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*Indices of the  
Proceedings for the  
Thirteen International  
Symposia on Detonation  
1951-2006*

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James E. Kennedy  
John B. Ramsay  
F. Joseph Schelling  
Bruce E. Takala**

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***INDICES OF  
THE PROCEEDINGS  
FOR THIRTEEN INTERNATIONAL  
SYMPOSIA ON DETONATION  
1951-2006***

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# The Detonation Symposia

<b>Number</b>	<b>Date</b>	<b>Location</b>
1	11-12 January, 1951	Washington, District of Columbia
2	9-11 February, 1955	Washington, District of Columbia
3	26-28 September, 1960	Princeton, New Jersey
4	12-15 October, 1965	Silver Spring, Maryland, 1st International
5	18-21 August, 1970	Pasadena, California
6	24-27 August, 1976	Coronado, California
7	16-19 June, 1981	Annapolis, Maryland
8	15-19 July, 1985	Albuquerque, New Mexico
9	27 August-1 September, 1989	Portland, Oregon
10	12-16 July, 1993	Boston, Massachusetts
11	30 August-4 September, 1998	Snowmass, Colorado
12	11-16 August, 2002	San Diego, California
13	23-28 July, 2006	Norfolk, Virginia

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# INDICES OF THE PROCEEDINGS FOR THE THIRTEEN INTERNATIONAL SYMPOSIA ON DETONATION, 1951–2006

Blaine W Asay, James E. Kennedy, John B. Ramsay, and F. Joseph Schelling  
and Bruce E. Takala

## ABSTRACT

The *Proceedings* of the thirteen Detonation Symposia have become the major archival source of information of international research in explosive phenomenology, theory, experimental techniques, numerical modeling, and high-rate reaction chemistry. In many cases, they contain the original reference or the only reference to major progress in the field. For some papers, the information is more complete than the complementary article appearing in a formal journal; yet for others, authors elected to publish only an abstract in the *Proceedings*. For the large majority of papers, the Symposia *Proceedings* provide the only published reference to a body of work. This report indexes the thirteen existing *Proceedings* of the Detonation Symposia by paper titles, topic phrases, authors, and first appearance of acronyms and code names.

## INTRODUCTION

The indices comprise four parts: (A) a listing of the paper titles and authors in order of appearance in each Symposium *Proceedings*, (B) an alphabetical listing of topic phrases, (C) an index of all authors, and (D) an index to first appearance of acronyms and code names of compositions and components that are defined.

Each index also lists the Symposium number and page number of the reference. These are the actual page numbers of the original *Proceedings* of the Fourth through the Thirteenth Symposia. The page numbers shown for the First and Second Symposia are for the single combined volume reprinted by the Detonation Symposium Committee in 1987 (NSWC MP 87-194), and not the original page numbers. Some confusion also

exists for references from the Third Symposium in that it was initially published as three paperback volumes. These were combined into a single hardbound volume, identified by the publisher, The Office of Naval Research, U.S. Navy, as ACR-52. The page numbers used in these Indices for the Third Symposium are those from this latter publication. If readers find errors in any of the sections, please contact one of the authors.

The indices are available on a CD containing a PDF version of the complete text suitable for text string searches.

## A. TITLES INDEX

In this first index, the chronological order of the papers is preserved, beginning with the First

Symposium and the first paper presented. We list the Symposium number, page number, paper title, co-authors, and nation of the first author.

## B. TOPIC PHRASE INDEX

Here we list topic phrases alphabetically with reference to the Symposium number and page number. We considered using key words, which are cryptic and more mnemonic, rather than the longer and more descriptive topic phrases, but we decided on the latter because they provide more information for selecting the correct reference. The compilers have used their own judgment in selecting and defining the topic phrases and hope that the phrases are self-explanatory. At the present time, a significant cross-referencing capability is lacking within the index, and users are cautioned to check several different possible topics when searching.

## C. AUTHOR INDEX

This index is a simple listing of all authors, giving the Symposium number and page number references. All except family names were contracted to initials. We have attempted to combine different presentations of an author's name (e.g., J. Ramsay and J.B. Ramsay) into a uniform entry.

## D. ACRONYM AND CODE NAME INDEX

This index is an attempt to cite the *first use* of an acronym or code name for neat explosives, ingredients, and formulations, for which a definition of the term is also provided. The names of some explosive compositions that were "known to everyone" in 1950 are no longer in

common usage, particularly within the international community. For example, the names MEDINA and DINA were used in at least one instance with no recognized chemical name or formula given. Rather interestingly, no definition of RDX was located within the *Proceedings* until the Fifth Symposium.

