"
Fiberite X-1942	Flash powder (50/50 red phosphorus/magnesium)	-0.38	40	100	"	AL-S-40-65
"	Propellant, HiVel #2, Lot 278 (single perf)	11+	16	90	Excess	"
"	Propellant M2 Lot LB-6616-1, flake	11+	40	90	Excess	"
Fiberite 4030	H-6 explosive	1.29	40	100	Neglig.	AL-S-84-62
"	RDX	1.04	40	100	"	"
Fiberite 5430 (epoxy/glass)	HTA-3 composition	6.80	40	100	Excess	AL-S-106-62
"	HTA-3	8.53	40	100	Excess	AL-S-70-61
"	PETN, Class A (unwashed)	0.03	40	100	Neglig.	"
"	RDX	8.01	40	100	Excess	"
Foam flex, sheet #2	Propellant M17	11+	40	100	Excess	59-H1-430
Foam-silastic Q3-0031	H6	-7.90	40	100	Neglig.	59-H1-489
Formica super fast dry contact cement (Cyanamid)	Black powder A5 fuse powder (50/50)	-0.30	40	90	"	AL-S-93-63
Formica super fast dry contact cement (Cyanamid)	Lead styphnate	-0.59	40	90	"	"
Fuller 7003 (epoxy)	Cyclotol (75/25)	11+	16	100	Excess	AL-S-61-66
Furane/CM catalyst/Gypsum (10/2/10)	DATB	NT*	40	100	No test	AL-S-39-63
"	DATB/Lexan (94/6)	NT	40	100	"	"
"	DATB/Teflon (94/6)	NT	16	100	"	"
"	DATB/Viton (94/6)	NT	16	100	"	"
"	RDX/Kel F (90/10)	NT	40	100	"	"
"	"	"	16	120	"	"
"	*Gas generated by control exceeded the capacity of the instrument					
Galvanoplast, conductive paint	Black powder A5	3.62	40	100	Mod.	AL-S-69-62
"	Propellant M6	0.96	40	90	Neglig.	"
"	Propellant M15	11+	21	90	Excess	"
"	Propellant M7	11+	16	90	Excess	"
"	RDX	2.11	40	100	Neglig.	"
"	Tetryl	2.63	40	100	"	"
"	TNT	3.38	40	100	Mod.	"
Gasket, Talos - see "rubber, Potomac"						
Glastimat #1	Composition B	0.01	40	100	Neglig.	AL-S-79-67
"	RDX	-0.21	40	100	"	"
"	Tetryl	0.01	40	100	"	"
Glue, DuPont	Composition B	0.19	40	100	"	AL-S-68-61
G Primer SS 4004	TNT Type 1	-0.17	40	100	"	AL-S-49-67
"	TNT + 1% calcium silicate, tech grade	-0.54	40	100	"	"
"	Tritonal (80/20)	-0.59	40	100	"	"
" (uncured)	Tritonal (80/20) + 1% calcium silicate, tech grade	-0.84	40	100	"	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Hot melt compound, MIL-C-3301	Minol-2 (40/40/20)	3.62	40	100	Mod.	AL-S-185-67
		3.58	40	100	"	"
Hot melt compound, MIL-C-3301 plus distilled water	Minol-2 (40/40/20), modified	3.81	40	100	"	"
		3.52	40	100	"	"
Hydrocarbon, chlorinated, Cereclor 42 (ICI)	Tritonal (80/20) modified	-0.15	40	100	Neglig.	"
		-	500	80	Comp.	DSL, Australia (Silvered Vessel)
Hypalon	Propellant HUK	-	1 yr	60	Slight/mod.	WAM/172/01
"	TNT	-	1 yr	60	Slight/mod.	WAM/172/01
Hysol 2039/Hysol 3469 (100/15) (2 hrs at 320 F)	Composition B	0.19	40	100	Neglig.	AL-S-100-62
Hysol 2039/Hysol 3469 (100/15) (2 hrs at 320 F) (stored 6 mo at 50 C)	"	0.42	40	100	"	"
Hysol cake	Delay composition (90/10 BaCr/B)	-0.14	40	100	"	AL-S-67-66
Hysol 2039/Hysol 3469 (100/15) (2 hrs at 320 F)	Octol (75/25)	0.11	40	100	"	AL-S-100-62
Hysol 2039/Hysol 3469 (100/15) (2 hrs at 320 F) (stored 6 mo at 50 C)	"	0.31	40	100	"	"
Hysol cake (cured)	RDX Type II, Lot PA 2-10 w/stearic acid 271-17-66	2.98	40	100	Slight	AL-S-85-66
Hysol (uncured)	"	11+	40	100	Excess	"
Inert sealer, Type 1 MIL-S-3105	Minol-2 (40/40/20)	-0.08	40	100	Neglig.	AL-S-184-67
Inert sealer, Type 1 MIL-S-3105, plus hot melt compound	"	-0.25	40	100	"	"
Inert sealer #1, MIL-S-3105	TNT Type 1 + 1% calcium silicate, tech grade	-0.50	40	100	"	AL-S-49-67
		0.14	40	100	"	"
Inert sealer, MIL-S-3105B, Type 1	TNT/AL Meg Aluminum granule EXXO 90-30 (80/20)	-0.43	40	100	"	AL-S-165-67
		-0.39	40	100	"	"
"	TNT/AL Meg Aluminum (50/50)	-0.36	40	100	"	"
Inert sealer, MIL-S-3105B, Type 1, plus coating hot melt MIL-C-3301	TNT/AL Meg Aluminum granules EXXO 90-30 (80/20)	-0.74	40	100	"	"
Inert sealer #1, MIL-S-3105	Tritonal (80/20)	-0.18	40	100	"	AL-S-49-67
		-0.28	40	100	"	"
		0.17	40	100	"	"
Inert sealer MIL-S-3105 plus distilled water	Tritonal (80/20) modified	-0.39	40	100	"	AL-S-190-67
Insulation, RPD 150	Propellant M8	1.79	40	90	"	AL-S-41-63
Isomer resin - see "Surlyn"	First fire composition	NT	40	90	Tubes broke on cooling	AL-S-52-62
Isochemrez #460 w/hardener #50 (uncured)	PA-PD-594, Type 1				Neglig.	"
" (cured)	"	-0.22	40	90	"	"
Isochemrez #460 w/hardener #63 and catalyst #215X (uncured)	"	0.23	40	90	"	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Isochemrez #460 w/hardener #63 and catalyst #215X (cured)	First fire composition PA-PD-594, Type 1	0.15	40	90	Neglig.	AL-S-52-62
Isochemrez #460 w/hardener #50 (uncured)	Illuminant comp.; Magnesium, sodium nitrate, binder (63/33/4)	NT	40	90	Tubes broke on cooling	"
" (cured)	"	-0.28	40	90	Neglig.	"
Isochemrez #460 w/hardener #63 and catalyst 215X (uncured)	"	NT	40	90	Tubes broke on cooling	"
" (cured)	"	-0.16	40	90	Neglig.	"
Isochemrez #460 w/hardener #50 (uncured)	Propellant M9, Lot I.EP-63006	11+	16	90	Excess	"
" (cured)	"	11+	16	90	Excess	"
Isochemrez #460 w/hardener #63 and catalyst 215X (uncured)	"	11+	40	90	Excess	"
" (cured)	"	-1.88	40	90	Neglig.	"
Kimpak, Sample #190 Type K-51	Propellant M10	-0.43	40	90	Neglig.	AL-S-79-62
Laminac, 4116 and 4134	Black powder A5	0.36	40	100	"	AL-S-116-61
Laminac	Composition A5	-0.42	40	100	"	AL-S-78-66
"	Composition B	-0.15	40	100	"	AL-S-72-65
Laminac 4116	"	-0.13	40	100	"	AL-S-26-59
Laminac/Lupersol	"	-0.16	40	100	"	AL-S-72-65
Laminac 4116	HBX-6	0.68	40	100	"	AL-S-26-59
Laminac 4116, coarse (cured)	HTA-3 composition	-0.23	40	100	"	AL-S-53-63
Laminac 4116, fine (cured)	"	-0.18	40	100	"	"
Laminac 4116 and 4134 (50/50)	Lead azide	1.88	40	90	"	AL-S-64-63
Laminac	Photoflash powder (Daisy) KClO <sub>4</sub> Al (60 40)	-0.25	40	100	"	AL-S-4-59
Laminac, Expt 126-4	Propellant M5, flake	-0.10	40	90	"	AL-S-96-62
Laminac, Expt 126-4/ Laminac 4173 (25/75)	"	1.03	40	90	"	"
Lastomer coating C-717	Tritonal (80/20)	1.93	40	100	"	AL-S-49-66
Lexan GE141	Black powder A5	-0.45	40	120	"	AL-S-27-66
"	Delay composition	-0.21	40	120	"	"
"	First fire composition	-0.21	40	120	"	"
Lexan	HTA-3	-0.18	40	100	"	AL-S-66-67
Lexan GE 141	Igniter composition	-0.46	40	120	"	AL-S-27-66
"	Illuminant composition	-0.49	40	120	"	"
Lexan	Lead azide, RD 1333	-0.27	40	100	"	AL-S-22-65
"	Propellant M8	-0.07	40	90	"	AL-S-106-66
"	Propellant M9, Lot 18820	-0.94	40	90	"	AL-S-103-67
"	Tetryl	-0.28	40	100	"	AL-S-16-63
"	"	-0.28	40	100	"	AL-S-22-65
Lexan GE 141	White star pellets, uncoated (ctg of 40 mm HE, M406)	-0.21	40	120	"	AL-S-27-66
Loctite AV-10-10	Benite	11+	16	100	Excess	AL-S-22-66
"	Benite powder (strands)	11+	16	100	Excess	AL-S-31-66
"	Benite powder (strands)*	11+	40	100	Excess	"

\* The strands of benite powder were separated from the Loctite by a piece of fiberglass approximately 2-1/2 inches long.

Plastic	Explosive	Qaa (mil)	Hrs	Temp (°C)	Rating	Report No.
Loctite AV-10-10	Black powder, class 7	-1.77	40	100	Neglig.	AL-S-22-66
Loctite, grade AA	Composition A3	-0.36	40	100	"	AL-S-103-62
Loctite AVV	Composition A5	0.31	40	100	"	AL-S-99-66
Loctite, Stud Lock	"	0.30	40	100	"	AL-S-99-66
Loctite, grade AA	Composition B	-0.80	40	100	"	AL-S-103-62
Loctite, grade AA	"	-0.39	40	100	"	AL-S-65-61
Loctite, grade A	"	11+	40	100	Excess	"
Loctite, grade C	"	11+	16	100	Excess	"
Loctite, grade E	"	11+	40	100	Excess	"
Loctite, grade H	"	11+	16	100	Excess	"
Loctite, grade AV-10-10	"	3.79	40	100	Mod.	"
Loctite, grade CV-4-10	"	11+	16	100	Excess	"
Loctite, grade EV-2-10	"	11+	16	100	Excess	"
Loctite X5320-S (polymerized)	"	-0.02	40	100	Neglig.	AL-S-199-67
Loctite, Quick Set 404	"	-0.24	40	90	"	AL-S-117-66
Loctite, grade A	Delay mix, DP-879	3.09	40	90	"	AL-S-71-61
Loctite, grade A*	"	0.98	40	90	"	"
* Separated by approximately 0.1 inch during test						
Loctite, grade A	First fire mix SI-155	4.60	40	90	Mod.	AL-S-71-61
Loctite, grade A*	"	0.40	40	90	Neglig.	"
* Separated by approximately 0.1 inch during test						
Loctite AV-10-10	HEN 12 composition (Shillelagh Missile Heat Comp.)	1.02	40	90	Neglig.	AL-S-5-66
"	Ignition mix M63 (electric igniter)	-0.27	40	100	"	AL-S-22-66
Loctite 404	Lead azide, RD 1333	0.10	40	100	"	AL-S-169-67
Loctite sealant (Type AV)	Lead azide, Lot MIL-L- 3055, Type 1	0.23	40	100	"	AL-S-29-66
Loctite 404	Lead styphnate	0.29	40	100	"	AL-S-169-67
Loctite 43	Octol (75/25)	0.14	40	100	"	AL-S-8-67
Loctite adhesive #307	"	0.38	40	100	"	AL-S-52-67
Loctite 404	PETN	0.25	40	100	"	AL-S-169-67
Loctite adhesive, Grade EV	Propellant M9	11+	16	90	Excess	AL-S-42-66
Loctite sealing compound, AV	Propellant M9, flake	11+	16	90	Excess	AL-S-48-67
Loctite sealing compound, AVV	"	11+	16	90	Excess	"
Loctite AA15-1	RDX, class A, type B	-0.15	40	100	Neglig.	AL-S-34-63
Loctite 404	RDX	-0.27	40	100	"	AL-S-169-67
Loctite, Quick, Set 404	RDX, Type II	-0.66	40	100	"	AL-S-59-66
Loctite 404	Tetryl	2.88	40	100	"	AL-S-169-67
"	Tetryl Lot KNK 7-063	0.48	40	90	"	AL-S-12-67
Loctite Quick Set 404	White phosphorus	0.14	40	90	"	AL-S-117-66
"	White phosphorus/ Composition B	1.02	40	90	"	"
Loxite No. 7021 (Xylas Rubber Co.)	Propellant M26, Lot RAD-SR-5-2-62	11+	16	90	Excess	AL-S-14-67
"	Propellant M30, Lot PA-63558	11+	16	90	Excess	"
Lupersol	Composition A5	-6.08	40	100	Neglig.	AL-S-78-66
"	Composition B	11+	16	100	Excess	AL-S-72-65
Marlex (Brown)	Igniter material	- *	1	120	*Explo- ded	AL-S-22-67
MBS - methacrylate/butadiene/styrene						
MBS	CE	-	1 yr	60	None/ slight	WAM/172/01
"	Propellant NQ	-	1 yr	60	Severe	WAM/172/01
"	TNT	-	1 yr	60	None/ slight	WAM/172/01
MCS-33-1 (epoxy)	Composition B	-0.17	40	100	Neglig.	AL-S-9-1959
MCS-33-2	"	-0.17	40	100	"	"
MCS-33-3	"	-0.17	40	100	"	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
MCS-33-1	Propellant M2	-0.18	40	90	Neglig.	AL-S-9-1959
MCS-33-2	"	-0.08	40	90	"	"
MCS-33-3	"	-0.10	40	90	"	"
MCS-33-1	Propellant M8	1.85	40	90	"	"
MCS-33-2	"	0.89	40	90	"	"
MCS-33-3	"	0.68	40	90	"	"
MCS-33-1	Tetryl	-0.14	40	90	"	"
MCS-33-2	"	-0.14	40	90	"	"
MCS-33-3	"	-0.14	40	90	"	"
McConnaplant 38	HMX	-0.33	40	100	"	AL-S-90-65
"	RDX	-0.19	40	100	"	"
Meta Seal - see "polyester"						
Molycoat	Composition B	0.26	40	100	"	AL-S-88-60
"	RDX	0.09	40	100	"	"
Molytube No. 16 (ReRay, Inc.)	Lead azide	-0.20	40	100	"	AL-S-90-66
"	Lead styphnate, basic	-0.29	40	100	"	"
"	Tetryl, KNK 7072	0.07	40	100	"	"
Mortite #89 (sealant)	Tritonal (80/20)	0.54	40	100	"	AL-S-49-68
Mortite #8001 (sealant)	"	0.24	40	100	"	"
Mortite #5700-57 (sealant)	"	0.08	40	100	"	"
Mylar film (Schjelbond 300)	Composition B	0.01	40	100	Neglig.	AL-S-74-63
"	Cyclotol (75/25)	-0.13	40	100	"	"
"	Lead azide, RD 1333	-0.31	40	100	"	"
Mylar	Octol (75/25)	-0.20	40	100	"	AL-S-120-66
Mylar film (Schjelbond 300)	PBX, Type A	-0.15	40	100	"	AL-S-74-63
Mylar film (Schjelbond 300)	Primer mix, NOL 130	-1.10	40	100	"	AL-S-74-63
Mylar film	Propellant, ball powder	-0.29	40	90	"	AL-S-34-61
"	Propellant HEX-12	-0.38	40	90	"	AL-S-34-61
"	Propellant LFT-1	-0.08	40	90	"	"
"	Propellant MDR-7	-0.08	40	90	"	"
"	Propellant M9, Lot 18820	0.78	40	90	"	AL-S-103-67
"	Propellant T16	-1.03	40	90	"	AL-S-34-61
Mylar film (Schjelbond 300)	RDX	-0.18	40	100	"	AL-S-74-63
Mylar film	RDX composition	-0.27	40	100	"	AL-S-42-61
Mylar film with adhesive EC-826 (JM)	Propellant, ball powder	-0.21	40	90	"	AL-S-34-61
"	Propellant HEX-12	-0.53	40	90	"	"
"	Propellant LFT-1	-0.01	40	90	"	"
"	Propellant M9	-2.62	40	90	"	"
"	Propellant, MDR-7	-0.21	40	90	"	"
"	Propellant T16	-0.73	40	90	"	"
Mystic - see "tape...."						
Narmco 3170/7133	HTA-3 Composition	11+	16	100	Excess Mod.	AL-S-135-63
Neoprene EC 870	Propellant M7	3.81	40	90	Neglig.	AL-S-122-63
"	Propellant M7, paint	2.63	40	90	Excess	"
Neoprene, Atlantic Brand	Propellant M7	11+	24	90	Excess	"
"	Propellant M7, paint	5.09	40	90	Excess	"
Neoprene	Tetrytol	2.02	40	100	Neglig.	AL-S-37-63
Neoprene gasket, w/brass contact	Propellant NH, vapors	-	3-7 mo	60	Fairly long service life	ERDE 9/M/53
"	Propellant NQ, vapors	-	3-7 mo	60	Very poor service life	"
Neoprene rubber	Astrolite G Lot 0014 (liquid explosive)	2.86	40	100	Slight	AL-S-19-67
Neoprene rubber cements (Neoseal Nos 6 & 7; Dunlop Rubber (Aust))	RDX, grade 1A	-	-	100	Comp.	DSL, Australia (Method M240/61)
Neoseal - see "neoprene rubber cements"						
Nitrocellulose tow	Ignition mix, AXP-90933	-0.23	40	100	Neglig.	AL-S-82-60
Nitrorubber	HMX	0.04	40	90	"	AL-S-152-65

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Nitrobutber	OOK Casting Powder (Cast PL-2596)	-0.12	40	90	Neglig.	AL-S-152-65
"	Ammonium perchlorate	0.21	40	90	"	"
"	Casting solvent (75% NG, 27% TA, 1% 2nDPA (added))	0.16	40	90	"	"
NOPCO H301, PIF-28H	Propellant HEN-12	7.86	40	90	Excess	AL-S-62-66
NOPCO P502, PIF-291	"	11+	18	90	Excess	"
NOPCO, G502, PIF 30J	"	-1.54	40	90	Neglig.	"
Noryl, Grade B1-701	Propellant M9, Lot 18820	0.02	40	90	"	AL-S-103-67
Nucure 28 (uncured) (Silicone rubber)	TNE Type 1	0.03	40	100	"	AL-S-49-67
"	Tritonal (80/20)	-0.05	40	100	"	"
Nuodex	Tritonal	-0.17	40	100	"	AL-S-115-62
"	Torpex	0.12	40	100	"	"
"	RDX	-0.25	40	100	"	"
"	TNT	0.25	40	100	"	"
"	Propellant H6	0.56	40	100	"	"
Nylafil, lot 1-B-268	Octol (75/25) Lot HOL SR-85-5	1.53	40	100	"	AL-S-86-67
"	Octol (70/30) Lot HOL 83-30	1.53	40	100	"	"
Nylex - see "polyvinyl chloride"						
Nylon - see "Plaskon", "Zytel"						
Nylon	HTA-3	-0.60	40	120	"	AL-S-88-60
Nylon scrim	Black powder A5	0.05	40	100	"	AL-S-108-65
"	Propellant M1	-0.45	40	100	"	AL-S-106-65
"	Propellant M2	3.17	40	90	Mod.	AL-S-108-65
"	Propellant T36	7 <sup>nc</sup>	40	90	Excess	"
Nylon epoxy laminate	Black powder A5	0	40	100	Neglig.	"
"	Propellant M1	-0.	40	100	"	"
"	Propellant M2	2.61	40	90	"	"
"	Propellant T36	11+	18	90	Excess	"
Nylon tape	Composition #1: RDX (238 pts), lead azide (150 pts), cloth (50 pts), Cab-O-Sil (12 pts)	1.25	40	100	Neglig.	AL-S-117-67
"	Composition #2: lead azide (150 pts), cloth (50 pts), Cab-O-Sil (12 pts)	0.09	40	100	"	"
Nylon 6	Plastic explosive (PE)	-	1 yr	60	None/ slight	WAM/172/01
Nylon 6, 6	CE	-	1 yr	60	"	WAM/172/01
Nylon 6, 6	Propellant NH	-	1 yr	60	"	WAM/172/01
Nylon 6, 6	Propellant NQ	-	1 yr	60	Slight/ mod.	WAM/172/01
Nylon 6, 6	Propellant HUK	-	1 yr	60	Slight/ mod.	WAM/172/01
Nylon 6, 6	TNT	-	1 yr	60	None/ slight	WAM/172/01
Nylon 6, 6, glass-filled	CE	-	1 yr	60	"	WAM/172/01
Nylon 6, 6, glass-filled	Propellant NQ	-	1 yr	60	"	WAM/172/01
PBAA type polymer (Rocketdyne)	RDX, class A, type B	0.31	40	100	Neglig.	AL-S-140-63
Penton - chlorinated polyether	Propellant NH	-	1 yr	60	None/ slight	WAM/172/01; ERDE 7/M/65
"	Propellant NQ	-	1 yr	60	"	"
"	TNT	-	1 yr	60	"	"
"	RDX/TNT	-	1 yr	60	"	"
Permacel - see "tape...."						
Permagum #576.1	Tritonal (80/20)	0.54	40	100	Neglig.	AL-S-44-66