Many explosive compounds and compositions are named as a contraction of the chemical name (e.g., TNT); for others, the history of the name is lost in research laboratories (e.g. HMX\*\*); and others have no relationship to the composition (e.g., X-0290).

A large number of papers within the Symposia *Proceedings* refer to compositions only by acronym or code name, with no formal definition of composition. Composition B (Comp B) is cited in many papers, yet at least 10 citations for Composition B provide similar, but different, compositions. Also, in some instances, the same explosive compound was defined by three or more different acronyms.

We intended that each citation be the earliest reference within the thirteen *Proceedings* to the use of the acronym coupled with a meaningful chemical definition. Errors in finding and entering the citations may have occurred.

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\*\* Ray Walker has told JBR that HMX most probably stands for High Melting eXplosive, but Walker has also heard a reasonable statement that the initials may have been derived from Holston Military eXplosive. It does not stand for His Majesty's eXplosive.

# A. Titles Index

## By Symposium and Page

**Sy. Pg Title, Authors, Country**

---

- 1.0003 Recent Studies in BURORD, S. Brunauer, USA
- 1.0009 Recent Work on Detonation at Aberdeen, J.M. Dewey, USA
- 1.0012 Studies on Detonation Phenomena, F.C. Gibson and C.M. Mason, USA
- 1.0022 Recent Work at NOL, D. Price, USA
- 1.0031 Recent Studies at the Naval Ordnance Test Station, J.S. Rinehart, USA
- 1.0039 Some Recent Studies in Canada, G.R. Walker, Canada
- 1.0043 Chemical Aspects of Detonation, B. Lewis, USA
- 1.0045 Nonstationary Detonation Waves in Gases, G.B. Kistiakowsky, USA
- 1.0052 Duration of the Reaction in a Detonating Explosive, S.J. Jacobs, USA
- 1.0057 Experiments on the Transition from Deflagration to Detonation, J. Roth, USA
- 1.0071 Physical Aspects of Detonation, J.G. Kirkwood, USA
- 1.0072 The Equation of State for Detonation Gases, S.R. Brinkley, USA
- 1.0079 Convergent Shock Waves, A. Kantrowitz, USA
- 1.0088 Shock Waves in Solids, J.E. Ablard, USA
- 1.0093 Interactions of Detonation Waves with Material Boundaries, R.B. Parlin and H. Eyring, USA
- 1.0105 Problems and Future Developments, G.B. Kistiakowsky, USA
- 1.0107 Theoretical Developments in Detonation, J.G. Kirkwood, USA
- 2.0119 Charge Preparation for Precise Detonation Velocity Studies, E. James, USA
- 2.0136 Technique for the Measurement of Detonation Velocity, A.W. Campbell, M.E. Malin, T.J. Boyd and J.A. Hull, USA
- 2.0151 A Microwave Technique for Measuring Detonation Velocities, T.J. Boyd, P. Fagan, USA
- 2.0157 Measurement of Detonation Temperatures, F.C. Gibson, M. Bowser, C.R. Summers, F.H. Scott, J.C. Cooper and C.M. Mason, USA
- 2.0168 A New Cine Microscope and its Application to Detonation Phenomena, J.S. Courtney-Pratt, UK
- 2.0187 The Measurement of Density Changes in Gaseous Detonations, G.B. Kistiakowsky and P.H. Kydd, USA
- 2.0198 The Attainment of Thermodynamic Equilibrium in Detonation Waves, G.B. Kistiakowsky and W.G. Zinman, USA
- 2.0216 On the Structure of a Detonation Wave, W.R. Gilkerson and N. Davidson, USA
- 2.0231 High Temperature Thermodynamic and Gaseous Detonations in Mixtures of Cyanogen, Oxygen and Nitrogen, H.M. Peek and R.G. Thrap, USA
- 2.0251 Detonation in Gases at Low Pressure, A.L. Bennet and H.W. Wedaa, USA
- 2.0266 Measurements on Gaseous Detonation Waves, J.A. Nicholls, R.B. Morrison and R.E. Cullen, USA
- 2.0281 Studies on Gaseous Detonation, B. Greifer, F.C. Gibson and C.M. Mason, USA
- 2.0295 Condensation Shocks and Weak Detonations, S.G. Reed and W.H. Heybey, USA