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Permagum #570.41	Tritonal (80/20)	0.14	40	100	Neglig.	AL-S-44-66
Petrin acrylate, monomer blend #1 <sup>s</sup>	RDX, Lot HOL-4-57	-1.14	40	100	"	AL-S-124-60
"	TNT	-0.27	40	100	"	"
PF resins	Plastic explosive	-	1 yr	60	None/slight	WAM/172/01
"	TNT	-	1 yr	60	"	WAM/172/01
Phenolic - see also "epoxy....", "Durez"						
Phenolic/glass molding compound - see "FM-4005"						
Phenolic molding compound - see "RX-431", "RX-475", "RX-525", "RX-600"						
Phenolic, CF1	H6	2.34	40	100	Neglig.	AL-S-79-61
Phenolic	HTA 3	0.57	40	100	"	AL-S-149-60
Phenol-formaldehyde (microballoons, Union Carbide)	Nitroglycerine	-	-	-	Comp.	DSL, Australia (Heat Test)
"	Nitrocellulose	-	-	-	"	"
Phenolic	PETN	0.29	40	100	Neglig.	AL-S-149-60
Phenol-formaldehyde case material	Photoflash composition (one week @ 100 C)	-0.25	40	100	"	AL-S-100-64
	(one month @ 100 C)	-0.11	40	100	"	"
		-0.14	40	100	"	"
Phenolic adhesive; Redux 775 liquid (CIBA) (ARL) Ltd.	Propellant, cast double base (5% aluminum)	-	500	80	Comp.	DSL, Australia (Silvered Vessel)
Phenolic resin, Plenco #5246	Propellant M2	1.39	40	90	Neglig.	AL-S-77-66
"	Propellant M2*	1.23	40	90	"	"
* The propellant was separated from the phenolic resin by fiberglass						
Phenolic	RDX	3.34	40	100	Mod.	AL-S-149-60
Phenolic, CF1	"	6.58	40	100	Neglig.	AL-S-79-61
Phenoxy PAHJ (EpiBond 100A)	Cyclotol (75/25)	11+	16	100	Excess	"
Phenoxy resin	CE	-	1 yr	60	None/slight	WAM/172/01
Phenoxy resin	Propellant NQ	-	1 yr	60	"	WAM/172/01
Phenoxy resin	TNT	-	1 yr	60	Slight/mod.	WAM/172/01
Phoenix cloth tape - see "adhesive-coated fabric"						
Plaskon 8200, nylon 6	Propellant M9, Lot 18820	2.10	40	90	Neglig.	AL-S-103-67
Plastisol rubber	Composition B	1.90	40	100	"	AL-S-67-63
Plastisol, RC, VP8-1	HMX/Exon/DOS (95/4.4/.6)	-0.44	40	100	"	AI-3-59
		-0.17	40	100	"	"
Plastisol rubber	RDX, class A, Type B	0.08	40	100	"	AL-S-67-63
Plastrene 317 - see "polyester"						
Plenco, 2.75	Flash powder (50/50 red phosphorus/magnesium)	-0.52	40	100	"	AL-S-40-65
"	Propellant, HiVel #2, Lot 278 (single perf)	5.57	40	90	Excess	"
"	Propellant M2 Lot IB-6616-1 (single perf grain)	0.94	40	90	Neglig.	"
Pliobond 20	Cyclotol (70/30) Lot 51-9	5.46	40	100	Excess	AL-S-76-67
Pliobond 30	"	5.41	40	100	Excess	"
Pliobond 30 (Goodyear)	Octol (70/30)	3.22	40	100	Mod.	AL-S-92-65
"	Octol (75/25)	2.79	40	100	Neglig.	"
Pliobond 20	Propellant M26 Lot RAD-SR-5-2-62	3.48	40	90	Mod.	AL-S-14-67
Pliobond 30	"	11+	40	90	Excess	"
Pliobond 20	Propellant M30, Lot PA-63558	4.89	40	90	Mod.	"
Pliobond 30	"	5.49	40	90	Excess	"
Pliobond 30 (cured)	Propellant T16	11+	16	90	Excess	AL-S-125-63
Pliobond 30 (uncured)	Propellant T16	0.77	40	50	n/a	"
Pliobond	Propellant T36	11+	16	90	Excess	AL-S-116-62
Pliobond/polyurethane	Propellant T36	11+	24	90	Excess	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Polyacetal - see "Delrin"						
Polyacetal	Propellant NH	-	1 yr	60	None/ slight	WAM/172/01;
"	Propellant NQ	-	1 yr	60	Severe	ERDE 7/M/65
"	RDX/TNT	-	1 yr	60	Mod.	"
"	TNT	-	1 yr	60	Severe	"
Polyacrylamides - see "Separan"						
Polyamide - see also "epoxy..."	"", "nylon"					
Polyamide; Versamid 140 resin (General Mills)	Composition SR 3710 (Mg powder, 42%; potassium nitrate, 50%; Acaroid resin, 8%; particles coated with Versamid)	-	120	60	Comp.	DSL, Australia (Heat Test, no inflammation)
Polyamine A1177B2 (uncured catalyst liquid)	Composition B	NT	-	100	Burned in 5 minutes	AL-S-71-65
Polybag - see "Delrin"						
Polybutadiene-acrylic acid rubber	Sodium nitrate Lot 6729, (Davies Nitrate Co.)	-0.29	40	100	Neglig.	AL-S-18-67
Polycarbonate - see "Lexan"						
Polycarbonate	Propellant NH	-	1 yr	60	None/ slight	WAM/172/01;
"	Propellant NQ	-	1 yr	60	Mod.	ERDE 7/M/65
"	TNT	-	1 yr	60	Mod.	"
"	RDX/TNT	-	1 yr	60	Mod.	"
Polyepp/activator	Black powder, grade A	-0.17	40	90	Neglig.	AL-S-130-63
Polyester - see also "fiberglass"	"", "cobalt naphthenate", "Dacron", "Laminac"					
Polyester	Baratol (67/33)	0.13	40	100	"	AL-S-23-67
Polyester, Meta Seal 19V5	"	0.22	40	100	"	AL-S-118-64
Polyester resin with cobalt naphthenate (0.5 phr) and cyclohexanone peroxide paste, (1.0 phr)	CE	-	-	100	Comp., cured resin	DSL, Australia (Method M240/61)
				120	Not comp., cured resin	
Plastrene 317 (Polymer Corporation)						
Polyester	Composition B4	-0.17	40	100	Neglig.	AL-S-23-67
Polyester, Meta Seal 19V5	Composition B	-0.13	40	100	"	AL-S-118-64
Polyester resin	H6	0.21	40	100	"	59-HI-489
Polyester resin, T-255042, pre-imp.	"	1.03	40	100	"	59-HI-78
Polyester/aluminum resin	"	0.12	40	100	"	59-HI-489
Polyester/asbestos	"	0.26	40	100	"	"
Polyester resin with cobalt naphthenate (0.5 phr) and cyclohexanone peroxide paste (1.0 phr)	PETN	-	-	100	Comp., cured resin	DSL, Australia (Method M240/61)
				120	Not comp., cured resin	"
Plastrene 317 (Polymer Corporation)						
					Not comp., uncured resin	
Polyester resin (30/40/30) (Selectron 5199/Hetron 31/Paraplex P-15)	Propellant/HEX 12	-1.04	40	90	Neglig.	AL-S-56-63
Polyester, Selectron (cured)	"	-0.08	40	90	"	AL-S-111-62
Polyester resins	Propellant HUK	-	1 yr	60	Severe	WAM/172/01

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Polyester, (3M), #850 (pressure sensitive tape)	Propellant M5	-0.04	40	90	Neglig.	AL-S-150-60
Polyester resin #1 (Laminac 4173/Laminac EPX-12614 (75/25), w/0.87 polyester blue color paste)	Propellant M5, flake	-1.58	40	90	"	AL-S-19-63
Polyester resin #2 (Laminac 4173/Laminac EPX-126-4 (75/25) w/0.57 polyester blue color paste added)	"	-0.72	40	90	"	"
Polyester solid foam #7	Propellant M17	11+*	16	90	Excess	AL-S-76-62
Polyester solid foam #5	"	11+*	19	90	Excess	"
* Note that high gassing of foam sample contributed unduly to "excessive" reaction						
Polyester film tape, Scotch brand No. 850	Propellant M30, Lot PA-63558	-0.28	40	90	Neglig.	AL-S-9-67
Polyester/glass laminate	Propellant NH	-	1 yr	60	None/slight	WAM/172/01
Polyester/glass laminate	Propellant NQ	-	1 yr	60	Slight/mod.	WAM/172/01
Polyester alternative sealing compound, Gildpol 1024, (cured)	Propellant T16	0.37	40	90	Neglig.	ERS-HE-125-60
" (uncured)	"	3.52	40	90	Mod.	"
Polyester solid foam #5	Propellant T36, Lot RAD-36-61	11+*	24	90	Excess	AL-S-76-62
Polyester solid foam #7	"	11+*	16	90	Excess	"
* Note that high gassing of foam sample contributed unduly to "excessive reaction"						
Polyester resin	RDX, Class A, Type B	-0.08	40	100	Neglig.	AL-S-103-63
Polyester resin, T-255042, pre-imp.	RDX	-0.44	40	100	"	59-HI-78
Polyester with cobalt naphthenate (0.2 phr) and methyl ethyl ketone peroxide (2.0 phr) - (Crystic 191 MV or Crystic 404S)	RDX, Grade 1A	-	-	100	Comp. when fully cured. Uncured resins not comp.	DSL, Australia (Method M240/61)
"	RDX/TNT	-	-	100	Comp. when fully cured; uncured resins not comp.	"
Polyester resin with cobalt naphthenate, (0.5 phr) and cyclohexanone peroxide paste, (1.0 phr) - (Plastrene 317, Polymer Corporation)	RDX, grade 1A	-	-	100	Comp. cured resin	"
				120	Comp. cured resin	
				150	Not comp. cured resin	
Polyester resins	RDX/TNT	-	1 yr	60	None/slight	WAM/172/01
Polyester/glass laminates	RDX/TNT	-	1 yr	60	"	WAM/172/01
Polyester	Tetryl	0.40	40	100	Neglig.	AL-S-23-67

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Polyester resin with cobalt naphthenate, (0.5 phr) and cyclohexanone peroxide paste (1.0 phr) - (Plastrene 317, Polymer Corporation)	TNT	-	-	100	Comp. cured resin	DSL, Australia (Method M240/61)
				120	Comp. cured resin	"
Polyester urethane	CE	-	1 yr	60	Mod.	WAM/172/01
"	Propellant NQ	-	1 yr	60	Severe	WAM/172/01
"	TNT	-	1 yr	60	Severe	WAM/172/01
Polyether - see also "Chlorinated...."						
Polyether urethane	Propellant NQ	-	1 yr	60	Severe	WAM/172/01
"	TNT	-	1 yr	60	Severe	WAM/172/01
Polyethylene - see also "Polythene", "Alathon", "Velostat"						
Polyethylene, antistatic (containing polyethylene glycol monostearate) (Union Carbide)	Nitrocellulose	-	-	-	Comp.	DSL, Australia (Heat Test after 3 mo at 50°C)
Polyethylene, low density	Astrolite G, Lot 0014 (liquid explosive)	-0.04	40	100	Neglig.	AL-S-19-67
Polyethylene	Black powder	-0.03	40	90	"	AL-S-41-63
Polyethylene caps	Black powder/magnesium (75/25)	-0.31	40	100	"	AL-S-187-64
Polyethylene with acrylic resin adhesive; black tape. Sellotape (Aust)	CE	-	-	100	Comp.	DSL, Australia (Method M240/61)
Polyethylene, antistatic, containing polyethylene glycol monostearate (Union Carbide)	Nitroglycerine	-	-	-	"	DSL, Australia (Heat Test after 3 mo at 50°C)
Polyethylene	PETN	-0.11	40	100	Neglig.	59-HI-570
Polyethylene caps	Photoflash powder PFP 579 (DWG CPX 89483)	-0.21	40	100	"	AL-S-187-64
Polyethylene	Propellant M2	-0.19	40	100	"	AL-S-26-66
Polyethylene, antistatic (containing polyethylene glycol monostearate) (Union Carbide)	RDX, Grade 1A	-	-	100	Comp.	DSL, Australia (Method M240/61)
Polyethylene wax emulsion coating (85% PE, 15% oleic acid)	RDX, Grade 1A (coated with wax emulsion, 2% uptake)	-	40	100	"	"
Polyethylene, antistatic (containing polyethylene glycol monostearate) (Union Carbide)	TNT	-	-	100	"	"
Polyethylene, high density	Tritonal	-0.07	40	100	Neglig.	AL-S-74-65
Polyethylene terephthalate (Melinex film)	Plastic explosive (PE)	-	1 yr	60	None/slight	WAM/172/01
Polyisoprene rubber, Lot A32	Lead azide, RD 1333 (Olin Mathieson Lot #63-19)	0.37	40	100	Neglig.	AL-S-60-66
Polylite, Reichold Chemical, 50/50-34-721/34-800, (after set-up, PIF-25F)	Propellant HEN-12	11+	20	90	Excess	AL-S-62-66
Polylite, Reichold Chemical, ED 50/50, 1081/34-800, (after set-up, PIF-25G)	"	11+	20	90	Excess	"
Polyethylmethacrylate	Propellant HUK	-	1 yr	60	Severe	WAM/172/01
Polyolefin film	Propellant M7, Lot 50615-55	0.63	40	90	Neglig.	AL-S-43-64
PPO - polyphenylene oxide	Propellant M8	0.14	40	90	"	AL-S-106-66
PPO	Black powder A5	-0.25	40	120	"	AL-S-27-66
Polypropylene, Avisun 840-1446						

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Polypropylene, Pro-Fax (Hercules Powder Co.)	Composition A5	-0.22	40	100	Neglig.	AL-S-92-66
Polypropylene	Composition B	-0.07	40	100	"	AL-S-125-66
Polypropylene, Avisun 840-1446	Delay composition	-0.22	40	100	"	AL-S-27-66
"	First fire composition	-0.18	40	120	"	"
"	Igniter composition	-0.37	40	120	"	"
"	Illuminant Composition	-0.43	40	120	"	"
Polypropylene	Propellant NH	-	1 yr	60	None/slight	WAM/172/01; ERDE 70/M/65
"	Propellant NQ	-	1 yr	60	Slight/mod.	"
"	RDX/TNT	-	1 yr	60	None/slight	"
"	TNT	-	1 yr	60	"	"
Polypropylene, Avisun 840 1446	White star pellets (uncoated)	-0.03	40	120	Neglig.	AL-S-27-66
Polystyrene, expanded - see "Resilo-Pak"						
Polystyrene (vial)	Black powder/magnesium (75/25)	-0.18	40	100	"	AL-S-167-64
Polystyrene; Styron Drab Green D2417, molding powder; CSRC, Dow	CE	-	-	100	Comp.	DSL, Australia (MIL-P-22332)
Polystyrene, modified	Flash powder, red phosphorus/magnesium (50/50)	1.26	40	100	Neglig.	AL-S-40-65
Polystyrene (vial)	Photoflash powder, PFP 579 (Dwg CPX 89483)	-0.26	40	100	"	AL-S-167-64
Polystyrene (foam)	Propellant, DDP, base grain	0.12	40	90	"	AL-S-94-65
Polystyrene No. 1, U.S. Mineral Prod. Co., PIF-31K	Propellant HEN-13	-0.40	40	90	"	AL-S-62-66
Polystyrene No. 2, U. S. Mineral Prod. Co., PIF-32I	"	0.33	40	90	"	"
Polystyrene No. 1	Propellant M5	-0.97	40	90	"	AL-S-117-62
Polystyrene No. 2	"	0.72	40	90	"	"
Polystyrene No. 3	"	1.17	40	90	"	"
Polystyrene	Propellant HUK	-	1 yr	60	None/slight	WAM/172/01; ERDE 70/M/65
"	Propellant NH	-	1 yr	60	"	"
"	Propellant NQ	-	1 yr	60	"	"
Polystyrene, toughened	Propellant HUK	-	1 yr	60	Slight/mod.	"
"	Propellant NQ	-	1 yr	60	"	"
Polystyrene	RDX/TNT	-	1 yr	60	None/slight	"
"	TNT	-	1 yr	60	"	"
Polystyrene, toughened	RDX/TNT	-	1 yr	60	"	"
"	TNT	-	1 yr	60	Slight/mod.	"
Polysulfide rubber composition (Thiokol, LPZ 313)	Composition B	2.33	40	100	Neglig.	AL-S-64-67
Polysulfide rubber sealant	Tetryl booster pellet (not contaminated, 60 & 61)	1.97	40	100	"	AL-S-61-63
"	Tetryl booster pellet (not contaminated, 20 & 21)	1.92	40	100	"	"
Polysulphone	CE	-	1 yr	60	None/slight	WAM/172/01

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Polysulphone PF700	Propellant M9, Lot 18820	-0.73	40	90	Neglig.	AL-S-103-67
Polysulphone	Propellant NQ	-	1 yr	60	Slight/mod.	WAM/172/01
"	TNT	-	1 yr	60	"	"
Polythene, low den	Plastic explosive (PE)	-	1 yr	60	"	WAM/172/01
Polythene, hi den	"	-	1 yr	60	Mod.	"
Polythene, low den	Propellant HUK	-	1 yr	60	Slight/mod.	WAM/172/01
Polythene, hi den	"	-	1 yr	30	None/slight	"
Polyurethane - see "Adhesive EC 1099", "Pliobond", "polyester urethane", and "polyether urethane"						
Polyurethane, foamed - see "Foamflex"						
Polyurethane, Solithane 113 with curing agents C113-300 and C113-328 (100/44/6)	Composition B	2.05	40	100	Neglig.	AL-S-68-67
Polyurethane, Solithane 113 (uncured)	"	2.50	40	100	"	"
Polyurethane foam #1	H-6 explosive	0.58	40	100	"	59-HI-430
Polyurethane	Ignition mix, AXP-90933	-0.11	40	100	"	AL-S-82-60
Polyurethane varnish	Lead azide, RD 1333	<1.57	40	100	"	AL-S-169-67
Polyurethane EP 626/628 (liquid)	PETN, Lot 23-2	3.94	40	100	Mod.*	AL-S-60-67
Polyurethane varnish	PETN	<3.38	40	100	Mod.	AL-S-170-67
Polyurethane, M (band cook-off protectors)	Propellant HEN-12	0.06	40	90	Neglig.	AL-S-62-66
"	"	0.32	40	90	(1.0/1.0) Neglig.	"
Polyurethane SX-58, Napco	Propellant M17	0.22	40	100	Neglig.	AL-S-98-60
Polyurethane	Propellant M30	0.38	40	90	"	AL-S-55-65
"	"	-1.10	40	100	"	"
Polyurethane, M (band cook-off protectors)	Propellant N-5 (HEN-12)	0.35	40	90	"	AL-S-62-66
Polyurethane, open cell - see "sponge..."	"	"	"	"	"	"
Polyurethane, Epocast, 5716 A/B	Propellant T28E1	2.04	40	100	"	AL-S-86-64
"	"	2.08	40	100	"	"
"	"	2.47	40	100	"	"
Polyurethane foam, (Robinson Industries)	Propellant T36	1.63	40	90	"	AL-S-27-62
Polyurethane foam, (Techcraft, #13)	"	1.65	40	90	"	"
Polyurethane foam, (Jered Products, #7)	"	2.45	40	90	"	"
Polyurethane A	"	1.90	40	90	"	AL-S-23-62
Polyurethane A	"	1.83	40	90	"	"
Polyurethane B	"	0.35	40	90	"	"
Polyurethane C	"	2.61	40	90	"	"
Polyurethane foam, (Swevco, #10)	"	1.62	40	90	"	AL-S-29-62
Polyurethane foam, (TP Industries, #8)	"	1.94	40	90	"	AL-S-27-62
Polyurethane #1 (upper liner) (Swevco)	"	0.96	40	90	"	AL-S-59-62
Polyurethane #2 (lower liner) (Swevco)	"	1.73	40	90	"	"
Polyurethane B	"	0.54	40	100	"	AL-S-11-62
Polyurethane A	"	0.80	40	100	"	"
Polyurethane C	"	11+	16	90	Excess	"
Polyurethane F	"	-0.71	40	90	Neglig.	AL-S-23-62
Polyurethane E	"	-0.05	40	90	"	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Polyurethane D	Propellant T36	6.39	40	90	Excess	AL-S-23-62
Polyurethane C	"	11+	40	90	Excess	AL-S-21-62
Polyurethane B	"	11+	40	90	Excess	"
Polyurethane B	"	11+	40	90	Excess	"
Polyurethane A	"	0.85	40	90	Neglig.	"
Polyurethane EP 626/628 (liquid)	Tetryl, KNK 7-063	11+	40	100	Excess	AL-S-60-67
Polyurethane varnish	* Test samples prepared by engineer; no controls					
Polyvinyl acetate, Metex XZ-2	RDX	<0.88	40	100	Neglig.	AL-S-170-67
"	Lead azide, RD 1333	-0.02	40	100	Neglig.	AL-S-98-65
"	TNT	11+	16	100	Excess	AL-S-98-65
PVC - Polyvinyl chloride PVC (rigid)	Propellant NH	-	1 yr	60	None/slight	WAM/172/01; ERDE 70/M/65
"	Propellant NQ	-	1 yr	60	"	"
PVC (plasticized)	Propellant HUK	-	1 yr	60	Mod.	WAM/172/01
Polyvinyl chloride, tubing, plasticized, Nylex Corp.	RDX, Grade 1A	-	1	100	Comp.	DSL, Australia (Method M240/61)
PVC (rigid)	RDX/TNT	-	1 yr	60	None/slight	WAM/172/01; ERDE 70/M/65
"	TNT	-	1 yr	60	"	"
PVC (plasticized)	RDX/TNT	-	1 yr	60	Mod.	"
"	TNT	-	1 yr	60	"	"
Polyvinyl chloride, plasticized, Scotch Brand No. 471 (3M Company)	TNT	-	-	120	Comp.	DSL, Australia (Method M240/61)
PVDC - Polyvinylidene chloride						
Polyvinylidene chloride (Saran)	Plastic explosive (PE)	-	1 yr	60	Slight/mod.	WAM/172/01
Polyvinylidene chloride	Propellant HUK	-	1 yr	60	None/slight	WAM/172/01
Potting compound - see "Bakelite ERL 2795" and "Selectron"						
Prestite - see "primer...."						
Primer, MIL-P-22332 (cured) plus Prestite (50/50)	Tritonal (80/20)/1% calcium silicate	0.13	40	100	Neglig.	AL-S-158-67
"	"	0.11	40	100	"	"
Primer, MIL-P-22332 (cured) plus Prestite (50/50) plus trichlorethylene	"	0.64	40	100	"	"
Primer, Dow Corning A4014	Composition 9404	0.60	40	100	"	59-HI-487
Pumpable caulk C-768	Tritonal (80/20)	-0.09	40	100	"	AL-S-49-66
PV-918 (extra baked)	Composition B4	3.09	40	120	Mod.	AL-S-18-64
Quaker Koat (bituminous) (Quaker State Oil Ref.)	Tritonal (80/20), PA-PD-126	0.59	40	100	Neglig.	AL-S-27-67
"	"	0.74	48	100	"	"
"	TNT, Type 1, MIL-T-248A	0.99	40	100	"	"
"	"	1.36	48	100	"	"
Raybestos R1	Propellant M2	1.96	40	90	Neglig.	AL-S-128-66
Raybestos R-86020 (adhesive) (cured 2 hrs @ 325 F)	Composition B	0.00	40	100	"	AL-S-100-62
"	"	0.31	40	100	"	"
(cured 2 hrs @ 325 F; stored 6 mo @ 50 C)	"					
"	Octol (75/25)	0.03	40	100	"	"
(cured 2 hrs @ 325 F)	"	-0.19	40	100	"	"
"	"					
(cured 2 hrs @ 325 F; stored 6 mo @ 50 C)	"					
Rayon, Elk #140 (9-22-63)	Propellant M6 (OKLA 32410)	0.11	40	100	"	AL-S-52-64
		-0.89	40	90	"	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Rayon, Elk #140 (9-22-63)	Propellant T36,	-0.91	40	100	Neglig.	AL-S-52-64
"	PA 63558	-0.34	40	90	"	"
"	Propellant M2	-0.23	40	90	"	"
Resilo-Pak 300 (polystyrene)	Propellant T16	-0.99	40	90	"	AL-S-65-64
(Armstrong Cork)						
Resinated asbestos flock	PE 3A (RDX, Grade 1)	-	-	100	Comp.	DSL, Australia
Durestos RA51, molding resin (Turner Bros)						(Method M240/61)
RX-431 (Rogers)	Octol	1.15	40	100	Neglig.	AL-S-50-64
RX-475 "	"	0.81	40	100	"	"
RX-525 "	"	0.85	40	100	"	"
RX-600 "	"	-0.11	40	100	"	"
RX-1300 H1 (Rogers)	"	-0.20	40	100	"	"
RTV 732 (cured)	Ball powder, epoxy	-0.72	40	90	"	AL-S-124-65
RTV 732 (uncured)	"	0.20	40	90	"	"
RTV 732 (cured)	Combustible case material	-0.04	40	90	"	"
RTV 732 (uncured)	"	0.00	40	90	"	"
RTV 11 (GE), with Thermit 12 catalyst (99-1 by wt) (RTC 24 hrs)	Composition B	-0.13	40	100	"	AL-S-68-67
RTV 11 (GE) (uncured)	"	-0.33	40	100	"	"
RTV 102, silicone rubber	"	-0.18	40	100	"	AL-S-126-63
RTV 732	"	-0.04	40	100	"	AL-S-83-63
RTV 504 (Dow Corning) (uncured)	"	0.00	40	100	"	AL-S-68-67
RTV, Dow Corning 3118, w/catalyst (96:4) (RTC 25 hrs)	"	-0.18	40	100	"	AL-S-68-67
RTV Dow Corning 3118 (uncured)	"	-1.01	40	100	"	"
RTV Dow Corning C, with catalyst (10:1), (cured 24 hrs RT)	"	-0.18	40	100	"	"
RTV silicone rubber	"	-0.12	40	100	"	AL-S-144-65
RTV 103 (uncured)	Delay composition, magnesium, D18	-0.09	40	90	"	AL-S-133-66
RTV 501, silicone	H6	0.25	40	100	"	59-H1-409
RTV silicone rubber	"	0.20	40	100	"	AL-S-144-65
RTV 101 (uncured) sealant	Igniter composition	-0.05	40	100	"	AL-S-18-65
RTV silicone rubber	HTA-3	-0.20	40	100	"	AL-S-144-65
RTV 103 (uncured)	Igniter composition A1A	-0.18	40	90	"	AL-S-133-66
"	Igniter composition Z3 (zirconium and barium chromate)	0.28	40	90	"	"
RTV 11 (G. E.) (uncured)	Lead azide	-0.31	40	90	"	AL-S-64-63
RTV 503 (G. E.), silicone rubber, uncured	"	0.01	40	90	"	"
RTV Q90-092	Octol (75/25)	-0.63	40	100	"	AL-S-46-65
RTV Q90-092	Octol (70/30)	-0.56	40	100	"	"
RTV 102	Octol (75/25)	-0.37	40	100	"	"
RTV 102	Octol (70/30)	-0.32	40	100	"	"
RTV silicone rubber	Octol (75/25)	-0.12	40	100	"	"
RTV 103 (uncured)	Output composition (60% lead azide)	0.63	40	90	"	AL-S-133-66
RTV 102 (uncured)	PETN	-0.30	40	100	"	AL-S-89-67
RTV 102 (cured)	"	-0.36	40	100	"	"
RTV 102, sealant (uncured)	Photoflash powder; Al/Mg/Pot perchlorate (26/34/40)	1.40	40	100	"	AL-S-18-65
RTV 103 (uncured)	Primer assembly M54	-0.02	40	90	"	AL-S-133-66
RTV 732 (cured)	Primer mix M61	-0.12	40	90	"	AL-S-124-65
RTV 732 (uncured)	"	1.09	40	90	"	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
RTV 732, Lot 815199, White (cured)	Propellant HES-8028.3	-0.14	40	90	Neglig.	AL-S-62-67
RTV, Dow Corning Q95-015 (cured)	Propellant M7	11+	40	90	Excess	AL-S-99-65
RTV, Dow Corning Q95-015 (uncured)	"	2.97	40	90	Mod.	"
RTV 102 (G. E.), adhesive; grey paint resisting enamel	Propellant M7 (RAD-50615-55)	-0.73	40	100	Neglig.	AL-S-136-63
RTV 732 (uncured)	Propellant M7	-0.06	40	90	"	AL-S-17-64
RTV 732 (Dow Corning), adhesive; grey enamel resisting enamel	Propellant M7 (RAD-50615-55)	-0.63	40	90	"	AL-S-136-63
RTV 112 (cured)	Propellant M9	-0.76	40	90	"	AL-S-32-66
RTV 112 (uncured)	"	0.18	40	90	"	"
RTV 732 (cured)	Propellant M9, flake Lot 64444	-	-	-	Neglig*	AL-S-191-67
RTV 732 (uncured)	"	-	-	-	Neglig*	"
* On basis of the 120°C Heat Test						
RTV 102, white (cured)	Propellant M9	-0.31	40	90	Neglig.	AL-S-196-67
RTV 102, white (uncured)	"	11+	40	90	Excess	"
RTV 102 (cured)	Propellant T16	-0.33	40	90	Neglig.	AL-S-125-63
RTV 731 (cured)	"	-0.17	40	90	"	"
RTV 732 (cured)	Propellant T28E1	-0.23	40	90	"	AL-S-124-65
RTV 732 (uncured)	"	0.72	40	90	"	"
RTV 102 (GE)	RDX	-0.13	40	100	"	AL-S-106-63
RTV 732	RDX, Class A, Type B	0.04	40	100	"	AL-S-83-63
RTV silicone rubber	RDX	0.40	40	100	"	AL-S-144-65
RTV 102 (uncured)	Tetryl, Lot KNK 7-063	-0.01	40	100	"	AL-S-89-67
RTV 102 (cured)	"	-0.09	40	100	"	"
RTV 732, vulcanizing rubber (uncured)	Tetryl booster pellet	0.12	40	RT	"	AL-S-67-64
"	"	-0.08	40	(160 F)	"	"
RTV 7 (cured)	TNT type 1	-0.69	40	100	"	AL-S-49-67
RTV 7 (uncured)	"	0.04	40	100	"	"
RTV 7/Nucure 23 (uncured)	"	-1.43	40	100	"	"
"	"	-1.47	40	100	"	"
RTV 7/Nucure 28 (uncured)	TNT type 1 + 1% calcium silicate, tech grade	-1.49	40	100	"	"
RTV 7/Nucure 28/ RTV 11/Nucure 28 (uncured)	TNT type 1	-1.61	40	100	"	"
"	"	-1.57	40	100	"	"
RTV 7/Nucure 28 - RTV 11/Nucure 28 (uncured)	TNT Type 1 + 1% calcium silicate, tech grade	-1.48	40	100	"	"
RTV 11 (cured)	TNT type 1	-0.13	40	100	"	"
RTV 11 (uncured)	TNT type 1	0.40	40	100	"	"
RTV 11/Nucure 28 (uncured)	TNT type 1	-0.42	40	100	"	"
"	"	-0.43	40	100	"	"
"	TNT type 1 + calcium silicate, 1%, tech grade	-0.30	40	100	"	"
RTV 616 (cured)	TNT	-0.54	40	100	"	AL-S-143-67
RTV 634 (cured)	"	-0.25	40	100	"	"
RTV 616 (cured) in the presence of Coating Compound Type 1 (1 to 1)	"	-0.17	40	100	"	"
RTV 634 (cured) in the presence of Coating Compound Type 1 (1 to 1)	"	-0.11	40	100	"	"
RTV silicone rubber	Tritonal (80/20)	0.09	40	100	"	AL-S-144-65
RTV 7 (cured)	"	-0.62	40	100	"	AL-S-49-67
RTV 7 (uncured)	"	-0.29	40	100	"	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
RTV 7/Nucure 28 (uncured)	Tritonal (80/20)	-1.40	40	100	Neglig.	AL-S-49-67
		-1.39	40	100	"	"
RTV 7/Nucure 28 - RTV 11/Nucure 28 (uncured)	"	-1.40	40	100	"	"
RTV 7/Nucure 28 - RTV 11/Nucure 28 (uncured)	Tritonal (80/20) + 1% calcium silicate, tech grade	-1.50	40	100	"	"
		-1.57	40	100	"	"
RTV 11 (cured)	Tritonal (80/20)	-0.20	40	100	"	"
RTV 11 (uncured)	"	-0.16	40	100	"	"
RTV 11/Nucure 28 (uncured)	"	-0.33	40	100	"	"
		-0.31	40	100	"	"
RTV 616 (uncured)	Tritonal (80/20) + 1% calcium silicate	-0.70	40	100	"	AL-S-143-67
"	Tritonal (80/20) + 1% calcium silicate	-0.44	40	100	"	"
RTV 616 (cured)	Tritonal (80/20)	-0.61	40	100	"	"
"	Tritonal (80/20) + 1% calcium silicate	-0.84	40	100	"	"
"	Tritonal (80/20) + 1% calcium silicate	-0.81	40	100	"	"
"	Tritonal (80/20) + 10% calcium silicate	-0.63	40	100	"	"
"	Tritonal (80/20) + 10% calcium silicate	-0.55	40	100	"	"
RTV 616 (cured) in the presence of Coating Compound Type 1 (1 to 1)	Tritonal (80/20) plus 10% calcium silicate	0.12	40	100	"	"
		0.02	40	100	"	"
RTV 634 (uncured)	Tritonal (80/20) + 1% calcium silicate	-0.65	40	100	"	"
"	Tritonal (80/20) + 10% calcium silicate	-0.37	40	100	"	"
RTV 634 (cured)	Tritonal (80/20)	-0.24	40	100	"	"
"	Tritonal (80/20) + 1% calcium silicate	-0.42	40	100	"	"
"	Tritonal (80/20) + 1% calcium silicate	-0.47	40	100	"	"
"	Tritonal (80/20) + 10% calcium silicate	-0.22	40	100	"	"
"	Tritonal (80/20) + 10% calcium silicate	-0.22	40	100	"	"
RTV 634 (cured) in the presence of Coating Compound Type 1 (1 to 1)	Tritonal (80/20) + 10% calcium silicate	0.72	40	100	"	"
		0.70	40	100	"	"
Rubber - see also "ethylene propylene", "RTV", "Silastic"						
Rubber plugs, 300R - see behavior of rubber plugs A35 and RB 24						
Rubber	Casting solvent, NG	1.43	40	90	"	USNOS-IH
		-0.11	40	90	"	"
Rubber, gum, B	"	0.95	40	90	"	"
Rubber, gum, G	"	1.00	40	90	"	"
Rubber, gum, P	"	0.52	40	90	"	"
Rubber, gum, I	"	2.03	40	90	"	"
Rubber, gum	Casting solvent, NG	1.45	40	90	"	"
Rubber, Columbia	"	1.78	40	90	"	"
Rubber, Potomac (Talco Gasket)	"	2.40	40	90	Slight/ Mod.	"
Rubber, Silastic	"	3.18	40	90	Excess	"
Rubber, natural (Formulations DS7 239 F and DSL 241 C)	CE	-	-	120	Not comp.	DSL, Australia (Method M240/ 61)
Rubber, fluorosilicone	"	-	1 yr	60	None/ slight	WAM/172/01
Rubber, neoprene	"	-	1 yr	60	"	"
Rubber, nitrile	"	-	1 yr	60	Mod.	"
Rubber, silicone	"	-	1 yr	60	Slight/ mod.	"
Rubber base adhesive, synthetic; 3MEC612	Composition B	0.54	40	100	Neglig.	59-H1-567
Rubber	Detonating cord	-0.03	40	100	"	AL-S-64-60
Rubber, silastic	HMX	-0.05	40	90	"	USNOS-IH
Rubber plugs, A35, for fuzes	PETN	-	28 mo	120	Comp.	DSL, Australia (accel compat)

Plastic	Explosive	(In (ml)	Hrs	Temp (°C)	Rating	Report No.
Rubber plugs, MB4, for Nases	PETN	-	28 min	180	Comp.	DMU, Australia (seal compat)
Rubber, neoprene	Plastic explosive (PE)	-	1 yr	60	None/ slight	WAM/172/01
Rubber, nitrile	"	1	1 yr	60	"	"
Rubber, silicone	Propellant ANH	-0.17	40	90	"	AL-S-44-64
		0.48	40	100	"	"
Rubber, Conover 8013-6	Propellant HNS-8088.3	-0.07	40	90	"	AL-S-63-67
Rubber, butyl	Propellant HUK	"	1 yr	60	Slight/ mod.	WAM/172/01
Rubber, neoprene	"	-	1 yr	60	Mod./ severe	"
Rubber, nitrile	"	-	1 yr	60	Severe	"
Rubber, natural	"	-	1 yr	60	Mod/ severe	"
Rubber base polymer; Para Seal	Propellant M6	3.15	40	90	Mod.	AL-S-87-64
Rubber base liner	Propellant M6	11.	40	90	Excess	AL-S-154-64
Rubber base polymer; Para Seal	"	0.93	40	90	Neglig.	AL-S-87-64
Rubber base enamel, chlorinated; Shervin Williams 899A14	Propellant M7	-0.40	40	90	"	AL-S-122-63
Rubber compound XC 45	Propellant M8	1.71	40	90	"	AL-S-73-66
Rubber compound XC 63	"	1.98	40	90	"	"
Rubber compound XC 45	Propellant M9	0.86	40	90	"	AL-S-73-66
Rubber compound XC 63	"	1.08	40	90	"	"
Rubber O-ring	"	2.04	40	90	"	AL-S-2-62
Rubber base polymer; Para Seal	Propellant M17	11.	17	90	Excess	AL-S-87-64
Rubber, butyl	Propellant NH	-	1 yr	60	Slight/ mod.	WAM/172/01
Rubber, neoprene	"	-	1 yr	60	Mod./ severe	"
Rubber, nitrile	"	-	1 yr	60	Severe	"
Rubber, natural	"	-	1 yr	60	Mod.	"
Rubber, natural, gasket w/brass contact	Propellant HN, vapors	-	3-7 min	60	Fairly long service life	ERDE 9/M/62
Rubber, butyl	Propellant NQ	-	1 yr	60	Slight/ mod.	WAM/172/01
Rubber, fluorosilicone	"	-	1 yr	60	Mod./ severe	"
Rubber, natural	"	-	1 yr	60	"	"
Rubber, nitrile	"	-	1 yr	60	Severe	"
Rubber, silicone	"	-	1 yr	60	Mod.	"
Rubber, base liner	Propellant T36	11.	16	90	Excess	AL-S-154-64
Rubber, chlorobutyl	"	0.99	40	90	Neglig.	AL-S-99-62
Rubber, Burke	"	3.99	40	90	Mod.	AL-S-99-62
"	"	3.70	40	90	"	"
"	"	1.80	40	70	Neglig.	"
Rubber, Burke (American obturators)	"	7.50	40	90	Excess	AL-S-93-62
Rubber, Burke (Obturators)	"	3.11	40	70	Mod.	AL-S-98-62
Rubber, Burke, M981, L-4	"	1.38	40	90	Neglig.	AL-S-2-63
Rubber, Burke, M981, R-1	"	4.49	40	90	Mod.	"
Rubber, Burke, M981, R-7	"	2.70	40	90	Neglig.	"
Rubber, Burke, M981, R-8	"	1.95	40	90	"	"
Rubber, Burke, M981, R-9	"	1.41	40	90	"	"
Rubber, Burke, X4438	"	1.00	40	90	"	"
Rubber, butyl	"	0.60	40	90	"	AL-S-99-62
Rubber, butyl, brominated	"	2.11	40	90	"	"

Plastic	Explosive	(Jan (ml)	Hrs	Temp (°C)	Rating	Report No.
Rubber, Castle	Propellant T38	6.46	40	90	Excess	AL-S-99-62
"	"	6.08	40	90	Excess	"
"	"	1.81	40	70	Neglig.	"
Rubber, Castle, obturators	"	11+	40	90	Excess	AL-S-98-62
"	"	1.88	40	70	Neglig.	"
Rubber, Paul Martini American obturators	"	6.60	40	90	Excess	AL-S-93-62
Rubber, Paul Martini obturators	"	1.01	40	70	Neglig.	AL-S-98-62
Rubber, Precision	"	3.23	40	90	Mod.	AL-S-99-62
"	"	2.95	40	90	Neglig.	"
"	"	1.12	40	70	"	"
Rubber, Precision; obturators	"	4.72	40	90	Mod.	AL-S-98-62
Rubber, SX-630-SMR	"	1.80	40	90	Neglig.	AL-S-99-62
Rubber, SX-630-GRM-653	"	2.22	40	90	"	"
Rubber, UK; obturators	"	2.47	40	90	"	AL-S-98-62
Rubber, plugs, A35, for fuses	RDX	-	28 mo	120	Comp.	DNL, Australia (accel. compat.)
Rubber plugs, R224, for fuses	"	-	28 mo	120	"	"
Rubber, butyl	TNT	-	1 yr	60	None/ slight	WAM/172/01
Rubber, fluorosilicone	"	-	1 yr	60	Slight/ mod.	"
Rubber, natural	"	-	1 yr	60	Severe	"
Rubber, neoprene	"	-	1 yr	60	Severe	"
Rubber, nitrile	"	-	1 yr	60	Slight/ mod.	"
Rubber, silicone	"	-	1 yr	60	"	"
SAN - styrene acrylonitrile SAN	Propellant NH	-	1 yr	60	None/ slight	WAM/172/01
SAN	Propellant NQ	-	1 yr	60	Severe	"
SBR - styrene/butadiene rubber SBR	Propellant HUK	-	1 yr	60	Mod.	"
SBR	TNT	-	1 yr	60	Severe	"
Scotch brand - see "polyester"						
Scotch tape, 3M, Lot 10, Core 0300	Flex-X (flexible explosive)	0.02	40	90	"	AL-S-121-67
Scotch tape, 3M, Lot 10, Core 0300	Flexible explosive	-0.12	40	90	"	"
Scotchply 1100	HTA-3	1.87	40	100	Neglig.	AL-S-133-60
Scotch Weld EC 2214	Octol (70/30)	5.17	40	100	Excess	AL-S-92-65
Scotch Weld EC 2216	"	11+	16	100	Excess	"
Scotch Weld EC 2214	Octol (75/25)	4.06	40	100	Mod.	"
Scotch Weld EC 2216	"	11+	16	100	Excess	"
Scotch Weld (3M), adhesive	PETN	1.37	40	100	Neglig.	AL-S-83-65
Scotch Weld (3M), EC-2216, Adhesive A (uncured)	"	11+	40	100	Excess	AL-S-73-65
Scotch Weld (3M), EC 2216, Adhesive B (uncured)	"	-0.34	40	100	Neglig.	"
Scotch Weld (3M), adhesive	RDX	11+	40	100	Excess	AL-S-83-65
Scotch Weld (3M) EC 2216, Adhesive A (uncured)	RDX, Type A	11+	40	100	Excess	AL-S-73-65
Scotch Weld (3M) EC 2216, Adhesive B (uncured)	"	11+	40	100	Excess	"
Scotchply 1100	RDX	-0.04	40	100	Neglig.	AL-S-149-60
Scott foam (80 ppi) SIF White; PIF-17A	Propellant HEN-12	3.13	40	90	Mod.	AL-S-62-66
Scott foam (80 ppi) Custom, PIF-18B	"	11+	40	90	Excess	"
Scott 1/32" Standard White Sheet, PIF-19C	"	6.00	40	90	Excess	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Scott 1/8" Premium Beige Sheet, PIF-30D	Propellant HEN-12	3.89	40	90	Mod.	AL-S-62-66
Sealant #400	Detonating cord	0.04	40	100	Neglig.	AL-S-64-60
Sealant, NS Truck and Bus Pellet	TNT	0.04	40	100	"	59-H1-615
Sealer, EC 1279	Tritonal (80/20)	0.36	40	100	"	AL-S-45-66
Selectron (Mix 5003/5214)	Black powder A5	0.31	40	100	"	AL-S-116-61
Selectron	Boron/potassium nitrate (pellets, type 2R)	-0.59	40	90	"	AL-S-132-63
Selectron	HEX-12	0.02	40	90	"	"
Selectron	LFT-3	-0.04	40	90	"	"
Separan NP10, Lot 258 (polyacrylamides)	HMX	-0.18	40	100	"	AL-S-22-59
Separan NP10, Lot 258/NaCl (10/1)	"	-0.08	40	100	"	"
Separan NP10, Lot 258/KCl(SO <sub>4</sub> ) <sub>2</sub> (10/1)	"	0.02	40	100	"	"
Separan NP10, Lot 326	"	-1.27	40	100	"	"
Separan NP20, Lot 8	"	-0.43	40	100	"	"
Separan NP20, Lot 8/NaCl (10/1)	"	-0.01	40	100	"	"
Separan NP20, Lot 8/KCl(SO <sub>4</sub> ) <sub>2</sub> (10/1)	"	0.02	40	100	"	"
Separan NP20, Lot 14	"	-0.09	40	100	"	"
Separan NP10, Lot 258	RDX	-0.27	40	100	"	"
Separan NP10, Lot 258/KCl(SO <sub>4</sub> ) <sub>2</sub> (10/1)	"	-0.10	40	100	"	"
Separan NP10, Lot 258/NaCl (10/1)	"	0.11	40	100	"	"
Separan NP10, Lot 326	"	5.36	40	100	Excess	AL-S-22-59
Separan NP20, Lot 8	"	-0.22	40	100	Neglig.	"
Separan NP20, Lot 8/KCl(SO <sub>4</sub> ) <sub>2</sub> (10/1)	"	0.14	40	100	"	"
Separan NP20, Lot 8/NaCl (10/1)	"	-0.02	40	100	"	"
Separan NP20, Lot 14	"	-0.22	40	100	"	"
Separan NP10, Lot 258	TNT	0.41	40	100	"	"
Separan NP10, Lot 258/KCl(SO <sub>4</sub> ) <sub>2</sub> (10/1)	"	0.28	40	100	"	"
Separan NP10, Lot 258/NaCl (10/1)	"	0.32	40	100	"	"
Separan NP10, Lot 326	"	6.22	40	100	Excess	AL-S-22-59
Separan NP20, Lot 8	TNT	0.01	40	100	Neglig.	AL-S-22-59
Separan NP20, Lot 8/KCl(SO <sub>4</sub> ) <sub>2</sub> (10/1)	"	0.13	40	100	"	"
Separan NP20, Lot 8/NaCl (10/1)	"	0.25	40	100	"	"
Separan NP20, Lot 14	"	0.07	40	100	"	"
Silastic - see "rubber"	"	"	"	"	"	"
Silastic foam - see "foam-silastic"	"	"	"	"	"	"
Silastic RTV 731 (uncured) (Dow Corning)	Black powder A5	0.14	40	100	"	AL-S-102-64
Silastic RTV 732 (uncured) (Dow Corning)	"	0.75	40	100	"	"
Silastic Gum #1	Composition B	0.15	40	100	"	AL-S-74-63
Silastic Gum #2, Lot 6861	"	-0.10	40	100	"	"
Silastic Gum #3, Lot 813	"	0.21	40	100	"	"
Silastic Gum #1	Cyclotol (75/25)	0.40	40	100	"	"
Silastic Gum #2, Lot 6861	"	-0.16	40	100	"	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Silastic Gum #3, Lot 813	Cyclotol (75/25)	-0.16	40	100	Neglig.	AL-S-74-63
Silastic 732 RTV (silicone rubber)	H-6 explosive	-0.20	40	100	"	AL-S-49-65
Silastic Gum #1, Lot 7150	Lead azide, RD 1333	-0.21	40	100	"	"
Silastic Gum #2, Lot 6861	"	-0.23	40	100	"	AL-S-74-63
Silastic Gum #3, Lot 813	"	-0.26	40	100	"	"
Silastic RTV 731 (uncured) (Dow Corning)	"	-0.33	40	100	"	AL-S-74-63
Silastic RTV 732 (uncured) (Dow Corning)	Lead azide	2.81	40	100	"	AL-S-102-64
Silastic RTV 731 (uncured) (Dow Corning)	Lead styphnate	3.39	40	100	Mod.	"
Silastic RTV 732 (uncured) (Dow Corning)	"	-0.28	40	100	Neglig.	"
Silastic Gum #1	PBX, Type A	0.63	40	100	"	"
Silastic Gum #2, Lot 6861	"	-0.13	40	100	"	AL-S-74-63
Silastic Gum #3, Lot 813	"	-0.48	40	100	"	"
Silastic Gum #1, Lot 7150	Primer mix, NOL 130	-0.10	40	100	"	"
Silastic Gum #2, Lot 6861	"	-1.16	40	100	"	"
Silastic Gum #3, Lot 813	"	-3.18	40	100	"	"
Silastic RTV-S-5370 (foam)	Propellant AHH (PAE-39603)	-2.47	40	100	"	"
Silastic 140	Propellant M5	-1.53	40	90	"	AL-S-146-64
Silastic RTV-S-5370 (foam)	Propellant N5	0.09	40	90	"	AL-S-95-62
Silastic Gum #1, Lot 7150	RDX	-1.23	40	90	"	AL-S-146-64
Silastic Gum #2, Lot 6861	"	-0.18	40	100	"	AL-S-74-63
Silastic Gum #3, Lot 813	"	-0.29	40	100	"	"
Silastic RTV 731 (uncured) (Dow Corning)	"	-0.03	40	100	"	"
Silastic RTV 732 (uncured) (Dow Corning)	"	1.78	40	100	"	AL-S-102-64
Silastic RTV 731 (uncured) (Dow Corning)	Tetryl	0.58	40	100	"	"
Silastic RTV 732 (uncured) (Dow Corning)	"	-0.29	40	100	"	"
Silastic RTV 731 (uncured) (Dow Corning)	TNT	0.07	40	100	"	"
Silastic RTV 732 (uncured) (Dow Corning)	"	0.60	40	100	"	"
Silicone - see "rubber"	"	1.12	40	100	"	"
Silicone Sealant #Q 95-001 (uncured) (Dow Corning)	Black powder A5	0.62	40	100	"	"
Silicone construction sealant #SE-1201 (uncured) (GE)	"	-0.45	40	100	"	"
Silicone grease (Dow Corning #6)	Composition B	-0.24	40	100	"	AL-S-39-64
Silicone Sealant #Q 95-011 (cured) (Dow Corning)	Lead azide, RD 1333	-0.42	40	100	"	AL-S-102-64
Silicone sealant #Q 95-011 (uncured) (Dow Corning)	"	-0.28	40	100	"	"
Silicone construction sealant #SE-1201 (uncured) (GE)	"	2.86	40	100	"	"
Silicone sealant #Q 95-011 (uncured) (Dow Corning)	Lead styphnate	0.16	40	100	"	"
Silicone construction sealant #SE-1201 (uncured) (GE)	"	-0.26	40	100	"	"
Silicone rubber, vulcanized, Silastic Grade 6508 (Dow Corning)	PETN	-	-	100	Comp.	DSL, Australia Method M240/61
Silicone, Dow Corning 92-018 (cured)	Propellant HES-8028.3	-0.08	40	90	Neglig.	AL-S-62-67
Silicone rubber, vulcanized (Dow Corning) Silastic Grade 6508	RDX, Grade 1A	-	-	100	Comp.	DSL, Australia Method M240/61