## A. Titles Index (Continued)

### **Sy. Pg Title, Authors, Country**

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- 2.0312 The Structure of a Steady-State Plane Detonation Wave with Finite Reaction Rate, J.G. Kirkwood and W.W. Wood, USA
- 2.0327 The Measurement of Chapman-Jouguet Pressure for Explosives, W.E. Deal, USA
- 2.0343 Measurement of the Chapman-Jouguet Pressure and Reaction Zone Length in a Detonating High Explosive, R.E. Duff and E. Houston, USA
- 2.0358 The Detonation Zone in Condensed Explosives, H.D. Mallory and S.J. Jacobs, USA
- 2.0383 Calculation of the Detonation Properties of Solid Explosives with the Kistiakowsky-Wilson Equation of State, W. Fickett and R.D. Cowan, USA
- 2.0404 A Solid-State Model for Detonations, R.B. Parlin and J.C. Giddings, USA
- 2.0424 Diameter Effect in Condensed Explosives. The Relation Between Velocity and Radius of Curvature of the Detonation Wave, W.W. Wood and J.G. Kirkwood, USA
- 2.0439 The Detonation Behavior of Liquid TNT, E.A. Igel and L.B. Seely, USA
- 2.0454 Detonation in Homogeneous Explosives, A.W. Campbell, M.E. Malin and T.E. Holland, USA
- 2.0478 Particle Size Effects in One- and Two-Component Explosives, M.E. Malin, A.W. Campbell and C.W. Mautz, USA
- 2.0500 Detonation Wave Fronts in Ideal and Non-Ideal Detonation, M.A. Cook, USA
- 2.0519 Determination of Reaction Rate of Sodium Nitrate and the Equation of State of 50/50 TNT- $\text{NaNO}_3$ , M.A. Cook and W.O. Ursenbach, USA
- 2.0529 The Decomposition of Alpha-Lead Azide, J.M. Grocock, UK
- 2.0547 The Detonation of Azides by Light, J.S. Courtney-Pratt and G.T. Rogers, UK
- 2.0561 Detonation in Azides when the Dimensions Are Comparable with the Length of the Reaction Zone, F.P. Bowden and A.C. McLaren, UK
- 2.0571 Origin of Luminosity in Detonation Waves, E. Jones, UK
- 2.0582 The Role of Gas Pockets in the Propagation of Low Velocity Detonation, O.A.J. Gurton, UK
- 2.0601 Sensitiveness to Detonation, E. Jones and I.G. Cumming, UK
- 2.0612 Initiation of Military Explosives by Projectile Impact, J.M. Dewey, USA
- 2.0620 Factors Affecting the Transmission of Detonation Between Small Explosive Charges, I.D. Hampton, J. Savitt, L.E. Starr and R.H.F. Stresau, USA
- 2.0643 The Correlation of the Sensitiveness of Explosives with Combustion Data, E.G. Whitbread and L.A. Wiseman, UK
- 2.0695 Problems of Initiation in Tests of Sensitiveness, E.G. Whitbread, UK
- 2.0711 Lead Azide Precipitated with Polyvinyl Alcohol, T.G. Blake, D.E. Seegar and R.H.F. Stresau, USA
- 2.0733 Thermo-Hydrodynamics and the Reaction Kinetics in Some Metalized Explosives, M.A. Cook, A.S. Filler, R.T. Keyes, W.S. Partridge and W.O. Ursenbach, USA
- 2.0749 Conditions Behind the Reaction Zone of Confined Columns of Explosive--Notions Derived from Plate Dent Experiments, W.M. Slie and R.H.F. Stresau, USA