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Silicone rubber, vulcanized (Dow Corning) Silastic Grade 6508 (Pigmented with chromium trioxide)	RDX, Grade 1A	-	-	100	Comp.	DSL, Australia Method M240/61
Silicone sealant #Q 95-011 (uncured) (Dow Corning)	RDX	-0.17	40	100	Neglig.	AL-S-102-64
Silicone construction sealant #SE-1201, (uncured) (GE)	"	-0.08	40	100	"	"
Silicone grease, GP, soft (Dow Corning Corp)	RDX/TNT	-	-	100	Comp.	DSL, Australia (MIL-P-22332)
Silicone sealant #Q 95-011 (uncured) (Dow Corning)	Tetryl	5.85	40	100	Excess	AL-S-102-64
Silicone construction sealant #SE-1201 (uncured) (GE)	"	-0.64	40	100	Neglig.	"
Silicone sealant #Q 95-011 (uncured) (Dow Corning)	TNT	0.44	40	100	"	"
Silicone construction sealant #SE-1201 (uncured) (GE)	"	-0.64	40	100	"	"
Silicone compound (GE), TBS-757A + TBS-757B (cured)	"	0.25	40	100	"	AL-S-73-67
Silicone compound (GE), TBS-757B (curing agent)	Tritonal (80/20) + 1% calcium silicate	11+	1/3	100	Excess	"
Silicone compound (GE), TBS-757A	"	-0.58	40	100	Neglig.	"
Silicone compound (GE), TBS-757A + TBS-757B (cured)	"	-0.13	40	100	"	"
Silicone compound (GE), TBS-757A	"	-0.27	40	100	"	"
Silicone compound (GE), TBS-757A	Tritonal (80/20) + 50% calcium silicate	-0.35	40	100	"	"
Silicone compound (GE), TBS-757B (curing agent)	"	-0.23	40	100	"	"
Silicone compound (GE), TBS-757A + TBS-757B (cured)	"	11+	1/3	100	"	"
Silicone compound (GE), TBS-757A + TBS-757B (cured)	"	0.51	40	100	"	"
Silicone compound (GE), TBS-757A + TBS-757B (cured) + bituminous coating compound	"	0.41	40	100	"	"
Silicone compound (GE), TBS-757A + TBS-757B (cured) + bituminous coating compound	Tritonal (80/20) + 10% calcium silicate	-0.24	40	100	"	"
Silicone compound (GE), TBS-757B	"	11+	1/4	100	Excess	"
Silicone compound (GE), TBS-757A	"	-0.16	40	100	Neglig.	"
Silicone compound (GE), TBS-757A + TBS-757B (cured)	"	-0.35	40	100	"	"
Silicone, Thermofax	"	0.60	40	100	"	"
Solthane - see "polyurethane"	"	0.73	40	100	"	"
Sponge, epon cell (plastic)	White phosphorus	-0.08	40	90	"	AL-S-117-66
Stearyl liner	White phosphorus	0.01	40	90	"	AL-S-171-64
Sti'well Syrup - see "urea-formaldehyde"	Propellant T36	0.08	40	90	"	AL-S-141-65
Styrene	Propellant T36	-0.14	40	90	"	AL-S-134-63
"	"	-0.99	40	100	"	"
Styrene/acrylonitrile	RDX/TNT	-	1 yr	60	Mod.	WAM/172/01
"	TNT	-	1 yr	60	"	"
Styrene-acrylonitrile, reinforced - see "Acrylafil"	"	"	"	"	"	"
Stycast 2541	Octol (75/25)	11+	16	100	Excess	AL-S-46-65
Styron - see "polystyrene"	"	"	"	"	"	"
Styron, Class 1, 322-27-71, YA-704-36	Composition C4	-0.25	40	100	Neglig.	AL-S-92-67
Styron, Class 1, 333-27, NAT-71, YA-704-32	"	-0.24	40	100	"	"

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Styron, Class 1, 475-27, NAT-71, YA-704-34	Composition C4	-0.28	40	100	"	"
Styron, Class 1, 453-27, NAT-1, YA-704-35	"	-0.26	40	100	"	"
Styron, Class 1, 492-27, NAT-71, YA-704-33	"	-0.26	40	100	"	"
Surlyn A	CE	-	1 yr	60	None/slight Excess	WAM/172/01
Surlyn, ionomer resin	Propellant M9, Lot 18820	5.20	40	90	"	AL-S-103-67
Surlyn A	Propellant NQ	-	1 yr	60	Mod.	WAM/172/01
"	TNT	-	1 yr	60	"	"
Tape, pressure, 3M, #202	Benite	-1.16	40	100	Neglig.	AL-S-131-60
"	Black powder A5	-0.14	40	100	"	"
Tape, 3M #4253 UAL	Composition A5, Type 1/0.25% graphite	-0.21	40	100	"	AL-S-174-67
Tape, Mystic PN 7453	"	-0.22	40	100	"	"
Tape, Permacel PN 112	"	-0.21	40	100	"	"
Tape, Permacel PN 112	Composition B	-0.05	40	100	"	"
Tape, pressure sensitive, Angier, PT-5502	"	-0.21	40	100	"	AL-S-37-59
Tape, pressure sensitive, 3M, 400	"	0.17	40	100	"	"
Tape, pressure sensitive, 3M, 471	"	-0.32	40	100	"	"
Tape, Permacel PN 112	Cyclotol (70/30), 0.35% calcium silicate	-0.20	40	100	"	AL-S-174-67
Tape, 3M, type 874	Composition C4	-0.34	40	100	"	AL-S-55-64
Tape, 3M, #4253 UAL	PBX, Type A	-0.14	40	100	"	AL-S-174-67
Tape, Mystic PN 7453	"	-0.20	40	100	"	AL-S-174-67
Tape, Permacel PN 112	"	-0.12	40	100	"	"
Tape, pressure, 3M, #202	Primer mix, electric 271-91	-0.03	40	100	"	AL-S-131-60
Tape, pressure sensitive, 3M, Scotchfoam, #410P	Propellant AHH	11+	16	100	Excess	AL-S-44-65
Tape, pressure sensitive, CMC 40	"	7.74	40	90	Excess	"
Tape, pressure sensitive, Temp-R (Conn. Hard Rubber)	Propellant DDP, #2056D, base grain powder	-0.16	40	100	Neglig.	"
Tape, Permacel PN 112	"	-0.23	40	100	"	"
"	RDX, SR 54-64	-0.19	40	100	"	AL-S-174-67
"	Tetryl, KNK 7063	0.00	40	100	"	"
Tape, Twin-T Mystic, 2005-152	Tritonal (80/20)	1.31	40	100	"	AL-S-21-66
Teflon	Ammonium perchlorate, PIF-265	0.01	40	RT	Neglig.	AL-S-6-62
Teflon film	Composition B	-0.10	40	100	"	AL-S-151-60
"	Cyclotol (75/25)	-0.05	40	100	"	"
Teflon treating agent	HTA-3 composition	11+	16	100	Excess	AL-S-33-67
Teflon film	Lead azide	-0.09	40	120	Neglig.	AL-S-151-60
"	NOL-130	0.85	40	100	"	"
"	PBX, type A	0.03	40	100	"	"
Teflon	Propellant, ABL-2056-D-PIF-264	0.12	40	RT	"	AL-S-6-62
"	Propellant, ABL-2056-D. Composite-PIF-269	-0.16	40	RT	"	"
"	Propellant ARP, base grain PIF-263	-0.02	40	RT	"	"
"	Propellant ARP, composite cast charge, PIF-268	-0.10	40	RT	"	"
"	Propellant, casting solvent, batch 6-62	-0.14	40	100	"	AL-S-43-63

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Teflon	Propellant, double-base, cast charge 5667	-0.06	40	90	Neglig.	AL-S-43-63
Teflon film	RDX	-0.03	40	100	"	AL-S-151-60
Telemar (fluorocarbon)	Composition B	-	40	100	"	AL-S-109-65
TPX - methyl pentene	CE	-	1 yr	60	None/slight	WAM/172/01
TPX	Propellant NQ	-	1 yr	60	"	"
"	TNT	-	1 yr	60	"	"
Tra-Bond BB-2129 (Tra-Con, Inc.)	RDX, Type II	4.86	40	100	Mod.	AL-S-59-66
Trenco M-5592 (Part A-10 pbw, Part B-20 pbw)	Composition B	11+	16	100	Excess	AL-S-114-60
Tubing, plastic, Flexible Z202 (Hughson Chemical Co.)	Composition B, Lot HOL-7-1879	0.33	40	100	Neglig.	AL-S-122-66
Tufflex	Propellant M10	-0.30	40	90	"	AL-S-79-P?
Tyton Adhesives - see "urea formaldehyde"						
Urea formaldehyde, paper impregnated with (Stilwell Syrup, Tyton Adhesives)	RDX (RDX/TNT)	-	-	100	Comp.	DSL, Australia (Method M240/61)
"	Tetryl	-	-	100	"	"
"	TNT (RDX/TNT)	-	-	100	"	"
Urethane (room temperature cured)	Composition B	-0.17	40	100	Neglig.	AL-S-144-65
"	R6 composition	2.32	40	100	"	"
"	HTA-3	-0.23	40	100	"	"
"	Octol (75/25)	-0.16	40	100	"	"
"	RDX	-0.17	40	100	"	"
"	Tritonal (80/20)	0.04	40	100	"	"
Urethane foam, low ext. ether 2AP, 63PPL8-31-2B	Propellant HEN-12	5.26	40	90	Excess	AL-S-57-66
Urethane foam, polyether sheet 2 apped	"	5.45	40	90	Excess	"
Urethane foam, SIF (90 ppi) Bun Ester (Premium)	"	3.66	40	90	Mod.	"
Urethane foam, polyester caustic, T59G#2	"	3.44	40	90	"	"
Urethane foam, low density polyester caustic, LF-13-1C	"	3.25	40	90	"	"
Urethane foam, low ext. ether 2AP (63 ppi) L8-31-2B (washed with distilled water)	"	3.83	40	90	"	"
Urethane foam, polyether sheet 2 apped (washed with distilled water)	"	2.87	40	90	Slight	"
Urethane foam, SIF (80 ppi) Bun Ester (Premium) (washed with distilled water)	"	2.54	40	90	"	"
Urethane foam, low ext. ether 2AP (63 ppi) L8-31-2B (washed with methylene chloride)	"	2.33	40	90	"	"
Urethane foam, polyether sheet 2 apped (washed with methylene chloride)	"	4.26	40	90	Mod.	"
Urethane foam, SIF (80 ppi) Bun Ester (Premium) (washed with methylene chloride)	"	3.17	40	90	"	"
Varnish, conductive (Stoner Mudge)	Propellant M17	5.93	40	90	Excess	AL-S-46-66

Plastic	Explosive	Gas (ml)	Hrs	Temp (°C)	Rating	Report No.
Velostate (polyethylene impregnated with graphite)	Composition A5 HOL-SR-550-62	-0.38	40	100	Neglig.	AL-S-131-63
Velostat screening	Lead azide, RD 1333	-0.50	40	100	Neglig.	AL-S-31-64
Versamid 125	Composition B	- *	1/8	100	*Explo	AL-S-50-67
Versamid XD-140	Photoflash powder, Type III, Class A (40/30/30)	0.02	40	100	Neglig.	AL-S-74-60
"	Photoflash powder Ca/A1/KC10 <sub>4</sub> (30/20/50)	1.17	40	100	"	"
Versamid 125	Nitrocellulose + 2% DPA	NT	1/8	100	Explo	AL-S-63-62
Vinyl - see "Elvax...."	Cyclotol (70/30)	0.49	40	100	Neglig.	AL-S-117-65
Vinyl coated aluminum, VCA-1289-Black-12	"	-0.09	40	100	"	"
Vinyl coated aluminum VCB-1325-Black-2048	Detonating fuse, mild RDX (Cyclomite)	-.03	40	90	Neglig.	AL-S-41-63
Vinyl tube	"	-0.02	40	100	"	AL-S-117-65
Vinyl coated aluminum, VCA-1289-Black-12	"	-0.06	40	100	"	"
Vinyl coated aluminum VCB-1325-Black-2048	Propellant NQ	-	1 yr	60	Mod.	WAM/172/01
Viton B	TNT	-	1 yr	60	Slight/ mod.	"
"	Propellant T36	0.07	40	90	Neglig.	AL-S-93-62
Vulcanized fibre Spaulding Fibre Co. (American rotating bands)	"	0.03	40	90	"	"
Vulcanized fibre National VF Co. (American rotating bands)	Composition C4	0.08	40	100	"	AL-S-70-63
Vydex AR	Composition B	-0.24	40	100	"	AL-S-164-67
KR-6-0902 resin (cured) (Dow Corning)	Cyclotol (70/30)	-0.60	40	100	"	"
"	Black powder, A5	-0.12	40	120	"	AL-S-27-66
Zefran - see "acrylic"	Delay composition	-0.18	40	120	"	"
Zytel 42 (nylon)	First fire composition	-0.08	40	120	"	"
"	Igniter composition	-0.36	40	120	"	"
"	Illuminant composition	-0.24	40	120	"	"
"	White star pellets, uncoated	0.08	40	120	"	"
Zytel 101, nylon 6/6	Propellant M9, Lot 18820	1.39	40	90	"	AL-S-103-67

PART TWO - COMPATIBILITY OF EXPLOSIVES WITH PLASTICS

Explosive	Plastic	Rating
Ammonium perchlorate	Nitrорubber	Negligible
Ammonium perchlorate, PIF-265	Teflon	"
Astrolite G Lot 0014 (liquid explosive)	Polyethylene, low density	"
"	Neoprene rubber	Slight
Astrolite G	Ethylene propylene rubber	Negligible
Ball powder - see "Emite", "propellant"		
Baratol (67/33)	Dapon resin	Negligible
"	Polyester	"
"	Polyester, Meta Seal 19V5	"
Benite	Loctite AV-10-10	Excessive
Benite powder (strands)	"	Excessive
Benite	Tape, pressure, 3M, #202	Negligible
Black powder, Lot DuP 36-1	Adhesive, EC 1099 (3M)	Negligible
Black powder, Lot DuP 36-		"
Black powder, Lot KPC-4-14		"
Black powder	Polyethylene	"
Black powder, Grade A	Polyepp/activator	"
Black powder A5	Amberlite resin	"
"	Delrin, DuPont	"
"	Epon 828/Versamid 125 (50/50)	"
"	Epon 828/Versamid 125 (55/45)	"
"	Epon 828/Versamid 125 (60/40)	"
"	Galvanoplast, conductive paint	Moderate
"	Laminac, 4116 and 4134	Negligible
"	Lexan GE141	"
Black powder, Class 7	Loctite AV-10-10	"
Black powder A5	Nylon scrim	"
"	Nylon epoxy laminate	"
"	Polypropylene, Avisun 840-1446	"
"	Selectron (Mix 5003/5214)	"
"	Silicone construction	"
"	sealant #SE-1201, uncured	"
"	Silicone sealant #Q 95-001, uncured	"
"	Silastic RTV 731 (uncured)	"
"	Silastic RTV 732 (uncured)	"
"	Tape, pressure, 3M, #202	"
"	Zytel 42 (nylon)	"
Black powder/fuze powder (50/50)	Adhesive, EC 880 (3M)	"
Black powder A5/fuze powder mix	Adiprene L 100	"
Black powder A5/fuze powder (50/50)	Formica super fast dry contact cement (Cyanamid)	"
Black powder/magnesium	Polyethylene caps	"
"	Polystyrene vial	"
Boron/potassium nitrate (2R pellets)	Astraceram	Negligible
"	Bakelite ERL 2795	"
"	Devcon B	"
"	Selectron	"
Casting powder, ABL 1852 * Mixture only	Epon resin #911S	"
Casting powder, ABL 1408	Epon Resin #828	Slight to Moderate
Casting solvent, 73% NG, 27% TA, 1% 2nDPA (added)	Nitrорubber	Negligible
Casting Solvent NG	Rubber	"
"	Rubber, Columbia	"
"	Rubber, gum	"
"	Rubber, gum, B	"
"	Rubber, gum, G	"

Explosive	Plastic	Rating
Casting solvent NG	Rubber, gum, P	Negligible
"	Rubber, gum, I	Slight
"	Rubber, Potomac (Talos Gasket)	Slight to Moderate
"	Rubber, Silastic	Excessive
Casting solvent, batch 6-62	Teflon	Negligible
CE (Tetryl)	EVA	None/slight
"	MBS	"
"	Nylon 6, 6	"
"	Nylon 6, 6, glass-filled	"
"	Phenoxy resin	"
"	Polyester resin with cobalt naphthenate and cyclohexanone peroxide paste	Compatible, cured resin (100C); not com- patible, cured resin (120C)
"	Polyester urethane	Moderate
"	Polyethylene with acrylic resin adhesive: black tape	Compatible
"	Polystyrene; Styron Drab Green D2417, molding powder; CSRC	"
"	Polysulphone	None/slight
"	Rubber, fluorosilicone	"
"	Rubber, natural (Formulations DSL 239 F and DSL 241 C)	Not compatible
"	Rubber, neoprene	None/slight
"	Rubber, nitrile	Moderate
"	Rubber, silicone	Slight/moderate
"	Surlyn A	None/slight
"	TPX	"
Combustible case, standard, Lot WPP-3-3	Epoxy adhesive 25-149 cured (Unfilled 31-59)	Negligible
Combustible case material	RTV 732 (cured or uncured)	"
Composition #1: RDX (238 pts), lead azide (150 pts), cloth (50 pts), Cab-0-Sil (12 pts)	Nylon tape	"
Composition #2: lead azide (150 pts), cloth (50 pts), Cab-0-Sil (12 pts)	"	"
Composition 9404	Primer, Dow Corning A4014	"
Composition SR 3710 (Mg powder, 42%; potassium nitrate, 50%; Acaroid resin, 8%; particles coated with Versamid)	Polyamide; Versamid 140 resin	Compatible
Composition A3	Adhesive, EC 1099 (3M)	Negligible
"	Loctite, grade AA	"
Composition A5	Armstrong A12, Part A (uncured)	Excessive
"	Armstrong A12, Part B (uncured)	Excessive
"	Armstrong A12, Parts A and B (uncured)	Excessive
"	" (cured)	Moderate
Composition A5, Type 1	Delrin 500	Negligible
Composition A5	Laminac	"
"	Loctite AVV	"
"	Lupersol	"
"	Polypropylene, Pro-Fax (Hercules Powder Co.)	"
"	Stud Lock (Loctite)	"

Explosive	Plastic	Rating
Composition A5, Type 1/0.25% graphite	Tape, 3M #4253 UAL	Negligible
"	Tape, Mystic PN 7453	"
"	Tape, Permacel PN 112	"
Composition A5, HOL-SR-550-62	Velostat (polyethylene impregnated with graphite)	"
Composition B (stored 6 mo @ 51 C)	Adhesive, AK21D (cured 2 hr at 350 F)	"
Composition B	"	"
"	Adhesive, 828/140 (ground fine)	Moderate
"	" (as received)	Negligible
"	Adhesive, EC 870 (3M)	"
"	Adhesive, EC 1099 (3M)	"
Composition B (stored 6 mo @ 50 C)	Adhesive, EC 1386 (cured 1 hr @ 360 F)	"
Composition B	"	"
"	Adhesive, EC 2086, (as received)	"
"	" (ground fine)	Excessive
"	Adhesive, EC 2186 (as received)	Negligible
"	" (ground fine)	Excessive
"	Adhesive, Formula 3548-74 w/catalyst MPDA/LP	Excessive
"	Adhesive, R86020 (as received)	Negligible
"	" (ground fine)	Moderate
"	Adhesive 43D-D16 (cured or uncured)	Negligible
"	Adiprene L-100	"
"	Araldite 6005-25pbw, hardener 957pbw	"
Composition B	Bondmaster BU 1200-100pbw, catalyst part II, 40 pbw	"
Composition B, Grade A	Casting resin RCM-2, curing agent S (4 hrs @ 65 C)	Excessive
"	" (8 hrs @ 65 C)	Excessive
Composition B	Cellulose acetate	Negligible
"	Cellulose acetate butyrate	"
Composition B, Lot HOL-7-1879	Chemglaze, white gloss, (Hughson Chemical)	"
Composition B	Cycolac T (ABS) (Marbon)	"
"	Delrin	"
Composition B, Lot HOL-71879	Delrin 500	"
Composition B	Devcon	"
"	Devcon (coated with acid proof paint)	"
"	Devcon mix (9/1)	Excessive
"	EC 612 (3M)	Negligible
"	Epiphen 825A (140pbw), modified (12pbw), converter (16pbw)	Excessive
"	Epocast N4S-066 Mod 1A	Excessive
Composition B	Epon X-81, catalyst Z and benzene	Negligible
"	Epon 820	"
"	Epon 820/TETA	Excessive
"	Epon 820/Versamid 140 (70/30)	Excessive
"	Epon 828	Negligible
"	Epon 828/Versamid 125 (uncured)	Exploded
"	" (cured)	Excessive
"	Epon 913	Negligible

Explosive	Plastic	Rating
Composition B	Epon 919	Negligible
"	Epon 31-89 (uncured)	Moderate
"	epoxy, Thermoset 101; epoxy 101/hardener 101, 1:1 (cured)	Excessive
"	Epon 31-89, Part A/Part B (anhydrite cured)	Negligible
"	Epoxy A1177B1 (uncured)	"
Composition B w/calcium silicate, 5%	Epoxy/fiberglass impregnated	"
Composition B	Ethylene acrylate, BLU 26/B	"
"	Glastimat #1	"
"	Glue, DuPont	"
"	Hysol 3039/Hynol 3469 (100/15), 2 hrs @ 320 F	"
"	" (stored 6 mo @ 50 C)	"
"	Laminar	"
"	Laminac 4116	"
"	Laminac Lupersol	"
"	Loctite, grade A	Excessive
"	Loctite, grade AV-10-10	Moderate
"	Loctite, grade AA	Negligible
"	Loctite, grade C	Excessive
"	Loctite, grade CV-4-10	Excessive
"	Loctite, grade E	Excessive
"	Loctite, grade EV-2-10	Excessive
"	Loctite, grade H	Excessive
"	Loctite Quick Set 404	Negligible
"	Loctite X5230-S (polymerized)	"
"	Lupersol	Excessive
"	MCS-33-1 (epoxy)	Negligible
"	MCS-33-2 "	"
"	MCS-33-3 "	"
"	Molycoat	"
"	Mylar film (Schjeldbond 300)	"
"	Plastisol rubber	"
"	Polyamine A1177B2, uncured catalyst liquid	Burned in 5 minutes
"	Polyester, Meta Seal 19V5	Negligible
"	Polypropylene	"
"	Polysulfide rubber composition (LPZ 313)	"
"	Polyurethane, Solithane 313 (uncured)	"
"	Polyurethane, Solithane 113 with curing agents C113-300 and C113-328 (100/44/6)	"
"	Raybestos R-86020 (cured 2 hrs @ 325 F)	"
"	" (stored 6 mo @ 50 C)	"
"	RTV 504 (uncured)	"
"	RTV 3118 (uncured)	"
"	RTV 3118, w/catalyst (96:4) (RTC 25 hrs)	"
"	RTV 504, with catalyst (10:1) (cured 24 hrs RT)	"
"	RTV 11, with Thermit 12 catalyst (99-1 by wt) (RTC 24 hrs)	"
"	RTV 11 (uncured)	"
"	RTV silicone rubber	"
"	RTV-102, silicone rubber	"
"	RTV-732	"

Explosive	Plastic	Rating
Composition A	Rubber base adhesive, synthetic (3M) EC 612	Negligible
"	Silastic Gum #1	"
"	Silastic Gum #2, Lat 6901	"
"	Silastic Gum #3, Lat 613	"
"	Silicone grease #6	"
"	Tape, Permacel PN 112	"
"	Tape, pressure sensitive	"
"	Teflon film	"
"	Telomer (fluorocarbon)	"
"	Tremco M-5592 (Part A-10pbw, Part B-20pbw)	Excessive
Composition B, Lat H01-T-1879	Tubing, plastic, Flexible X 203	Negligible
Composition B	Urethane (room temperature cured)	"
"	Versamid 125	Exploded
"	XR-6-002 resin (cured)	Negligible
Composition B4	Adhesive, EC 870	"
"	Adhesive, EC 2186-1 cured	Excessive
"	Adhesive, EC 2186-2 cured	Negligible
"	Adhesive, MIL-A-388A, Type 2	"
"	Cellulose nitrate (base)	"
"	Type 2 cement	"
"	Dapon resin	"
"	Polyester	"
"	PV-918 (extra baked)	Moderate
Composition C3 - See "PE-3A"		
Composition C4	Acrylofl 040/36	Negligible
"	Adhesive, EC 1099 (3M)	"
"	Adiprene	"
"	Delrin	"
"	Devcon A/Devcon flux/Ciba 951/Ciba 802	Negligible
"		Moderate
"	Epocast	Excessive
"	Epon 829	Negligible
"	Styron, Class 1	"
"	Tape 3M, type 874	"
"	Vydax AR	"
Composition H6	Cellulose acetate	"
"	Cellulose acetate butyrate	"
"	Durez	"
"	Epon 828/Cardolite 6885/Epon Acc. 2/Kaolin	"
"	Epoxy 826 (w/fiber glass)	"
"	Fiberite	Excessive
"	Fiberite 4030	Negligible
"	Foam-Silastic Q3-0031	"
"	Nuodex	"
"	Phenolic, CF 1	"
"	Polyester resin	"
"	Polyester resin, T-255042, pre-imp.	"
"	Polyester/aluminum resin	"
"	Polyester/ asbestos	"
"	Polyurethane foam #1	"
"	RTV 501, silicone	"
"	RTV silicone rubber	"
"	Silastic 732 RTV (silicone rubber)	"
"	Solithane 113-302 or 113-325	"
"	Urethane (room temperature cured)	"

Explosive	Plastic	Rating
Carbide - see "Propellant HUK", "Propellant NG"		
Cyclotol (70/30) lot 51-9	Adhesive, Armstrong A18	Excessive
"	Adhesive, KC 1000	Negligible
Cyclotol (75/25)	Devcon B Liquid Type and Hardener	Slight
Cyclotol (70/30)	Epon 81-60	Negligible
Cyclotol (75/25)	Epon 828	Excessive
Cyclotol w/1% boric acid added	"	Excessive
Cyclotol (70/30)	Epon 813 (uncured)	Negligible
Cyclotol (75/25)	Epon 813 (cured)	Excessive
Cyclotol (70/30)	"	Moderate
Cyclotol (75/25)	(cramped to 40 mesh)	
"	Eponet M1 and Eponure 60	Excessive
"	Eponet M1 and Eponure 8-9	Excessive
"	Epoxy, Armstrong C-7, cured w/Armstrong activator H-47	Excessive
"	Epoxy resin 2215B	Excessive
"	Epoxy resin 2611	Excessive
"	Epoxy resin, 2500 Black, plus 44 Hardener (1:1)	Excessive
"	Ethylene acrylate, BI.U 26/B	Negligible
"	Fuller 7003 (epoxy)	Excessive
"	Mylar film (Schjelbond 300)	Negligible
"	Phenoxy PANJ (Epibond 100A)	Excessive
Cyclotol (70/30) lot 51-9	Pliobond 20 or 30	Excessive
Cyclotol (75/25)	Silastic Gum #1, 2 or 3	Negligible
Cyclotol (70/30) 0.35% calcium silicate	Tape, Permacel PN 121	"
Cyclotol (75/25)	Teflon film	"
Cyclotol (70/30)	Vinyl coated aluminum	"
"	XR-6-0902 resin (cured)	"
DDP Base Grain Powder	Polystyrene foam	"
DDP Base Grain Powder, 2056D	Tape, pressure sensitive	"
DATB (Diaminotrinitrobenzene)	Epon 820/Versamid 140 (70/30)	"
"	Furane/CM catalyst/Gypsum (10/2/10)	No test
DATB/Lexan (94/6)	Epon 820/Versamid 140 (70/30)	Negligible
"	Furane/CM catalyst/Gypsum (10/2/10)	No test
DATB/Teflon (94/6)	Adhesive, Bostik 1816-541	Excessive
"	Epon 828/Versamid 140 (70/30)	Negligible
"	Furane/CM catalyst/Gypsum (10/2/10)	No Test
DATB/Viton (94/6)	Epon 820/Versamid 140 (70/30)	Negligible
"	Furane/CM catalyst/Gypsum (10/2/10)	No test
Delay composition	Delrin, DuPont	Negligible
Delay composition (90/10, BaCr/B)	Hysol cake	"
Delay composition	Lexan GE141	"
Delay mix, DP-879	Loctite, grade A	"
Delay composition	Polypropylene, Avisun 840-1446	"
Delay composition, magnesium, D16	RTV 103 (uncured)	"
Delay composition	Zytel 42 (nylon)	"
Detonating cord	Rubber	"
"	Sealant #400	"
Detonating fuse, mild	Vinyl tube	"

Explosive	Plastic	Rating
Diaminodinitrobenzene - see DATB		
Emko, Lot X2476 (ball powder)	Epoxy 828/Versamid 125 65/35 (cured or uncured)	Negligible
Explosive sheet, KL-808C	Adhesive	Negligible or No test
First fire composition	Delrin, DuPont	Negligible
First fire composition PA-PD-894, Type 1	Isocemres #460 w/hardener #50 (cured)	"
"	(uncured)	Tubes broke on cooling
"	Isocemres #460 w/hardener #63 and catalyst 215X (cured or uncured)	Negligible
First fire composition	Lexan GE 141	"
First fire mix, SI-155	Loctite, Grade A	Moderate
"	Loctite, grade A	Negligible
First fire composition	Polypropylene, Astan 840- 1446	"
"	Zytel 42 (nylon)	"
Flash powder (50/50 red phosphorus/ magnesium)	Fiberite X-1942	"
"	Polystyrene, modified	"
"	Plenco, 2.75	"
Flex-X (flexible explosive)	Scotch tape, 3M, Lot 10, Core 0300	"
Flexible explosive	"	"
Fuses	Epoxy ERL 2774/Versamid 125 (2.5/1)	"
HBX-6	Laminac 4116	"
HEN 12 composition (Shillelagh Missile Heat Comp.)	Loctite AV 10-10	"
HMX	Epon 820/Versamid 140 (70/30), Adhesive A	"
"	McConnaplast 38	"
"	Nitrorubber	"
"	Separan NP10, Lot 258	"
"	Separan NP10, Lot 258/ KCL (SO <sub>4</sub> ) <sub>2</sub> (10/1)	"
"	Separan NP10, Lot 258/ NaCl (10/1)	"
"	Separan NP10, Lot 326	"
"	Separan NP20, Lot 8	"
"	Separan NP20, Lot 8/ KCL (SO <sub>4</sub> ) <sub>2</sub> (10/1)	"
"	Separan NP20, Lot 8/ NaCl (10/1)	"
"	Separan NP20, Lot 14	"
HMX-AL-Nylon	Adiprene L-MOCA-AGE	Negligible
"	Epiphen 825A	"
"	Epon 820/Versamid 140	"
HMX/A1/Nylon (66/25/9)	Epon 901-B-1	Excessive
HMX/Exon/DOS (95/4.4/.6)	Plastisol, RC, VP8-1	Negligible
HMX	Rubber, Silastic	"
HTA-3	Adiprene L-100 (MOCA-AGE)	"
"	Cellulose acetate	"
"	Cellulose acetate butyrate	"
"	Diallyl phthalate	Moderate
"	Epon 31-59	Negligible
"	Epon 820-125 or 820-125 HC	Excessive
"	Epon 820/Versamid 140 (70/30), Adhesive	Excessive

Explosive	Plastic	Rating
HTA-3	Epon 820/Versamid 140 (70/30), Adhesive	Moderate
HTA-3M	"	Excessive
"	"	Moderate
HTA-3	Epon 820-140 or 820-140 HC	Excessive
"	Epon 820-250 or 820-250 HC	Excessive
"	Epon 820-310 or 820-310 HC	Excessive
"	Epon 820/915B-A-1-5R (adhesive)	Negligible
"	Epon 820-2000 or 820-2000 HC	Excessive
HTA-3 explosive (with fiber glass)	Epoxy 828	Negligible
HTA-3	Epon 828-125 or 828-125 HC	Excessive
"	Epon 828/EM-550	Negligible
"	Epon 828/Versamid (cured)	"
HTA-3 Composition HMX/TNT/A1 (84/25/21)	Epon 901-B-1	Excessive
"	Epon 913-A-1-6A	Negligible
"	Epon 919	"
HTA-3	Fibertite 5430	Excessive
"	Fibertite 5430 (epoxy/glass)	Excessive
"	Laminac 4110, coarse or fine (cured)	Negligible
"	Lexan	"
"	Molding compound, FS-4	"
"	Narmco 3170/7133	Excessive
"	Nylon	Negligible
"	Phenolic	"
"	RTV silicone rubber	"
"	Scotchply 1100	"
"	Teflon treating agent	Excessive
"	Urethane, room temperature cured	Negligible
HUK - see "Propellant"		
Igniter material	Alathon 3120	Moderate
Igniter composition	Delrin, DuPont	Negligible
Igniter mix T61	Eccobond 56C (cured)	"
"	Epoxy resin	"
Ignition mix (AXP-90933)	Epoxy/ball powder, M6, bonded	"
Igniter composition	Lexan GE 141	"
Ignition mix M63 (electric igniter)	Loctite AV-10-10	"
Igniter material	Marlex (Brown)	* Exploded
Ignition mix, AXP-90933	Nitrocellulose tow	Negligible
Igniter composition	Polypropylene, Avisun 840-1446	"
Ignition mix, AXP-90933	Polyurethane	"
Igniter composition	RTV-102 (uncured) sealant	"
Igniter composition A1A	RTV 103 (uncured)	"
Igniter composition Z3 (zirconium and barium chromate)	"	"
Igniter composition	Zytel 42 (nylon)	"
Illuminant composition	Delrin	"
Illuminant composition, magnesium/sodium nitrate binder (63/33/4)	Isochemrez #460 w/hardener #63 and catalyst 215X (uncured)	No Test
"	" (cured)	Negligible
"	Isochemrez #460 w/hardener #50 (uncured)	No Test
"	" (cured)	Negligible
Illuminant composition	Lexan GE 141	"
"	Polypropylene, Avisun 840-1446	"
"	Zytel 42 (nylon)	"

Explosive	Plastic	Rating
LFT-1 Comp (PI-F-510) (Gas generator)	Epoxy adhesive (cured or uncured)	Negligible
LFT-3	Bakelite ERL 2795	"
"	Selectron	"
Lead azide - see "Composition #1"		
Lead azide, RD-1333	Brolite (epoxy A423 & thinner T352)	"
"	Cab-O-Bil	"
Lead azide, PVA	"	"
Lead azide	Delrin	"
Lead azide, RD-1333	Epoxy/polyamide	"
Lead azide	Laminac 4116 and 4134 (80/80)	"
Lead azide, RD-1333	Lexan	"
"	Loctite 404	"
Lead azide (MIL-L-3055, Type D)	Loctite sealant, Type AV	"
Lead azide	Molylube #16	"
Lead azide, RD-1333	Mylar film (Schjelbond 300)	"
Lead azide, RD-1333	Polyisoprene rubber, Lot #432	"
Lead azide, RD-1333	Polyurethane varnish	"
"	Polyvinyl acetate, Metex X2-2	"
Lead azide	RTV-11 (uncured)	"
"	RTV-502, silicone rubber (uncured)	"
Lead azide	Alkyd resin, Plaskon 2201	"
"	Silastic RTV 732 (uncured)	Moderate
Lead azide, RD-1333	Silastic RTV 731 (uncured)	Negligible
"	Silastic Gum #1, #2 and #3	"
"	Silicone sealant	"
Lead azide	Teflon film	"
Lead azide, RD-1333	Velostat screening	"
Lead azide, dextrinated	Adhesive EC 1099 (3M) (95/5 EC 1099/benzene)	"
"	Epoxy 907, adhesive (M. S. Co.)	"
Lead styphnate	Adhesive, EC 880 (3M)	"
"	Adiprene L 100	"
"	Formica super fast dry contact cement	"
"	Loctite 404	"
Lead styphnate, basic	Molylube #16	"
Lead styphnate	Silastic RTV 731 (uncured)	"
"	Silastic RTV 732 (uncured)	"
"	Silicone sealant	"
Liquid explosive - see "Astrolite...."		
Minol-2 (40/40/20)	Inert sealer, Type 1 MIL-S-3105	"
"	"	"
"	(plus hot melt compound)	"
Minol-2 (40/40/20), modified	Coating compound, MIL-C-45C type 1 (cured)	"
Minol-2 (40/40/20)	"	"
Minol-2 (40/40/20), modified	Hot melt compound, MIL-C-3301	Moderate
"	"	"
Nitrocellulose compound	Epoxy	Negligible
Nitrocellulose	Phenol-formaldehyde (microballoons)	Compatible
"	Polyethylene, antistatic	"
Nitrocellulose + 2% DPA	Versamid 125	Exploded
Nitroglycerine	Phenol-formaldehyde (microballoons)	Compatible
"	Polyethylene, antistatic	"

Explosive	Plastic	Rating
Nitroglycerine-dipped combustible case, 1B7843 F-1 NH - see "Propellant" NOL-130 NQ - see "Propellant"	Epoxy adhesive 24-149, (cured) (unfilled 31-59) Teflon film	Negligible "
Octol (75/25)	Adhesive, AK 21D (cured 2 hr @ 350 F)	Negligible
Octol (75/25), stored 6 mo @ 50 C	"	"
Octol (75/25)	Adhesive, EC 1386, (cured 1 hr @ 360 F)	"
Octol (75/25), stored 6 mo @ 50 C	"	"
Octol (75/25)	Cellulose acetate	"
"	Cellulose acetate butyrate	"
"	Devcon, lead	Moderate
"	Eccobond solder (including catalyst)	"
"	Epon 815	Excessive
Octol	Epon 820/Versamid 140 (70/30), Adhesive A	Excessive
Octol M	"	Moderate
Octol (75/25)	Epon 820/Versamid 140	Excessive
Octol M	Epon 820/Versamid 140 (70/30), Adhesive A	Excessive
Octol	"	Moderate
Octol (75/25)	Epon 913	Negligible
"	Epon 913 (cured)	"
"	Epon 919	"
"	Epoxy adhesive, 3M, #77	"
"	Epoxy adhesive, M5	Excessive
Octol (70/30)	Epoxy adhesive, Alloco	Excessive
Octol	Epoxy, Marasette	Excessive
"	FM-4005 (Fiberite Corp)	Negligible
Octol (75/25)	FS-4 (Mesa Plastics)	"
"	Hysol 2039/Hysol 3469 (100/15), 2 hrs @ 320 F	"
"	"	"
"	(Stored 6 mo @ 50 C)	"
"	Loctite 43	"
"	Loctite adhesive #307	"
"	Mylar	"
Octol (75/25), Lot HOL SR-85-5	Nylafil, Lot 1-B-268	"
Octol (70/30), Lot HOL 83-30	"	"
Octol (70/30)	Plibond 30	Moderate
Octol (75/25)	"	Negligible
"	Raybestos R-86020, cured 2 hr @ 325 (adhesive)	"
"	"	"
"	(6 mo @ 50 C)	"
Octol	Rogers, RX-431, RX-475, RX-525, RX-600 and RX-1300 H1	"
Octol (75/25)	RTV silicone rubber	"
Octol (70/30)	RTV 102	"
Octol (75/25)	"	"
"	RTV Q90-092	"
Octol (70/30)	"	"
Octol (75/25)	Scotch Weld EC 22.4	Moderate
Octol (70/30)	"	Excessive
"	Scotch Weld EC 2216	Excessive
Octol (75/25)	"	Excessive
"	Stycast 2541	Excessive
"	Urethane (room temperature cured)	Negligible

Explosive	Plastic	Rating
OGK Casting Powder (Cast PL-2596) Output composition (60% lead azide)	Nitrorubber RTV 103 (uncured)	Negligible "
PBX Type A	Silastic Gum #1, #2 and #3	"
"	Teflon film	"
"	Tape, 3M #4253 UAL	"
"	Tape, Mystic PN 7453	"
"	Tape, Permacel PN 112	"
"	Mylar film (Schjelbond 300)	"
PE - plastic explosive PE 3A (RDX - Grade 1)	Resinated asbestos flock (Durestos RA51)	Compatible
PETN	Adhesive, EC 2216 (3M) A & B (uncured)	Moderate
"	Delrin	Negligible
"	Epon 31-59 (cured or uncured)	"
"	Epon 31-59 Part A (uncured)	Moderate
"	Epon 31-59, Part B (uncured)	Negligible
"	Epon 820/Versamid 140	"
"	Epon 934 (cured or uncured)	"
"	Epon 934, Part A (uncured)	"
"	Epon 934, Part B (uncured)	Excessive
PETN, Class A, unwashed	Fiberite 5430 (epoxy/glass)	Negligible
PETN	Loctite 404	"
"	Phenolic	"
"	Polyester resin w/cobalt naphthenate and cyclohexanone peroxide paste	Compatible, cured resin (100C); not compatible, cured resin (120C); not compatible, uncured resin (120C)
PETN	Polyethylene	Negligible
PETN, Lot 23-2	Polyurethane EP 626/628 (liquid)	Moderate
PETN	Polyurethane varnish	Moderate
"	RTV 102 (cured or uncured)	Negligible
"	Rubber plugs, A35, for fuzes	Compatible
"	Rubber plugs, RB 24, for fuzes	"
"	Scotch Weld (3M), adhesive	Negligible
"	Scotch Weld (3M) EC-2216, Adhesive A (uncured)	Excessive
"	Scotch Weld (3M) EC-2216, Adhesive B (uncured)	Negligible
"	Silicone rubber, vulcanized, Silastic Grade 6508	Compatible
Photoflash powder - see "potassium perchlorate/aluminum"		
Photoflash powder (Mg/Al/KClO <sub>4</sub> )	Adhesive, Paisley	Negligible
Photoflash composition (Atomized aluminum and potassium perchlorate)	Cellulose acetate (film)	"
Photoflash powder Ca/Al/KClO <sub>4</sub> (30/20/50)	Epon 828	"
Photoflash powder, Type III, Class A, (40/30/30)	"	"
"	Epon 828/Versamid (70/30)	"
"	Epon 828/Versamid XD-140 (70/30) (uncured)	"
Photoflash powder, (30/20/50), Ca/Al/KClO <sub>4</sub>	"	"
"	(uncured)	"
"	(cured)	"