## A. Titles Index (Continued)

### **Sy. Pg Title, Authors, Country**

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- 3.0001 A Colliding Ball High Explosive Impact Sensitivity Testing Machine, C.M. Bean, G.P. Cachia and J. Kirkham, UK
- 3.0010 A Photographic Study of Explosions Initiated by Impact, J. Wenograd, USA
- 3.0024 Pure Environmental Shock Testing of Condensed Phases, T.A. Erikson, USA
- 3.0042 On the Memory Effect in the Thermal Initiation of Explosives, W.R. Hess and R.C. Ling, USA
- 3.0050 The Thermal Decomposition of  $[\text{Co}(\text{NH}_3)_6](\text{N}_3)_3$ , T.B. Joyner and F.H. Verhoek, USA
- 3.0060 The Behavior of Explosives at Very High Temperatures, J. Wenograd, USA
- 3.0077 The Rapid Burning of Secondary Explosives by a Convective Mechanism, J.W. Taylor, UK
- 3.0088 Electrical Initiation of RDX, G.M. Muller, D.B. Moore and D. Bernstein, USA
- 3.0112 Detonation Studies in Electric and Magnetic Fields, F.E. Allison, USA
- 3.0120 Electrical Measurements in Detonating Pentolite and Composition B, R.L. Jameson, USA
- 3.0139 On the Electrical Conductivity of Detonating High Explosives, B. Hayes, USA
- 3.0150 Ionization in the Shock Initiation of Detonation, R.B. Clay, M.A. Cook, R.T. Keyes, O.K. Shupe and L.L. Udy, USA
- 3.0184 Chemical Factors in External Detonation-Generated Plasmas, M.A. Cook and A.G. Funk, USA
- 3.0202 Detonation Plasma, R.T. Keyes, E.L. Kendrew and E.G. Whitbread, UK
- 3.0205 Energy Transfer to a Rigid Piston under Detonation Loading, A.K. Aziz, H. Hurwitz and H.M. Sternberg, USA
- 3.0226 A Computer Program for the Analysis of Transient Axially Symmetric Explosion and Shock Dynamics Problems, T. Orlow, D. Piacesi and H.M. Sternberg, USA
- 3.0241 Pressure Profiles in Detonating Solid Explosive, G.E. Hauver, USA
- 3.0253 Decay of Explosively-Induced Shock Waves in Solids and Spallings of Aluminum, J.O. Erkman, USA
- 3.0267 Effects of Boundary Rarefactions on Impulse Delivered by Explosive Charge, B.C. Taylor, USA
- 3.0285 Experimental Determination of Stresses Generated by an Electric Detonator, J.S. Rinehart, USA
- 3.0304 Comments on Hypervelocity Wave Phenomena in Condensed Explosives, R.F. Chaiken, USA
- 3.0309 Nonideal Detonation of Ammonium Nitrate-Fuel Mixtures, L.D. Sadwin, R.H.F. Stresau and J. Savitt, USA
- 3.0327 The Detonation Velocity of Pressed TNT, M.J. Urizar, E. James and L.C. Smith, USA
- 3.0357 Measurement of Detonation, Shock, and Impact Pressures, R.T. Keyes and W.O. Ursenbach, USA
- 3.0386 Low Pressure Points on the Isentropes of Several High Explosives, W.E. Deal, USA
- 3.0396 Strong Shocks in Porous Media, J.L. Austing, H.S. Napadensky, R.H.F. Stresau and J. Savitt, USA
- 3.0420 The Behavior of Explosives at Impulsively Induced High Rates of Strain, H.S. Napadensky, R.H.F. Stresau and J. Savitt, USA
- 3.0436 Initiation and Growth of Detonation in Liquid Explosives, F.C. Gibson, C.R. Summers, C.M. Mason and R.W. Van Dolah, USA
- 3.0455 Initiation Characteristics of Mildly Confined, Bubble-Free Nitroglycerine, C.H. Winning, USA
- 3.0469 Shock Initiation of Detonation in Liquid Explosives, A.W. Campbell, W.C. Davis and J.R. Travis, USA
- 3.0499 Shock Initiation of Solid Explosives, A.W. Campbell, W.C. Davis, J.B. Ramsay and J.R. Travis, USA