Explosive	Plastic	Rating
Photoflash comp., (EDSP of simulator, gun flash M110)	Epon 828/Versamid 140	Negligible
"	Epoxide, ERL-2774	"
"	Epoxy A31	"
Photoflash powder (26/34/40)	Epoxy ERL-2774/Versamid 125 (25/1)	"
Al/Mg/potassium perchlorate	Laminac (polyester)	"
Photoflash powder (Daisy) KClO <sub>4</sub> /Al (60/40)	Phenol-formaldehyde case material	"
Photoflash composition	Polyethylene caps	"
Photoflash powder PFP 579 (DWG CPX 89483)	Polystyrene vial	"
Photoflash powder, PFP 579 (Dwg CPX 89483)	RTV-102 (uncured) sealant	"
Photoflash powder; Al/Mg/Pot perchlorate (26/34/40)	Versamid, XD-140	"
Photoflash powder, Type III, Class A (40/30/30)	"	"
Photoflash powder, Ca/Al/KClO <sub>4</sub> (30/20/50)	Epoxy-phenolic laminates	None/slight
Plastic explosive (PE)	PF resins	"
Plastic Explosive	Nylon 6	"
Plastic explosive (PE)	Polyethylene terephthalate (Melinex film)	"
"	Polythene, low den	Slight/moderate
"	Polythene, hi den	Moderate
"	Polyvinylidene chloride (Saran)	Slight/moderate
"	Rubber, neoprene	None/slight
"	Rubber, nitrile	"
Potassium chlorate, Grade A, Class 2	Adhesive EC 1099 (3M) (95/5 EC 1099/benzene)	Negligible
"	Epoxy 907, adhesive (M. S. Co.)	"
Potassium perchlorate/aluminum (60/40)	Armstrong A-4 Epoxy (cured or uncured)	"
"	Activator A (for epoxy)	"
"	Epon 820 (cured or uncured)	"
Primer assembly M54	RTV 103 (uncured)	"
Primer mix M61	RTV-732 (cured or uncured)	"
Primer mix NOL 130	Mylar film (Schjelbond 300)	"
"	Silastic Gum #1, #2 and #3	"
Primer mix, electric, 271-91	Tape, pressure, 3M, No. 202	"
Propellant - see also "DDP", "OGK"	Teflon, propellant	"
Propellant ABL-2056-D, Composite-PIF-269	Buna-N w/DAG-154	"
Propellant AHH (XM 548 (PPS-502C))	Buna-N w/DAG-210	"
Propellant AHH	Cellulose acetate, sheet #1, #2 and #3	"
"	Epon 828/Versamid 125 (cured or uncured)	Excessive
"	Rubber, silicone	Negligible
Propellant AHH, PAE-39603	Silastic RTV-S-5370 (foam)	"
Propellant AHH	Tape, pressure sensitive, 3M, Scotchfoam, #4108	Excessive
Propellant ARP	Adhesive, EC 1359	Negligible
"	Cement, congoleum (Black Mastic)	Moderate
Propellant ARP, base grain PIF-263	Teflon	Negligible
Propellant ABL-2056-D-PIF-264	"	"

Explosive	Plastic	Rating
Propellant ARP, composite cast charge, PIF-268	Teflon	Negligible
Propellant, ball powder	Adhesive, EC 826 (3M)	"
"	Mylar film	"
"	Mylar film w/adhesive, EC 826 (3M)	"
Propellant, ball powder, epoxy	RTV 732 (cured or uncured)	"
Propellant, cast double base	Epoxy adhesive (amine cured); Epophen ET-2-A and EL-5 w/hardener EHR-1	Compatible
Propellant, cast double base (5% aluminum)	Epoxy (amine cured); Epon 946, Parts A & B	"
"	Epoxy (anhydride cured); Epon 25-149, Parts A & B	"
"	Epoxy (amine cured) (40/60)	"
"	Epikote 828 w/hardener Versamid 140	"
"	Epoxy (amine cured) (60/40)	"
"	Hydrocarbon, chlorinated	"
"	Cereclor 42	"
"	Phenolic adh. : Redux 775 liquid	"
Propellant, double-base, cast charge 5667	Teflon	Negligible
Propellant HEN-12	Conap 2510/Conacure AH-19 (50/50), after set-up PIF-21E	Excessive
"	NOPCO H201, PIF-28H	Excessive
"	NOPCO P502, PIF-29I	Excessive
"	NOPCO G502, PIF-30J	Negligible
Propellant HEN-12	Polylite, 50/50-34-721/34-800, after set-up PIF-25E	Excessive
"	Polylite, ED 50/50, 1081/34-800, after set-up PIF-25G	Excessive
"	Polystyrene #1 and #2 (PIF-31K and PIF-32L)	Negligible
"	Polyurethane, M (Band cook-off protectors)	"
Propellant HEN-12 (N-5)	Polyurethane, M (Band cook-off protectors)	"
Propellant HEN-12	Scott foam (80 ppi), SIF White; PIF-17A	Moderate
"	Scott foam (80 ppi), Custom, PIF-18B	Excessive
"	Scott 1/32" Standard White Sheet, PIF-19C	Excessive
"	Scott 1/8" Premium Beige Sheet, PIF-20D	Moderate
"	Urethane foam, low ext. ether 2AP, (63 ppi) L8-31-2B	Excessive
"	Urethane foam, polyether sheet 2 apped	Excessive
"	Urethane foam, SIF (80 ppi) Bun Ester (Premium)	Moderate
"	Urethane foam, polyester caustic, T59G#2	"
"	Urethane foam, low density polyester caustic, LF-13-1C	"
Propellant HEN-12	Urethane foam, low ext. ether 2AP, (63 ppi) L8-31-2B	"
"	(washed with distilled water)	"
"	Urethane foam, polyether sheet 2 apped (washed with distilled water)	Slight

Explosive	Plastic	Rating
Propellant HEN-12	Urethane foam, SIF (80 ppi), Bun Ester (premium) (washed with distilled water)	Slight
"	Urethane foam, low ext. ether 2AP, (63 ppi) L8-31-2B (washed with methylene chloride)	"
"	Urethane foam, polyether sheet 2 apped (washed with methylene chloride)	Moderate
"	Urethane foam, SIF (80 ppi) Bun Ester (Premium) (Washed with methylene chloride)	"
Propellant HES-8028.3	Silicone, 92-018 (cured)	Negligible
"	RTV 732, 815199, white (cured)	"
"	Rubber, S613-6	"
Propellant HEX-12	Adhesive, EC 826	Moderate
"	Astraceram	Negligible
"	Bakelite ERL 2795	Excessive
"	Dencon B	Excessive
"	Mylar film	Negligible
"	Mylar film with adhesive, EC 826	"
"	Polyester resin (30/40/30) Selectron 5199; Hetron 31; Paraplex P-15	"
"	Polyester (Selectron), (cured)	"
"	Selectron	"
Propellant HUK - Doublebase (43% NG)		
Propellant HUK	Cellulose acetate	Severe
"	Epoxy resin	None/slight
"	Ethyl cellulose	Moderate
"	Hypalon	Slight/moderate
"	Nylon 6, 6	"
"	Polyester resins	Severe
"	Polymethylmethacrylate	Severe
"	Polystyrene	None/slight
"	Polystyrene, toughened	Slight/moderate
"	Polythene, lo den	"
"	Polythene, hi den	None/slight
"	PVC (plasticized)	Moderate
"	Polyvinylidene chloride	None/slight
"	Rubber, butyl	Slight/moderate
"	Rubber, natural	Moderate/severe
"	Rubber, neoprene	Moderate/severe
"	Rubber, nitrile	Severe
"	SBR	Moderate
Propellant, HiVel #2, Lot 278 (single perf)	Fiberite X-1942	Excessive
"	Plenco, 2.75	Excessive
Propellant/LFT-1	Adhesive, EC 826 (3M)	Negligible
"	Mylar film	"
"	Mylar film with adhesive, EC 826 (3M)	"
Propellant M1	Cycolac LTH 3003	"
"	Nylon epoxy laminate	"
"	Nylon scrim	"
Propellant M2	Adhesive, Eastman 910, (cured or uncured)	"
"	Durez 28080	Moderate; Negligible
"	Durez D1 or D2	"
Propellant M3 (Lot LB-6616-1, flake)	Fiberite X-1942	Excessive

Explosive	Plastic	Rating
Propellant M2	MCS-33-1, -2 or -3 (epoxy)	Negligible
"	Nylon epoxy laminate	"
"	Nylon scrim	Moderate
Propellant M2 (separate w/fiberglass)	Phenolic resin, Plenco #5246	Negligible
Propellant M2, Lot IB-6616-1 (single perf grain)	Plenco 2.75	"
Propellant M2	Polyethylene	"
"	Raybestos R1	"
"	Rayon, Elk #140 (9-22-63)	"
Propellant M5	Adhesive, EC 826	Excessive
"	Epoxy 828	Excessive
"	Epoxy 437	Excessive
Propellant M5, flake	Epoxy, H-1863	Negligible
"	Laminac, Expt 126-4	"
"	Laminac, Expt 126-4/ Laminac 4173 (25/75)	"
Propellant M5	Polyester (3M, #850) (pressure sensitive tape)	"
Propellant M5 flake	Polyester resin No. 1 w/0.87 polyester blue color paste	"
"	Polyester resin No. 2 w/0.57 polyester blue color paste added	"
Propellant M5, Lot RAD-38141	Polyester/Fiberglass (FD-12-59)	"
Propellant M5	Polystyrene #1, #2 or #3	"
"	Rubber base polymer; Para Seal	Moderate
"	Silastic 140	Negligible
Propellant M6, OKLA 32410	Acrylic/rayon blend	"
Propellant M6	Cyclocac LTH 3003	"
"	Galvanoplast, conductive paint	"
Propellant M6, OKLA 32410	Rayon, Elk #140 (9-22-63)	"
Propellant M6	Rubber base liner	Excessive
"	Rubber base polymer; Para Seal	Negligible
Propellant M7	Adhesive, Angier SW 608	"
"	Adhesive, Angier SW 608 (grey enamel)	"
"	Adhesive, EC 1838 B/A (3M)	Excessive
"	Galvanoplast, conductive paint	Excessive
"	Ethylene propylene, polymer	Slight
"	Neoprene EC 870	Moderate
Propellant M7, paint	"	Negligible
"	Neoprene, Atlantic Brand	Excessive
Propellant M7	"	Excessive
Propellant M7, Lot 50615-55	Polyolefin film	Negligible
Propellant M7	RTV, Dow Corning Q95-015 (cured)	Excessive
"	"	Moderate
"	(uncured)	"
Propellant M7, RAD-50615-55	RTV 732 (uncured)	Negligible
"	RTV-102, adhesive; grey paint resisting enamel	"
"	RTV 732, adhesive; grey paint resisting enamel	"
Propellant M7	Rubber base enamel, chlorinated B69A14	"
Propellant M8	Adhesive, Eastman 910	Moderate
"	Adhesive, plastic trim	Negligible
"	Cellophane, DuPont	"
"	Insulation, RPD 150	"
"	Lexan	"
"	MCS-33-1, -2, or -3 (epoxy)	"
"	PPO (Polyphenylene oxide)	"
"	Rubber compound XC 45 or XC 63	"

Explosive	Plastic	Rating
Propellant M9	Adhesive, EC 826 (3M)	Negligible
Propellant M9, Lot 18820	Alathon 7040, polyethylene	"
"	Cycolac, ABS	"
Propellant M9, HEP 37360	Dacron	"
Propellant M9, Lot 18820	Delrin 50, polyacetal	"
Propellant M9	Epon 828/Versamid 125 (50/50) (cured)	Excessive
"	Epon 828/Versamid XD-140	Excessive
"	" (cured)	Excessive
Propellant M9, Flake (EDSP-Sig I11, Grd Para Green Star M19A)	Epon 828/Versamid 140 (50/50) (uncured)	Excessive
"	" (50/50) (cured 3 hrs)	Excessive
"	" (50/50) (cured 24 hrs)	Excessive
"	" (70/30) (uncured)	Excessive
"	" (70/30) (cured 3 hrs)	Excessive
"	" (70/30) (cured 24 hrs)	Excessive
Propellant M9, RAD-PE-162-17	Epoxy resin/ball powder, M6 (90/10)	Excessive
Propellant M9, Lot HEP 63040	Epoxy system (uncured)	No test
"	Epoxy system (cured)	No test
Propellant M9, Lot PE-46-11C	Epoxy system (uncured)	Excessive
"	Epoxy system (cured)	Negligible
Propellant M9, HEP-63008	Isochemrez #460 w/hardener #63 and catalyst 215X (cured)	"
"	" (uncured)	Excessive
"	Isochemrez #460 w/hardener #50 (cured)	Excessive
"	" (uncured)	Excessive
Propellant M9, Lot 18820	Lexan, polycarbonate	Negligible
Propellant M9	Loctite adhesive, Grade EV	Excessive
Propellant M9, flake	Loctite sealing compound AV and AVV	Excessive
Propellant M9, Lot 18820	Mylar film	Negligible
Propellant M9	Mylar film with adhesive, EC 826 (3M)	"
Propellant M9, Lot 18820	Noryl, Grade B1-701	"
"	Plaskon 8200, nylon 6	"
"	Polysulfone P1700	"
Propellant M9	RTV 102, white (cured)	"
"	RTV 102, white (uncured)	Excessive
Propellant M9	RTV-112 (cured or uncured)	Negligible
Propellant M9, flake, Lot 64444	RTV 732 (cured and uncured)	"
Propellant M9	Rubber compound XC 45 or XC 63	"
"	Rubber O-ring	"
Propellant M9, Lot 18820	Surlin, ionomer resin	Excessive
"	Zytel 101, nylon 6/6	Negligible
Propellant M10, RAD 60310	Delrin 500 (in presence of equal amount of Polybag)	"
Propellant M10	Kimpak, Sample #190 Type K-51	"
"	Tufflex	"
Propellant M15	Cycolac LTH 3003	"
"	Galvanoplast, conductive paint	Excessive
Propellant M17	Adhesive, Edge Tak	Negligible
"	Adhesive, EC 1022 (3M)	"

Explosive	Plastic	Rating
Propellant M17	Adhesive, EC 1099 (3M)	Negligible
"	Adhesive, EC 1359 (3M)	"
"	Epon 828, asbestos filled TETA #3	Excessive
"	Epon 828/TETA #3 graphite filled	Excessive
"	Epon 828/TETA #3 asbestos filled	Excessive
"	Cycolac LTH 3003	Negligible
"	Foam Flex Sheet #2	Excessive
"	Polyester solid foam #5	Excessive
"	Polyester solid foam #7	Excessive
"	Polyurethane SX-58, Napco	Negligible
"	Rubber base polymer; Para Seal	Excessive
"	Varnish conductive (Stoner Mudge)	Excessive
Propellant M26, Lot RAD-SR-5-2-62	Loxite No. 7021	Excessive
"	Pliobond 20	Moderate
"	Pliobond 30	Excessive
Propellant M26E1, Lot RAD-PE- 162-22	Epoxy resin/ball powder, M6 (90/10)	Excessive
Propellant M30	Elastomer XD-38	Moderate
"	Elastomer 7D-10	Negligible
Propellant M30, Lot PA-63558	Loxite No. 7021	Excessive
"	Pliobond 20	Moderate
"	Pliobond 30	Excessive
"	Polyester film tape, Scotch brand #850	Negligible
Propellant M30	Polyurethane	"
Propellant MDB-7	Adhesive, EC 826 (3M)	"
Propellant MDB-7 (Expt 5685)	Cellulose acetate/fiber glass tape/epoxy	Excessive
Propellant MDB-7 (Expt 6585)	"	Negligible
Propellant MDB-7 (Expt 5685)	Cellulose acetate/fiber glass tape/Selectron 5119	Negligible
Propellant MDB-7 (Expt 6585)	"	"
Propellant MDB-7	Mylar film	"
"	Mylar film with adhesive, EC 826 (3M)	"
Propellant N5	Silastic RTV-S-5370 (foam)	"
Propellant NH - Singlebase (NC/DNT/DBP)(86/10/3)		
Propellant NH	ABS	None/slight
Propellant NH, vapors	Acrylonitrile rubber gasket, with brass contact	Not recommend- ed
Propellant NH	Acrylonitrile/styrene	None/slight
Propellant NH, vapors	Butyl rubber, gasket, with brass contact	Superior service life
Propellant NH	Chlorinated polyether	None/slight
Propellant NH, vapors	Neoprene gasket, with brass contact	Fairly long service life
Propellant NH	Nylon 6, 6	None/slight
"	Penton	"
"	Polycetal	"
"	Polycarbonate	"
"	Polyester/glass laminate	"
"	Polypropylene	"
"	PVC (rigid)	"
"	Polystyrene	"
"	Polyvinyl chloride (rigid)	"
"	Rubber, butyl	Slight/moderate
"	Rubber, natural	Moderate
"	Rubber, neoprene	Moderate/severe
"	Rubber, nitrile	Severe
"	SAN	None/slight

Explosive	Plastic	Rating
Propellant NQ - Doublebase (20 % NG)		
Propellant NQ	ABS	Severe
"	Acrylonitrile rubber gasket, with brass contact	Not recommended
"	Acrylonitrile/styrene	Severe
Propellant NQ, vapors	Butyl rubber, gasket, with brass contact	Longest service life
Propellant NQ	Celluloid	Moderate
"	Cellulose acetate	"
"	Chlorinated polyether	None/slight
"	EPT	Slight/moderate
"	EVA	Moderate
"	MBS	Severe
Propellant NQ, vapors	Neoprene gasket, with brass contact	Very poor service
Propellant NQ	Nylon 6, 6	Slight/moderate
"	Nylon 6, 6, glass filled	None/slight
"	Penton	"
"	Phenoxy resin	"
"	Polyacetal	Severe
"	Polycarbonate	Moderate
"	Polyester urethane	Severe
"	Polyester/glass laminate	Slight/moderate
"	Polyether urethane	Severe
"	Polypropylene	None/slight; slight/moderate
"	Polystyrene	None/slight
"	Polystyrene, toughened	Slight/moderate
"	Polysulphone	"
"	PVC (rigid)	None/slight
"	Rubber, butyl	Slight/moderate
"	Rubber, fluorosilicone	Moderate/severe
"	Rubber, natural	"
"	Rubber, nitrile	Severe
"	Rubber, silicone	Moderate
"	SAN	Severe
"	Surlin A	Moderate
"	TPX	None/slight
"	Viton B	Moderate
Propellant OGK	Cellulose acetate, sheets #1, #2, #3	Negligible
Propellant OM22, IB 7470	Delrin X	"
Propellant T16	Adhesive, EC 826 (3M)	"
"	Adhesive, EC 826 (3M) Lot 15M2B	Excessive
"	Adhesive, EC 1099 (3M)	Negligible
"	Ethafoam (expanded polyethylene)	"
"	Mylar film	"
"	Mylar film with adhesive, EC 826 (3M)	"
"	Pliobond 30 (cured)	Excessive
"	Pliobond 30 (uncured)	n/a
"	Polyester alternative sealing compound, Glidpol 1024, (cured)	Negligible
"	"	Moderate
"	(uncured)	"
"	Resipak 300	Negligible
"	RTV-102 (cured)	"
"	RTV-731 (cured)	"
Propellant T28	Adhesive, Edge Tak	"
"	Adhesive, EC 1099 (3M)	"
"	Adhesive, EC 1359 (3M)	"

Explosive	Plastic	Rating
Propellant T28	Adhesive, EC 1022	Negligible
"	Epon 828/Versamid 125	Excessive
"	Epoxy/ball propellant (M6)	Excessive
Propellant T28E1	Epon 828/Versamid 125 (cured or uncured)	Excessive
Propellant T28E1	Epon 946 A & B (cured or uncured)	Negligible
"	Epoxy 31B	Excessive
"	Epoxy 1210	Excessive
"	Epoxy 9:53H1494	Excessive
"	Epoxy/ball propellant (M6)	Excessive
"	Epoxy/propellant (M6)	Excessive
"	Polyurethane, Eporast	Negligible
"	RTV-732 (cured or uncured)	"
"	Rubber, GRS	"
Propellant T36	Acrylic, Zefran fiber	Excessive
"	Adhesive EC 1099 (3M)	Negligible
"	Adhesive EC 1099 (3M)/ polyurethane	"
"	Elastomer 455-1	"
"	Elastomer 510	Moderate
"	Elastomer H-8-P	Negligible
"	Elastomer I 19	"
"	Elastomer I 51 EF	"
"	Elastomer M75E2 Fl.	"
"	Elastomer N 117	Moderate
"	Elastomer S54BIDEF2	"
"	Elastomer S-54DE-F2	"
"	Elastomer S-55-F4	"
"	Elastomer S-133 or S-133B	Negligible
"	Elastomer S-135 or S-136	"
"	Elastomer Z46E	Excessive
"	Elastomer Z 103	Moderate
"	Elastomer Z 110CE2F3	Excessive
"	Elastomer Z 118 CIF4	Negligible
"	Elvax liner (vinyl)	"
"	Ethylene propylene	Excessive
"	Nylon epoxy laminate	Excessive
"	Nylon scrim	Excessive
"	Plitbond	Excessive
"	Plitbond/polyurethane	Excessive
Propellant T36, RAD-36-61	Polyester solid foam #5 or #7	Excessive
Propellant T36	Polyurethane A	Negligible
"	Polyurethane B	"
"	Polyurethane B	Excessive
"	Polyurethane C	Negligible
"	Polyurethane C	Excessive
"	Polyurethane D	Excessive
"	Polyurethane E	Negligible
"	Polyurethane F	"
"	Polyurethane foam	"
"	Polyurethane #1 (upper liner)	"
"	Polyurethane #2 (lower liner)	"
"	Polyurethane foam #10	"
"	Polyurethane foam #13	"
"	Polyurethane foam #8	"
Propellant T36, PA 63558	Rayon, Elk #140	"
Propellant T36	Rubber, Burke	Moderate
"	Rubber, Burke	Negligible
"	Rubber, Burke (American obturers)	Excessive
"	Rubber, Burke (Obturers)	Moderate
"	Rubber, Burke, M981, L-4	Negligible
"	Rubber, Burke, M981, R-1	Moderate