## A. Titles Index (Continued)

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3.0520		Shock Induced Sympathetic Detonation in Solid Explosive Charges, M. Sultanoff, V.M. Boyle and J. Paszek, USA
3.0534		Growth of Detonation from an Initiating Shock, J.W. Enig, USA
3.0562		Initiation of a Low-Density PETN Pressing by a Plane Shock Wave, G.E. Seay and L.B. Seely, USA
3.0574		The Transition from Shock Wave to Detonation in 60/40 RDX/TNT, E.L. Kendrew and E.G. Whitbread, USA
3.0584		Determination of the Shock Pressure Required to Initiate Detonation of an Acceptor in the Shock Sensitivity Test, I. Jaffe, R. Beauregard and A.B. Amster, USA
3.0606		A Computational Treatment of the Transition from Deflagration to Detonation in Solids, C.T. Zovko and A. Macek, USA
3.0635		A Method of Determination of Detonability of Propellants and Explosives, S. Wachtell and C.E. McKnight, USA
3.0659		Sensitiveness Testing and its Relation to the Properties of Explosives, E.G. Whitbread, UK
3.0671		Sensitivity Relationships, M.J. Kamlet, USA
3.0693		A Statistical Correlation of Impact Sensitivity with Oxygen Balance for Secondary Explosives, J. Alster, USA
3.0706		The Electric-Spark Initiation of Mixtures of High Explosives and Powdered Electrical Conductors, T.P. Liddiard and B.E. Drimmer, USA
3.0721		Detonation and Shock Review, M.L. Wilkins, USA
3.0725		Detonation Performance Calculations Using the Kistiakowsky-Wilson Equation of State, C.L. Mader, USA
3.0738		Energy Release from Chemical Systems, J.W. Kury, G.D. Dorough and R.E. Sharples, USA
3.0761		The Detonation Properties of (1,3-Diamino, 2,4,6-Trinitrobenzene), N.L. Coleburn, B.E. Drimmer and T.P. Liddiard, USA
3.0784		Non-Steady Detonation-A Review of Past Work, S.J. Jacobs, USA
3.0813		The Shock Initiation of Detonation in Liquid Explosives, W.A. Gey and K. Kinaga, USA
3.0822		Sensitivity of Propellants, W.W. Brandon and K.F. Ockert, USA
3.0833		Some Studies on the Shock Initiation of Explosives, E.N. Clark and F.R. Schwartz, USA
3.0842		The Influence of Energy on the Decomposition of the Transition from Initiation to Detonation, Z.V. Harvalik, USA
4.0003		Metal Acceleration by Chemical Explosive, J.W. Kury, H.C. Hornig, E.L. Lee, J.L. McDonnel, D.L. Ornellas, M. Finger, F.M. Strange and M.L. Wilkins, USA
4.0014		The Motion of Plates and Cylinders Driven by Detonation Waves at Tangential Angles, N.E. Hoskin, J.W.S. Allan, W.A. Bailey, J.W. Lethaby and I.C. Skidmore, UK
4.0027		The Chapman-Jouguet Isentrope and the Underwater Shock Wave Performance of Pentolite, W.A. Walker and H.M. Sternberg, USA
4.0039		Detonation of a Cylindrical Charge-Study of the Flow of Burned Gases, C. Fauquignon, M. Prouteau and G. Verdes, France

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- 4.0047 The Equation of State of Detonation Products Behind Overdriven Detonation Waves in Composition B, I.C. Skidmore and S. Hart, UK
- 4.0052 An Equation of State of Detonation Products at Pressure below 30 Kilobars, J.W.S. Allan and B.D. Lambourn, UK
- 4.0067 Structure, Chemistry, and Instability of Detonation in Gases, G.L. Schott, USA
- 4.0078 Theoretical Considerations on the Propagation of Shock and Detonation Waves, R. Cheret, France
- 4.0084 Failure of the Chapman-Jouguet Theory for Liquid and Solid Explosives (Abstract Only), W.C. Davis, B.G. Craig and J.B. Ramsay, USA
- 4.0086 Radius of Curvature Effect on Detonation Velocity, L.G. Green and E. James, USA
- 4.0092 Lateral Shock Pressure Measurements at an Explosive Column, L.D. Sadwin and N.M. Junk, USA
- 4.0096 Studies on the Diameter-Dependence of Detonation Velocity in Solid Composite Propellants: I. Attempts to Calculate Reaction-Zone Thickness, M.L. Pandow, K.F. Ockert and H.M. Shuey, USA
- 4.0102 Studies of the Diameter-Dependence of Detonation Velocity in Solid Composite Propellants: II. Prediction of Failure Diameter, M.L. Pandow, K.F. Ockert and T.H. Pratt, USA
- 4.0107 Non-Ideal Detonation with Constant Lateral Expansion, F. Wecken, France
- 4.0117 Detonations in Liquid Explosives-The Low Velocity Regime, R.W. Watson, C.R. Summers, F.C. Gibson, R.W. Van Dolah, USA
- 4.0126 Detonation of Nitromethane-Tetranitromethane Mixtures: Low and High Velocity Waves, A.B. Amster, D.M. McEachern and Z. Pressman, USA
- 4.0135 Observation and Study of the Conditions for the Formation of Mach Detonation Waves, J.P. Argous, C. Peyre and J. Thouvenin, France
- 4.0142 Mach Interaction of Two Plane Detonation Waves, B.D. Lambourn and P.W. Wright, UK
- 4.0153 Interaction of Oblique Detonation Waves with Iron (Abstract Only), H.M. Sternberg and D. Piacesi, USA
- 4.0154 Interactions of Detonation Waves in Condensed Explosives (Abstract Only), S.D. Gardner and J. Wackerle, USA
- 4.0156 Axial Initiation of Multi-Component Explosives Charges, L. Deffet and C. Fosse, Belgium
- 4.0167 A Detonation Calorimeter and the Heat of Products of Detonation of Pentaerythritol Tetranitrate (PETN) (Abstract Only), D.L. Ornellas, J.H. Carpenter and S.R. Gunn, USA
- 4.0168 Anomalous Isentrope Results Obtained with the RUBY Computer Program, J. Hershkowitz, USA
- 4.0176 Front and Mass Velocity at Detonation in Evacuated Chambers, M. Lundborg, Sweden
- 4.0179 Detonation Limits in Condensed Explosives, W.E. Gordon, USA
- 4.0198 Summary of Papers on Condensed Phase Detonation, R.E. Duff, USA
- 4.0205 Evaluation of the Grüneisen Parameter for Compressed Substances: I. Metals, W.H. Andersen, USA
- 4.0213 The Equation of State of 1060 Aluminum from Shock Wave Measurements (Abstract Only), G.D. Anderson, A.L. Fahrenbruch and G.R. Fowles, USA
- 4.0214 The Compression of Polymethyl Methacrylate by Low Amplitude Shock Waves, T.P. Liddiard, USA
- 4.0222 Shock Wave Compression of Plexiglas from 3 to 20 Kilobars, W.J. Halpin and R.A. Graham, USA

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4.0233		Analysis of Shock Wave and Initiation Data for Solid Explosives, J.B. Ramsay and A. Popolato, USA
4.0239		Low-Pressure Hugoniot of Solid Explosives (Abstract Only), R.J. Wasley and J.F. O'Brien, USA
4.0240		The Unreacted Hugoniot Equations of State of Several Explosives (Abstract Only), N.L. Coleburn and T.P. Liddiard, USA
4.0241		Determination of Shock Hugoniot for Several Condensed Phase Explosives, V. Boyle, R.L. Jameson and M. Sultanoff, USA
4.0248		Shock Induced Phase Transitions, G. E. Duvall and Y. Horie, USA
4.0258		Effect of a Shock Wave on a Porous Solid, J. Thouvenin, France
4.0266		Shock Behavior of Some Non-Reacting Porous Solids, J.R. Rempel and D.N. Schmidt, USA
4.0277		Elastoplastic Effects in the Attenuation of Shock Waves, J.O. Erkman, USA
4.0289		Hydrodynamic Elastic Plastic Theory and Plane Shock Waves in Metals: I. Theory (Abstract Only), J.C. Pearson, USA
4.0290		The Elasto-Plastic Release Behavior of Magnesium at 80 kb, P.J.A. Fuller and J.H. Price, UK
4.0295		The Influence of Mechanical Properties on Wave Propagation in Elastic-Plastic Materials, B.M. Butcher and D.E. Munson, USA
4.0305		The Instability of an Interface Between Two Fluids under Variable Normal Acceleration, I.G. Cameron and H.H.M. Pike, UK
4.0316		Calculation of the Growth of Interface Instabilities by a Lagrangian Mesh Method, L.A. Elliot, UK
4.0321		Shock Wave Research on Inert Solids, W.E. Deal, USA
4.0349		The Effect of Interstitial Gas on the Shock Sensitivity of Low Density Explosive Compacts, M.C. Chick, UK
4.0359		Shock Initiation of Low-Density Pressings of Ammonium Perchlorate, M.W. Evans, B.O. Reese and L.B. Seely, USA
4.0373		Initiation of a Solid Explosive by a Short-Duration Shock, E.F. Gittings, USA
4.0381		Oblique Impact of a Layer of Explosive by a Metal Plate, F. David, C. Fauquignon, H. Bernier and J. Potau, France
4.0386		Experimental Observations of Initiation of Nitromethane by Shock Interactions at Discontinuities, J.R. Travis, USA
4.0394		Initiation of Detonation by the Interaction of Shock with Density Discontinuities (Abstract Only), C.L. Mader, USA
4.0395		An Equation of State and Derived Shock Initiation Criticality Conditions for Liquid Explosives (Abstract Only), J.W. Enig and F.J. Petrone, USA
4.0399		The Effect of Wax on the Shock Sensitivity of Explosive Compacts, J. Eadie, UK
4.0404		Direct Contact Detonation Sensitivity, J. Savitt, Capt. N. Leone and C. Kyselka, USA
4.0412		The Effect of Physical and Chemical Properties on the Sensitivity of Liquid Explosives, J.E. Hay, J. Ribovich, F.H. Scott and F.C. Gibson, USA
4.0426		Retonation Caused by the Reflection of Divergent Waves, W.R. Marlow, UK
4.0432		Comparison Between Shooting and Barrier Tests, N. Lundborg, Sweden