Explosive	Plastic	Rating
Propellant T36	Rubber, Burke, M981, R-7	Negligible
"	Rubber, Burke, M981, R-8	"
"	Rubber, Burke, M981, R-9	"
"	Rubber, Burke, X4438	"
"	Rubber, butyl	"
"	Rubber, butyl, brominated	"
"	Rubber, Castle	Excessive
"	Rubber, Castle	Negligible
"	Rubber, Castle, obturators	Excess., Neglig.
"	Rubber, Paul Martin; American obturators	Excessive
"	Rubber, Paul Martin; obturators	Negligible
"	Rubber, Precision	Moderate
"	Rubber, Precision	Negligible
"	Rubber, Precision; obturators	Moderate
"	Rubber, SX-630-3SR	Negligible
"	Rubber, SX-630-GRM-#23	"
"	Rubber, UK; obturators	"
"	Rubber, chlorobutyl	"
"	Rubber base liner	Excessive
"	Stearyl liner	Negligible
"	Styrene	"
"	Vulcanized fibre	"
Propellant WC-660	Epoxy/polyethylene glass tape	"
PVA lead azide	Eccobond cement (cured or uncured)	"
RDX - see "FE...."		
RDX, Grade 1 - see "PE 3"		
RDX	Adhesive, Eastman 910 (uncured)	"
"	Adhesive-coated fabric tape	Compatible
"	Adhesive, FC 826 (3M)	Excessive
"	Adhesive, EC 2216 (3M) A & B (uncured)	Excessive
RDX, MIL-R-398C	Alkyd resin, Plaskon 2201	Negligible
RDX/Kel F (90/10)	Bostik cement	Negligible or Excessive
RDX, Class A-HOL-SR-54-64	Brolite (Epoxy A423 + thinner T252)	Excessive
RDX	Cellulose acetate	Negligible
"	Cellulose acetate butyrate	"
RDX, Grade 1A	Cobalt naphthenate, accelerator for polyester	Compatible
RDX	Devcon	Negligible
"	Devcon mix (9/1)	Excessive
"	Devcon (coated with acid proof paint)	Negligible
"	Durez	"
RDX, Class A	Epon 31-59 (cured or uncured)	"
"	Epon 31-59, Part A (uncured)	Excessive
"	Epon 31-59, Part B (uncured)	Negligible
RDX	Epon 820/Versamid 140	Excessive
RDX/Kel-F (90/10)	Epon 820/Versamid 140 (70/30)	Negligible or Excessive
RDX	Epon 820/Versamid 140 (70/30) Adhesive A	Moderate
RDX, Class A	Epon 934, Part B (uncured)	Excessive
"	Epon 934 (cured)	Negligible
"	Epon 934 (uncured)	Excessive
"	Epon 934, Part A (uncured)	Excessive
RDX	Epoxy/polyamide (clear) MIL-C-22750	Moderate

Explosive	Plastic	Rating
RDX	Epoxy/polyamide (OD) MIL-C-22750	Excessive
"	Epoxy/phenolic MIL-C-52232	Negligible
RDX, Grade 1A	Ethylene propylene gum rubbers (Dutral N, EPR, S, and EPDM) (Montecatini)	Compatible
RDX	Fiberite	Negligible
"	Fiberite 4030	"
"	Fiberite 5430 (epoxy/glass)	Excessive
RDX/Kel F (90/10)	Furane/CM catalyst/Gypsum (10/2/10)	No test
RDX	Galvanoplast, conductive paint	Negligible
"	Glastimat #1	"
RDX Type II, Lot PA 2-10 w/stearic acid 271-17-66	Hysol cake (cured)	Slight
"	Hysol (uncured)	Excessive
RDX	Loctite 404	Negligible
RDX, Type II	Loctite, Quick Set 404	Negligible
RDX, Class A, Type B	Loctite AA15-1	"
RDX	McCanoplast 38	"
"	Molycoat	"
"	Mylar film	"
"	Mylar film (Schjelbond 300)	"
RDX, Grade 1A	Neoprene rubber cements (Neoseal #6 and #7)	Compatible
RDX	Nuodex	Negligible
RDX, Class A, Type B	PBAA type polymer	"
RDX (HOL 4-57)	Petrin acrylate, monomer blend #13	"
RDX	Phenolic	Moderate
"	Phenolic CF1	Negligible
RDX, Class A, Type B	Plastisol rubber	"
"	Polyester resin	"
RDX, Grade 1A; RDX/TNT	Polyester (w/cobalt naphthenate and methyl ethyl ketone peroxide)	Compatible when fully cured. Uncured resins not compatible.
RDX, Grade 1A	Polyester resin with cobalt naphthenate and cyclohexanone peroxide paste	Compatible cured resin; or not compatible cured resin.
RDX	Polyester resin, T-255042, pre-imp.	Negligible
RDX, Grade 1A	Polyethylene, antistatic	Compatible
RDX, Grade 1A, coated with wax emulsion, 2% uptake	Polyethylene wax emulsion coating (85% PE, 15% oleic acid)	"
RDX, Grade 1A	Polyvinyl chloride, tubing, plasticized	"
RDX	Polyurethane varnish	Negligible
RDX	RTV silicone rubber	Negligible
RDX	RTV-102-6E	Negligible
RDX, Class A, Type B	RTV-732	"
RDX	Rubber plugs, A35, for fuzes	Compatible
"	Rubber plugs, RB24, for fuzes	"
RDX	Scotchply 1100	Negligible
RDX, Type A	Scotch Weld (3M) EC 2218, Adhesive B (uncured)	Excessive
RDX	Scotch Weld (3M), adhesive	Excessive
"	Separan NP10 Lot 258	Negligible
"	Separan NP10 Lot 258/NaCl (10/1)	"
"	Separan NP10 Lot 258/KCl (SO <sub>4</sub> ) <sub>2</sub> (10/1)	"

Explosive	Plastic	Rating
RDX	Separan NP10, Lot 326	Excessive
"	Separan NP20, Lot 8	Negligible
"	Separan NP20, Lot 8/KCl (SO <sub>4</sub> ) <sub>2</sub> (10/1)	"
"	Separan NP20, Lot 8/NaCl (10/1)	"
"	Separan NP20, Lot 14	"
"	Silastic Gum #1, #2 and #3	"
"	Silastic RTV 731 and RTV 732 (uncured)	"
"	Silicone sealant (uncured)	"
RDX, Grade 1A	Silicone rubber, vulcanized Silastic Grade 6508	Compatible
"	" (Pigmented with chromium trioxide)	"
RDX, SR 54-64	Tape, Permacel PN 112	Negligible
RDX	Teflon film	"
RDX, Type II	Tra-bond BB-2129 (Tra-Con Inc)	Moderate
RDX	Urethane (room temperature cured)	Negligible
RDX (Cyclonite)	Vinyl coated aluminum	"
RDX/TNT (60/40)		
RDX/TNT	ABS	Moderate
"	Epoxy/glass laminates	None/slight
"	Penton	"
"	Polyacetal	Moderate
"	Polycarbonate	Moderate
"	Polyester resins	None/slight
"	Polyester/glass laminates	"
"	Polyether, chlorinated	"
"	Polypropylene	"
"	Polystyrene	"
"	Polystyrene, toughened	"
"	PVC (rigid)	"
"	PVC (plasticized)	Moderate
"	Silicone grease, GP, soft	Compatible
"	Styrene/acrylonitrile	Moderate
"	Urea-formaldehyde, paper impregnated with.	Compatible
Red phosphorus, SRP	Adiprene L 100	Negligible
Sodium nitrate, Lot 6729	Epoxy, ERL 2774	"
"	Polybutadiene-acrylic acid rubber	"
Spotting composition 580	Armstrong A-4	"
"	Cyclo weld C-14	"
"	Dow Corning #A-4000	"
"	Epiphen ER-825A	"
Tetryl - see "CE"		
Tetryl, Grade 1, Class A	Adhesive, EC 1099 (95/5) (EC 1099/benzene)	"
Tetryl	Dapon resin	"
"	Delrin	"
Tetryl, Grade 1, Class A	Epoxy 907, adhesive	"
Tetryl	Galvanoplast, conductive paint	"
"	Glastimat #1	"
"	Lexan	"
Tetryl, Lot KNK 7-063	Loctite 404	"
Tetryl	"	"
"	MCS-33-1, -2, and -3 (epoxy)	"
Tetryl, KNK 7072	Molybde No. 18	"
Tetryl	Polyester	"

Explosive	Plastic	Rating
Tetryl booster pellet (not contaminated 20 and 21)	Polysulfide rubber sealant	Negligible
" (not contaminated 60 and 61)	"	"
Tetryl, KNK 7-063	Polyurethane EP 626/628 (liquid)	Excessive
"	RTV 102 (cured or uncured)	Negligible
Tetryl booster pellet	RTV-732, vulcanizing rubber (uncured)	"
Tetryl	Silastic RTV 731 or RTV 732 (uncured)	"
"	Silicone construction sealant #SE-1201 (uncured)	"
"	Silicone sealant #Q95-011 (uncured)	Excessive
Tetryl, KNK 7063	Tape, Permacel PN 112	Negligible
Tetryl	Urea-formaldehyde, paper impregnated with.	Compatible
Tetrytol (70/30)	Adhesive, EC 870 (3M)	Excessive
"	Adhesive, EC 1099 (3M)	Excessive
Tetrytol	Neoprene	Negligible
TNT	ABS	Moderate
"	Acrylonitrile/styrene	"
"	Adhesive-coated fabric tape	Compatible
TNT + 10% calcium silicate	Alkyd enamel, priming paint, MIL-P-22332 (cured) with inert sealing compound, MIL-S-3105	Negligible
TNT	Chlorinated polyether	None/slight
TNT/AL Meg Aluminum alloy granules EXXO-30 (80/20)	Coating MIL-C-450 (cured) plus asphalt hot melt, MIL-C-3301	Negligible
TNT, Grade 1	Coating, asphalt hot melt, MIL-C-3301 plus AL Meg Aluminum granules, EXXO 90-30	"
TNT	Delrin	"
"	Epon 820/Versamid 140 (70/30), Adhesive A	Excessive
"	EPT	Slight/moderate
"	EVA	"
"	Galvanoplast, conductive paint	Moderate
TNT + 1% calcium silicate, tech grade	G Primer SS 4004	Negligible
TNT, Type 1	"	"
TNT	Hypalon	Slight/moderate
TNT/AL Meg Aluminum granule EXXO 90-30 (80/20)	Inert sealer, MIL-S-3105B, Type 1	"
TNT/AL Meg Aluminum (50/50)	"	"
TNT/AL Meg Aluminum granules EXXO 90-30 (80/20)	" (plus coating hot melt MIL-C-3301)	"
TNT, Type 1 + 1% calcium stearate, tech grade	Inert sealer #1, MIL-S-3105	Negligible
TNT	MBS	None/slight
TNT, Type 1/Nucure 28	Silicone rubber (uncured)	Negligible
TNT	Nuodex	"
"	Nylon 6, 6	None/slight
"	Penton	"
"	Petrin acrylate, blend #13	Negligible
"	PF resins	None/slight
"	Phenoxy resin	Slight/moderate
"	Polyacetal	Severe
"	Polycarbonate	Moderate

Explosive	Plastic	Rating
TNT	Polyester resin with cobalt naphthenate, and cyclohexanone peroxide paste	Compatible, cured resin
TNT	Polyester urethane	Severe
"	Polyether urethane	Severe
"	Polyethylene, antistatic	Compatible
"	Polypropylene	None/slight
"	Polystyrene	"
"	Polystyrene, toughened	Slight/moderate
"	Polysulphone	"
"	Polyvinyl acetate, Metex XZ-2	Excessive
"	Polyvinyl chloride, plasticized, Scotch Brand #471	Compatible
"	PVC (rigid)	None/slight
"	PVC (plasticized)	Moderate
TNT, Type 1, MIL-T-248A	Quaker Koat	Negligible
TNT Type 1	RTV 7 (cured or uncured)	"
"	RTV 11 (cured or uncured)	"
"	RTV 7/Nucure 28 (uncured)	"
"	RTV 11/Nucure 28 (uncured)	"
"	RTV 7/Nucure 28/RTV-11-Nucure 28 (uncured)	"
TNT Type 1 + 1% calcium silicate (tech grade)	RTV 7/Nucure 28 (uncured)	Negligible
"	RTV 7/Nucure 28/RTV 11/Nucure 28 (uncured)	"
TNT	RTV 616 (cured)	"
"	RTV 634 (cured)	"
"	RTV 616 (cured) in the presence of Coating Compound Type 1 (1 to 1)	"
"	RTV 634 (cured) in the presence of Coating Compound Type 1 (1 to 1)	"
"	Rubber, butyl	None/slight
"	Rubber, fluorosilicone	Slight/moderate
"	Rubber, natural	Severe
"	Rubber, neoprene	Severe
"	Rubber, nitrile	Severe
"	Rubber, silicone	Slight/moderate
TNT	SBR	Severe
"	Sealant, NS Truck and Bus Pellet	Negligible
"	Separan NPV10, Lot 258	"
"	Separan NPV10, Lot 258/ KCl (SO <sub>4</sub> ) <sub>2</sub> (10/1)	"
"	Separan NPV10, Lot 258/ NaCl (10/1)	"
"	Separan NPV10, Lot 326	Excessive
"	Separan NPV20, Lot 8	Negligible
"	Separan NPV20, Lot 8/ KCl (SO <sub>4</sub> ) <sub>2</sub> (10/1)	"
"	Separan NPV20, Lot 8/ NaCl (10/1)	"
"	Separan NPV20, Lot 14	"
"	Silastil- RTV 731 and RTV 732 (uncured)	"
"	Silicone compound (GE), TBS-757A + TBS-757B (cured)	"
"	Silicone sealant (uncured)	"
"	Surlyn A	Moderate
"	TPX	None/slight
"	Viton B	Slight/moderate
Torpex	Nuodex	Negligible

Explosive	Plastic	Rating
Tritonal (80/20)	Adhesive, EC 1126 (3M)	Negligible
Tritonal (80/20) + 1% calcium silicate	Alkyd enamel, priming paint, MIL-P-22332 (cured or uncured)	"
Tritonal (80/20) + 50% calcium silicate	Alkyd enamel, priming paint, MIL-P-22332 (cured or uncured)	"
Tritonal (80/20) + 1% calcium silicate	Alkyd enamel, priming paint, MIL-P-22332 (cured) with inert sealing compound, MIL-S-3105	"
Tritonal (80/20) + 10% calcium silicate	Alkyd enamel, priming paint, MIL-P-22332 (cured) with inert sealing compound, MIL-S-3105	"
Tritonal (80/20)	Cellulose acetate	"
"	Cellulose acetate butyrate	"
"	Elastic compound, # 155.2	"
"	Epon adhesive, Shell 948 (cured)	"
"	Epon adhesive, Shell 942	"
"	Epon adhesive, Shell 953	"
"	G. Primer SS4004 (uncured)	"
Tritonal (80/20) + 1% calcium silicate, tech grade	G. Primer SS 4004	"
Tritonal (80/20) modified	Hot melt compound, MIL-C-3301 plus distilled water	"
Tritonal (80/20)	Inert sealer #1, MIL-S-3105	"
Tritonal (80/20) + 1% calcium silicate, tech grade	"	"
Tritonal (80/20) modified	Inert sealer, MIL-S-3105 plus distilled water	"
Tritonal (80/20)	Lastomer coating C-717	"
"	Mortite #89, #5001 or #5700-57	"
Tritonal	Nuodex	"
Tritonal (80/20)	Nucure 28, silicone rubber (uncured)	"
Tritonal	Polyethylene (high density)	"
Tritonal (80/20)	Permagum #570.41 or #576.1	"
Tritonal (80/20) + 1% calcium silicate	Primer, MIL-P-22332 (cured) plus Prestite (50/50)	"
Tritonal (80/20) + 10% calcium silicate	"	"
"	"	"
Tritonal (80/20)	plus trichlorethylene	"
Tritonal (80/20) PA-PD-126	Pumpable caulk C-768	"
Tritonal (80/20)	Quaker Kquat	"
"	RTV silicone rubber	"
"	RTV 7 (cured or uncured)	"
"	RTV 7/Nucure 28 (uncured)	"
"	RTV 11 (cured or uncured)	"
"	RTV 11/Nucure 28 (uncured)	"
"	RTV 7 - Nucure 28 RTV 11 Nucure 28 (uncured)	"
Tritonal (80/20) + 1% calcium silicate, tech grade	"	"
Tritonal (80/20), plus 10% calcium silicate	RTV 616 or RTV 634 (uncured)	"
Tritonal (80/20)	Sealer, EC 1279	"
Tritonal (80/20) + 1% calcium silicate	Silicone compound, TBS-757B (curing agent)	Excessive
"	Silicone compound, TBS-757A	Negligible
"	Silicone compound TBS-757A + TBS-757B (cured)	"

Explosive	Plastic	Rating
Tritonal (80/20) + 10% calcium silicate	Silicone compound TBS-757A + TBS-757B (cured) + bituminous coating compound	Negligible
"	Silicone compound TBS-757A	Excessive
"	Silicone compound TBS-757A	Negligible
"	Silicone compound TBS-757A + TBS-757B (cured)	"
Tritonal (80/20) + 50% calcium silicate	Silicone compound TBS-757A	"
"	Silicone compound TBS-757B (curing agent)	Excessive
"	Silicone compound TBS-757A + TBS-757B (cured)	Negligible
Tritonal (80/20)	Tape, Twin-T Myetic, 2005-152	"
"	Urethane (room temperature cured)	"
Tritonal (80/20)	RTV 616 or RTV 634 (cured)	"
Tritonal (80/20) plus 1% calcium silicate	RTV 616 or RTV 634 (cured)	"
Tritonal (80/20) plus 10% calcium silicate	RTV 616 or RTV 634 (cured)	"
Tritonal (80/20) plus 1% calcium silicate	RTV 616 or RTV 634 (uncured)	"
Tritonal (80/20) plus 10% calcium silicate	RTV 616 (cured) in the presence of Coating Compound Type 1 (1 to 1)	"
"	RTV 634 (cured) in the presence of Coating Compound Type 1 (1 to 1)	"
White phosphorus	Cellulose acetate butyrates	"
"	Loctite Quick Set 404	"
White phosphorus/Composition B	"	"
White phosphorus	Silicone, Thermofax	"
"	Sponge, open cell (polyurethane)	"
White star pellets (unclated)	Dairin, du Pont	"
White star pellets, uncoated (ctg of 40 mm HE, M406)	Lexan GE 141	"
White star pellets (uncoated)	Polypropylene, Avisun 840-1446	"
"	Zytel 42 (nylon)	"
Yellow smoke pellet (EDSP Pellet, Smoke, f/Mine AP, Practice M8A1)	Epoxy 907, adhesive	"
Yellow smoke comp	Epoxy 907, adhesive (EDSP, Pellet, Smoke, f/Mine AP, Practice M8A1)	"

## APPENDIX A

### SOURCES OF INFORMATION, WITH EXAMPLES OF WITHIN-REPORT REFERENCE NUMBERS

Source	Example of Reference
<p>Defense Standards Laboratories Department of Supply Victoria, Commonwealth of Australia</p> <p>Testing methods are identified with citations; primarily elevated temperature processing with degree of breakdown of explosive indicated.</p>	<p>DSL - Australia*</p> <p>* by letter, Victoria, 17 Jan 68, s/P. Dunn</p>
<p>Explosives Research and Development Establishment, Waltham Abbey, Essex, England</p> <p>Testing primarily involved elevated temperature storage of the contact materials, with subsequent physical testing of the plastic rather than the explosive. Primarily measured was the physical effect of the explosive on the plastic.</p>	<p>ERDE 9/M/69; ERDE 7/M/66; WAM/172/01**</p> <p>** by letter, Ref ZB/ 74/02, dated 31 Jan 68, s/R. N. C. Strain</p>
<p>Picatinny Arsenal, Dover, New Jersey Reports from the Analytical Chemistry Laboratory</p> <p>Testing employed mostly the Vacuum Stability Test for gas evolution at elevated temperature; or infrequently the Propellant Heat Test, for bleaching of indicator paper. Primarily measured is the degree of breakdown of the explosive in contact with the plastic.</p>	<p>69-H1-XX; or AL-xx-xx; or AL-S-xx-xx (See Appendix C)</p>
<p>U. S. Naval Ammunition Depot Crane, Indiana, Quality Evaluation Department</p> <p>Testing by use of a modified Henkin Test, involving comparison of the temperature of explosion of a mixture submerged in a Wood's metal bath with that of the explosive alone. Primarily shows the degree of breakdown of the explosive material.</p>	<p>USNAD-C***</p> <p>*** by letter, 15 Feb 67, s/ R. E. Klausmeier</p>
<p>U. S. Naval Ordnance Station Indian Head, Maryland</p> <p>This work primarily involved the Vacuum Stability Test, with degree of breakdown of explosive indicated.</p>	<p>USNOS-IH****</p> <p>**** by letter, 22 Mar 68, s/ John E. Morgan</p>

## APPENDIX B

### METHODS EMPLOYED IN TESTING FOR COMPATIBILITY

#### REACTIVITY TEST (Vacuum Stability Test) (a)

##### Concept

The contact of an explosive with a contiguous material may, in time, cause the chemical deterioration of the explosive. This may lead to the development of non-standard or hazardous conditions, or to spontaneous ignition of the explosive material. The reactivity test, by subjecting intimate mixtures of the explosive and materials with which it is likely to come into contact to a prolonged high temperature conditioning, simulates the possible effect of such contact under normal conditions.

##### Apparatus

This test involves the same procedure and apparatus as the vacuum stability test (b). The preparation of the specimens for testing may require glass plates (for film drying) or tools for cutting, rasping, or grinding, as suggested below.

##### Preparation

Since the efficiency of the test is commensurate with the degree of contact between the materials under study, insure an intimate contact by reducing all solids to a practicable fineness by cutting or milling into chips, rasping into shreds or granules, or pulverizing, observing established safety procedures.

**NOTE:** For some of the materials for which reactivity data may be required, special preparations will be necessary. Typical of such materials are the liquid coating materials. Those which form removable films (paints, lacquers, etc.) may be predried on glass plates, stripped, and chipped. Those which form non-removable films (metal coatings such as parkerizing and anodizing) may be deposited directly on chips of the metal involved, and then tested.

(a) From: Picatinny Arsenal

STANDARD LABORATORY PROCEDURES FOR DETERMINING  
SENSITIVITY, BRISANCE, AND STABILITY OF EXPLOSIVES,  
by Arthur J. Clear. PATR 3278, December 1965.

(b) The Vacuum Stability Test procedure is contained in the above reference. It is also described in MIL-P-22332, para 4.4.20, "Reactivity", and in Method M/240/61, "Compatibility of Materials with Explosives Using the Vacuum Stability Test", Chemical Inspectorate, UK.

### Procedure

The procedure for the vacuum stability test is followed in this test. Normally the test temperature is 100°C, but in special cases it may be raised to 120°C or lowered to 90°C or 75°C. The duration of the test is 40 hours.

For the basic unit (one explosive and one contact material) select 3 sample tubes. Into the first tube place 2.5 ± 0.01 grams of the explosive material, into the second tube place 2.5 ± 0.01 grams of the contact material, and into the third tube place 2.5 ± 0.01 grams of the explosive material and 2.5 ± 0.01 grams of the contact material (c).

Blend the materials which have been placed in the third tube by appropriate agitation, being careful not to lose any of the materials or to get them onto the ground-glass throat of the sample tube. (This might make for an insecure junction between the sample tube and the manometer). Complete the three assemblies by joining the capillary tubes to the sample tubes and proceed as in the vacuum stability test.

### Evaluation

In determining the degree of reactivity of the materials under test, the materials processed separately are used as controls. The reactivity (or chemical deterioration) of the explosive is measured by comparing the volume of gas generated by the mixture of the explosive and the chosen contact material with the volume of gas generated by the controls.

The extent of reactivity is then calculated by the following equation:

$$R = C - (A + B)$$

where:

R = extent of reactivity, or volume of gas generated by the mixture in excess of the controls

C = volume of gas generated by the mixture

A = volume of gas generated by the explosive

B = volume of gas generated by the contact material

(c) These weights are "standard". Variations are sometimes imposed by (1) the wishes of the engineer, (2) limited supply of the materials to be tested, or (3) limitations on the amount of explosive that is safe to test. (See Appendix C)

Estimate the degree of reactivity by comparing the extent of reactivity (gas volume) with the following adjective-rating table:

Extent of Reactivity, Excess Gas, ml	Degree of Reactivity (d)
0.0 - 3.0	Negligible
3.0 - 5.0	Normal
5.0 & above	Excessive

(d) This adjective rating (for degree of reactivity) evolved, over the years, from the following:

Excess Gas, ml	Degree of Reactivity
Less than 0.0	None
0.0 - 1.0	Negligible
1.0 - 2.0	Very Slight
2.0 - 3.0	Slight
3.0 - 5.0	Moderate
5.0 and above	Excessive

Considerable of the work reflected in this report was evaluated under the old system. However, in transcription of the values, a three-part rating has been held to: "negligible", "moderate", or "excessive".

#### PROPELLANT HEAT TEST (at 120 C or 134.5 C) (e)

This test involves the high temperature heating of controls and mixtures of the contact materials in long glass tubes. Normal methyl violet indicator papers are suspended above the materials. Fading of the paper above the mixture before that above the control is indication of the acceleration of the breakdown of the propellant.

(e) The procedure is contained in Reference (a) above.

#### EXPLOSION TEST (100 C HEAT TEST) (f)

This test is used primarily for material that are likely to explode under test. Small samples (0.6 g.) are weighed into two small glass tubes; and similar samples are placed in two additional tubes. These are stored at the prescribed elevated temperature in perforated pipe-bombs (for safety). The elevated temperature storage is usually for two periods of 48 hours each (with weighings for determination of weight loss thereafter); and concurrently the two additional samples are allowed to remain undisturbed for 100 hours, in order to determine if explosion occurs.

(f) The procedure is contained in Reference (a) above.

#### SILVERED VESSEL TEST (80 C)

This test gets its name from the "silvered" or "vacuum-flask" type of container used. The usually well-ground sample is weighed into the flask, and a thermometer is inserted to such depth that the bulb is at about the center of the mass. The whole is inserted into a well in an elevated temperature bath (usually at 80 C) and maintained at that temperature for 500 hours. Periodic readings are taken for detection of mass temperature rise, as indicative of deterioration of the sample under test.

#### MODIFIED HENKIN TEST (g)

This test determines the endurance of an explosive or mixture when submerged in a Wood's metal bath. The test pertains particularly to explosives; but it is believed that, once the test behavior of an explosive is known, the change in behavior of an explosive/contact material mixture will show significance from the compatibility standpoint.

This test is discussed in I and E C, PRODUCT RESEARCH AND DEVELOPMENT, September 1962, "Incompatibility in Explosive Mixtures" by R. N. Rogers, p 169.

#### ACCELERATED STORAGE AND PHYSICAL TESTING (ERDE)

Of the works reported, only the Explosives Research and Development Laboratory used the accelerated storage test of contact materials to any great extent. They followed such storage with physical testing of the plastic or elastic materials, rather than the testing of the explosives.

In the United States, this type of work was conducted largely before 1959, and results are reported in PATR 2595.

The method followed by ERDE is as follows:

The thermoplastics were injection moulded and the vulcanized rubbers were cut into dumb-bells of a design previously prescribed.

Dumb-bells of each material were conditioned before exposure by storing them in an uncharged desiccator for 48 hours at room temperature. Each dumb-bell was then accurately weighed (to the nearest 0.001 g.) and the width and thickness measured (to the nearest 0.001") at several points along its length.

Small trays to hold three dumb-bells were made from aluminum foil, and molten TNT was poured in to cover the bottom. While the explosive was still molten, three dumb-bells were laid in each tray and covered with sufficient molten explosive to ensure complete immersion of the test pieces. The trays were allowed to cool to room temperature before placing them in groups of four (one for each withdrawal at 1, 3, 6, and 12 months) in an aluminum container which was covered, sealed and placed in an oven at  $60^{\circ} \pm 0.5^{\circ} \text{C}$ .

Cordite NQ and CE were supplied as fine powders. The powders were spread liberally over the bottoms of the small trays, three dumb-bells were placed on the powders, then more powder was added to cover the specimens, taking care to obtain intimate contact. As before, four trays were sealed in an aluminum container and placed in an oven at  $60 \pm 0.5^\circ \text{C}$ .

Control experiments were carried out at the same temperature by sealing four aluminum trays, each containing three dumb-bells only, in an aluminum container.

Withdrawals were made after 1, 3, 6, and 12 months. The container was unsealed, one tray was removed, and the container resealed and returned to the oven immediately.

The selected trays were allowed to cool in an uncharged desiccator. The explosive was then carefully broken away and removed as completely as possible without damaging the test-pieces. Each dumb-bell was reweighed, the percentage change in weight calculated, and the average of the three results recorded.

The tensile strength and elongation at break of three unexposed dumb-bells of each material were measured and the average results recorded. Similar measurements were made on the exposed and control test-pieces immediately after reweighing. The tensile strength of plastics specimens was measured at a rate of 1 inch per minute on a Baldwin Tensometer and the force at yield and break (or break if the sample did not yield) determined. The time was taken from the moment the force was applied to the sample until yield and/or break occurred and from this an approximate value of the percentage elongation was calculated.

The tensile strength of the rubber specimens was measured on a Hounsfield Rubber Testing machine at a rate of 20 inch per minute and at the same time the elongation at break was automatically recorded by an Extensometer (type K301) made by Tensometer Ltd.

APPENDIX C

PROPORTIONS OF THE CONTRACT MATERIALS USED IN THE REACTIVITY TESTS AT  
PICATINNY ARSENAL, AS REPORTED HEREIN

Report No.	Test Proportion (gm/gm)*	Report No.	Test Proportion (gm/gm)*	Report No.	Test Proportion (gm/gm)*
99-11-10	2.5/2.5	AL-S-79-61	2.5/2.5	AL-S-19-63	2.5/2.5
99-11-11	2.5/2.5	AL-S-80-61	2.5/2.5	AL-S-26-63	2.5/2.5
99-11-74	2.5/2.5	AL-S-81-61	2.5/2.5	AL-S-30-63	0.5/5.0
99-11-863	n/a	AL-S-108-61	2.5/2.5	AL-S-34-63	2.5/2.5
99-11-864	1.25/1.25	AL-S-116-61	2.5/2.5	AL-S-36-63	2.5/2.5
99-11-430	2.5/2.5	AL-S-1-62	2.5/2.5	AL-S-37-63	2.5/2.5
99-11-487	0.5/5.0	AL-S-2-62	1.0/1.0	AL-S-39-63	0.5/5.0
99-11-489	2.5/2.5	AL-S-4-62	2.5/2.5	AL-S-41-63	1.0/1.0
99-11-567	2.5/2.5	AL-S-6-62	2.5/2.5		2.5/2.5
99-11-570	2.5/2.5	AL-S-9-62	2.5/2.5	AL-S-43-63	2.5/2.5
99-11-615	2.5/2.5	AL-S-11-62	2.5/2.5	AL-S-49-63	2.5/2.5
AL-S-59	2.5/2.5	AL-S-13-62	2.0/2.0	AL-S-52-63	2.5/2.5
AL-3-59	2.5/2.5	AL-S-19-62	2.5/2.5	AL-S-53-63	2.5/2.5
AL-4-59	1.0/1.0	AL-S-21-62	2.5/2.5	AL-S-56-63	2.5/2.5
AL-S-4-59	2.5/2.5	AL-S-23-62	0.5/5.0	AL-S-61-63	0.5/5.0
AL-S-9-59	2.5/2.5		0.5/5.0	AL-S-62-63	2.5/2.5
AL-S-11-59	n/a		2.0/2.0	AL-S-64-63	1.0/1.0
AL-S-14-59	2.5/2.5	AL-S-24-62	2.5/2.5	AL-S-67-63	2.5/2.5
AL-S-22-59	2.5/2.5		n/a	AL-S-70-63	2.5/2.5
AL-S-26-59	2.5/2.5	AL-S-27-62	2.5/2.5	AL-S-74-63	2.5/2.5
AL-S-36-59	1.0/1.0	AL-S-29-62	2.5/2.5		1.0/1.0
99-AL-S-37	2.5/2.5	AL-S-30-62	2.5/2.5	AL-S-83-63	2.5/2.5
AL-S-36-60	0.25/2.5	AL-S-32-62	0.5/5.0	AL-S-93-63	2.5/2.5
AL-S-61-60	0.5/5.0	AL-S-35-62	2.5/2.5	AL-S-97-63	2.5/2.5
AL-S-62-60	2.5/2.5	AL-S-37-62	n/a	AL-S-99-63	n/a
AL-S-64-60	2.5/2.5	AL-S-37-62	0.5/5.0	AL-S-103-63	2.5/2.5
AL-S-65-60	2.5/2.5	AL-S-38-62	0.5/5.0	AL-S-106-63	2.5/2.5
AL-S-67-60	0.5/5.0	AL-S-39-62	0.5/5.0	AL-S-112-63	2.5/2.5
AL-S-72-60	2.5/2.5	AL-S-44-62	n/a	AL-S-117-63	n/a
AL-S-74-60	1.0/1.0	AL-S-50-62	0.2/1.2	AL-S-118-63	2.5/2.5
AL-S-79-60	2.5/2.5		0.1/1.1	AL-S-122-63	2.5/2.5
AL-S-82-60	1.0/1.0	AL-S-51-62	2.5/2.5		3(1.6)/5.0
AL-S-84-60	1.0/1.0	AL-S-52-62	2.5/2.5	AL-S-125-63	2.5/2.5
AL-S-86-60	2.5/2.5	AL-S-54-62	2.5/2.5	AL-S-126-63	2.5/2.5
AL-S-88-60	2.5/2.5	AL-S-59-62	2.5/2.5	AL-S-130-63	2.5/2.5
AL-S-93-60	2.5/2.5	AL-S-63-62	2.5/2.5	AL-S-131-63	2.5/2.5
AL-S-98-60	2.5/2.5	AL-S-67-62	0.5/5.0	AL-S-123-63	2.5/2.5
		AL-S-69-62	2.5/2.5	AL-S-134-63	n/a
AL-S-104-60	2.5/2.5	AL-S-73-62	2.5/2.5	AL-S-135-63	2.5/2.5
AL-S-106-60	0.5/5.0	AL-S-76-62	2.5/2.5	AL-S-136-63	3(1.6)/5
AL-S-108-60	1.0/1.0	AL-S-79-62	2.5/2.5	AL-S-140-63	2.5/2.5
AL-S-113-60	2.5/2.5	AL-S-84-62	2.5/2.5	AL-S-154-63	2.5/2.5
AL-S-114-60	2.5/2.5	AL-S-93-62	2.5/2.5	AL-S-5-64	2.5/2.5
AL-S-115-60	2.5/2.5	AL-S-94-62	2.5/2.5		3(1.67)/5
AL-S-124-60	2.5/2.5	AL-S-95-62	2.5/2.5	AL-S-11-64	2.5/2.5
ERS-HB-125-60	2.5/2.5	AL-S-96-62	2.5/2.5	AL-S-12-64	0.229/2.5
AL-S-126-60	1.0/1.0	AL-S-97-62	2.5/2.5	AL-S-17-64	0.5/2.5
AL-S-129-60	2.5/2.5	AL-S-99-62	2.5/2.5	AL-S-18-64	2.5/2.5
AL-S-131-60	2.5/2.5	AL-S-100-62	0.5/5.0	AL-S-23-64	0.229/2.5
AL-S-133-60	2.5/2.5	AL-S-103-62	2.5/2.5	AL-S-26-64	n/a
AL-S-142-60	0.5/5.0	AL-S-106-62	2.5/2.5	AL-S-39-64	2.5/2.5
AL-S-149-60	2.5/2.5	AL-S-110-62	0.5/5.0	AL-S-43-64	3(1.67)/5
AL-S-150-60	2.5/2.5	AL-S-111-62	2.5/2.5	AL-S-44-64	2.5/2.5
AL-S-151-60	1.0/1.0	AL-S-115-62	2.5/2.5	AL-S-50-64	2.5/2.5
	2.5/2.5	AL-S-116-62	2.5/2.5	AL-S-52-64	1.25/1.25
AL-S-153-60	2.5/2.5	AL-S-117-62	1.25/1.25	AL-S-55-64	2.5/2.5
AL-S-34-61	0.5/5.0		3(1.66)/5	AL-S-60-64	2.5/2.5
AL-S-42-61	0.5/5.0	AL-S-118-62	2.5/2.5	AL-S-65-64	2.5/2.5
AL-S-55-61	0.5/5.0	AL-S-124-62	2.5/2.5	AL-S-66-64	2.5/2.5
AL-S-65-61	1.0/1.0	AL-S-2-63	2.5/2.5	AL-S-67-64	2.5/2.5
AL-S-70-61	2.5/2.5	AL-S-5-63	0.25/2.5	AL-S-80-64	0.5/5.0
AL-S-71-61	2.5/2.5	AL-S-14-63	2.5/2.5	AL-S-81-64	2.5/2.5
AL-S-75-61	4(1.25)/5.0	AL-S-16-63	2.5/2.5	AL-S-83-64	1.25/1.25
AL-S-76-61	2.5/2.5				

\* Expressed as "grams of plastic"/"grams of explosive"

APPENDIX C (CONTINUED)

Report No.	Test Proportion (gm/gm)*	Report No.	Test Proportion (gm/gm)*	Report No.	Test Proportion (gm/gm)*
AL-S-86-64	2.5/2.5	AL-S-1-66	2.5/2.5	AL-S-24-67	2.5/2.5
AL-S-87-64	2.5/2.5	AL-S-2-66	2.5/2.5		1.0/1.0
AL-S-88-64	2.5/2.5	AL-S-5-66	2.5/2.5	AL-S-26-67	2.5/2.5
AL-S-93-64	n/a	AL-S-10-66	2.5/2.5	AL-S-27-67	2.5/2.5
AL-S-99-64	2.5/2.5	AL-S-15-66	2.5/2.5	AL-S-30-67	2.5/2.5
AL-S-100-64	2.5/2.5	AL-S-16-66	0.5/5.0	AL-S-33-67	2.5/2.5
AL-S-102-64	2.5/2.5	AL-S-19-66	2.5/2.5	AL-S-46-67	2.5/2.5
AL-S-104-64	2.5/2.5	AL-S-21-66	2.5/2.5	AL-S-48-67	0.5/5.0
AL-S-107-64	2.5/2.5	AL-S-22-66	2.5/2.5	AL-S-49-67	0.5/5.0
AL-S-109-64	2.5/2.5	AL-S-23-66	0.5/5.0		0.5/1.0
AL-S-116-64	1.0/1.0	AL-S-25-66	2.5/2.5	AL-S-50-67	2.5/2.5
	2.5/2.5	AL-S-26-66	0.5/5.0	AL-S-52-67	1.0/1.0
AL-S-118-64	2.5/2.5	AL-S-27-66	2.5/2.5		2.5/2.5
AL-S-128-64	2.5/2.5	AL-S-29-66	2.5/2.5	AL-S-60-67	2.5/2.5
	1.0/1.0	AL-S-31-66	2.5/2.5	AL-S-62-67	2.5/2.5
AL-S-129-64	2.5/2.5	AL-S-32-66	2.5/2.5	AL-S-64-67	2.5/2.5
AL-S-146-64	2.5/2.5	AL-S-42-66	0.5/5.0	AL-S-66-67	2.5/2.5
AL-S-154-64	2.5/2.5	AL-S-44-66	2.5/2.5	AL-S-68-67	2.5/2.5
AL-S-167-64	2.5/2.5	AL-S-45-66	2.5/2.5		2.5/2.5
AL-S-171-64	0.5/2.5	AL-S-46-66	2.5/2.5	AL-S-73-67	2.5/2.5
AL-F-180-64	2.5/2.5	AL-S-49-66	2.5/2.5	AL-S-76-67	2.5/2.5
AL-S-2-65	2.5/2.5	AL-S-54-66	2.5/2.5	AL-S-79-67	2.5/2.5
AL-S-18-65	2.5/2.5	AL-S-57-66	1.0/1.0	AL-S-81-67	0.5/4.5
AL-S-22-65	2.5/2.5	AL-S-59-66	2.5/2.5	AL-S-86-67	2.5/2.5
	1.0/1.0	AL-S-60-66	2.5/2.5	AL-S-89-67	2.5/2.5
AL-S-23-65	2.5/2.5	AL-S-61-66	2.5/2.5	AL-S-92-67	2.5/2.5
AL-S-25		AL-S-62-66	1.0/1.0	AL-S-94-67	2.5/2.5
AL-S-25-65	2.5/2.5		2.5/2.5	AL-S-101-67	2.5/2.5
AL-S-28-65	2.5/2.5	AL-S-67-66	2.5/2.5	AL-S-102-67	2.5/2.5
AL-S-32-65	2.5/2.5	AL-S-68-66	2.5/2.5	AL-S-103-67	2.5/2.5
AL-S-35-65	2.5/2.5	AL-S-69-66	2.5/2.5	AL-S-117-67	1.0/1.0
AL-S-40-65	2.5/2.5	AL-S-70-66	2.5/2.5	AL-S-121-67	2.5/2.5
AL-S-42-65	2.5/2.5	AL-S-73-66	2.5/2.5	AL-S-122-67	1.0/1.0
AL-S-43-65	2.5/2.5	AL-S-76-66	2.5/2.5		n/a
AL-S-44-65	1.0/2.0	AL-S-77-66	2.5/2.5	AL-S-138-67	
AL-S-46-65	2.5/2.5	AL-S-78-66	0.5/5.0	AL-S-139-67	2(1.25)/2.5
AL-S-49-65	2.5/2.5	AL-S-79-66	2.5/2.5		2.5/2.5
AL-S-5-65	1.25/1.25	AL-S-85-66	2.5/2.5	AL-S-142-67	2(1.25)/2.5
AL-S-57-65	2.5/2.5	AL-S-87-66	2.5/2.5	AL-S-143-67	2.5/2.5
AL-S-65-65	2.5/2.5	AL-S-92-66	0.5/5.0	AL-S-158-67	2(1.5)/2.0
AL-S-71-65	1.25/1.25	AL-S-96-66	2.5/2.5	AL-S-164-67	2.5/2.5
AL-S-72-65	0.25/2.5	AL-S-99-66	0.5/5.0	AL-S-165-67	2(1.5)/2.0
AL-S-73-65	0.25/2.5		0.5/1.0		2.5/2.5
AL-S-74-65	2.5/2.5	AL-S-106-66	2.5/2.5	AL-S-169-67	2.5/2.5
AL-S-83-65	2.5/2.5	AL-S-115-66	0.5/5.0		1.0/1.0
AL-S-90-65	2.5/2.5	AL-S-116-66	2.5/2.5	AL-S-170-67	n/a
AL-S-92-65	2.5/2.5	AL-S-117-66	2.5/2.5	AL-S-174-67	2.5/2.5
AL-S-94-65	2.5/2.5	AL-S-120-66	2.5/2.5	AL-S-176-67	2.5/2.5
AL-S-98-65	2.5/2.5	AL-S-122-66	2.5/2.5	AL-S-179-67	2.5/2.5
AL-S-99-65	2.5/2.5	AL-S-125-66	2.5/2.5	AL-S-183-67	1.0/1.0
AL-S-108-65	1.25/1.25	AL-S-128-66	2.5/2.5	AL-S-184-67	2.5/2.5
AL-S-109-65	n/a	AL-S-133-66	0.1/1.0		3(1.67)/5.0
AL-S-111-65	n/a	AL-S-8-67	1.0/1.0	AL-S-185-67	2.5/2.5
AL-S-117-65	2.5/2.5	AL-S-9-67	1.0/1.0	AL-S-190-67	0.25/4.75
AL-S-124-65	1.0/1.0	AL-S-12-67	2.5/2.5	AL-S-191-67	1.25/1.25
	2.5/2.5	AL-S-14-67	2.5/2.5	AL-S-196-67	2.5/2.5
	0.25/2.5	AL-S-15-67	2.5/2.5	AL-S-198-67	0.5/5.0
	0.25/1.0	AL-S-18-67	2.5/2.5	AL-S-202-67	2.5/2.5
AL-S-136-65	2.5/2.5	AL-S-19-67	1.0/1.0		
AL-S-141-65	2.5/2.5	AL-S-22-67	2.5/2.5		
AL-S-144-65	2.5/2.5	AL-S-23-67	2.5/2.5		
AL-S-152-65	2.5/2.5				

\* Expressed as "grams of plastic"/"grams of explosive"

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13. ABSTRACT		
<p>A roundup of data on the compatibility of explosives with polymers was made by Miss Marjorie St Cyr in the years immediately prior to 1959. This work was reported as PATR 2595, dated March 1959.</p> <p>The work herein reported covers the explosives/plastics compatibility data from 1959 through 1967. The effort has been to include all available hard data from the United Kingdom, Canada, Australia and these United States.</p> <p>The present study is given a simplified form: in alphabetical order (first) by trade name or generic name of the plastic and (second) by explosive. By this means the reader can tell (first) what explosives a plastic is compatible with and (second) what plastics can be used safely with a particular explosive.</p> <p>For this report, the search was stretched to include adhesives and elastomers.</p>		

DD FORM 1473

REPLACES DD FORM 1473, 1 JAN 64, WHICH IS OBSOLETE FOR ARMY USE.

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14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Plastics						
Polymers						
Elastomers						
Adhesives						
Propellants						
Explosives						
Compatibility						

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