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- 4.0435 The Initiation Properties of Boosters in Explosives with Low Sensitivity, C.H. Johansson and T. Sjolín, Sweden
- 4.0442 Size Factors in Detonation Transfer, R.H.F. Stresau, USA
- 4.0449 Confinement Effects in Exploding Bridgewire Initiation of Detonation, R.H.F. Stresau, R.M. Hillyer and J.E. Kennedy, USA
- 4.0461 Surface Rate Processes and Sensitivity of High Explosives (Abstract Only), R.F. Chaiken and F.J. Cheselske, USA
- 4.0462 Low Order Reactions in Shocked Explosive, N. Griffiths and V.C. Broom, UK
- 4.0473 Initiation of Explosives by Low Velocity Impact, H.S. Napadensky, USA
- 4.0477 Further Studies on the Ignition of Explosives, L.G. Green and G.D. Dorough, USA
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- 4.0496 Mechanical and Detonation Properties of Rubber Bonded Sheet Explosives, W. Kegler and R. Schall, France
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# D. Acronym and Code Name Index

## Alphabetic, First Reference

Name	Sy.Pg	Makeup
1,1-DP	5.0090	1,1-bis(difluoroamino)propane
1,2-DB	5.0237	1,2-bis(difluoramino)butane
1,2-DP	5.0237	1,2-bis(difluoramino)propane
1,3-DP	5.0090	1,3-bis(difluoramino)propane
1,4 BGDN	11.0086	1,4 Buthylene Glycoldinitrate
1-MNT	6.0232	1-methyl-5-nitrotetrazole
2,2-DB	5.0237	2,2-bis(difluoramino)butane
2,2-DP	5.0237	2,2-bis(difluoramino)propane
2,3 BGDN	11.0086	2,3 Buthylene Glycoldinitrate
2-MNT	6.0232	2-methyl-5-nitrotetrazole
2-NE	7.0762	2-nitroethanol
2-NP	13.0990	2-nitropropane
A-3	9.0106	91 RDX/9 wax
A-5	7.0551	97 RDX/3 wax
A-589	5.0139	86 HMX/14 PB
A-590	5.0139	80.3 HMX/5.9 AP/13.8 PB
A-591	5.0139	69 HMX/17 AP/14 PB
A-592	5.0139	57 HMX/29 AP/14 PB
AAB 3189	7.0892	9.2 RDX/60.8 AP/15 Al/15 binder
AAB 3225	7.0892	7.1 RDX/62.9 AP/15 Al/15 binder
AAB 3267	7.0892	5 RDX/65 AP/15 Al/15 binder
ABH	8.0528	C <sub>24</sub> H <sub>6</sub> N <sub>14</sub> O <sub>24</sub>
ADDF	6.0467	1,4,4,10,10,13-hexafluoro-1,1,7,7,13,13-hexanitro-3,5,9,11- tetraoxotridecane
ADN	11.0214	ammonium dinitramide
ADNBF	9.0566	7 amino-4,6 dinitrobenzofuroxan
ADNT	7.0801	ammonium salt of 3,5-dinitro-1,2,4-triazole
AF 902	9.0487	95 NQ/5 Viton A
AFM	11.0443	Atomic force microscope
AFX-108 E	9.1236	82 RDX/18 O
AFX1100	9.1284	66 TNT/16 OD2 wax/18 Al
AFX-521	8.1106	95 PYX/5 Kel-F 800
AHM	12.0141	Asphaltic hot melt
ALE3D	12.0095	Coupled thermal-hydro-chemical code
Aln	13.1228	nanoaluminum
Amatex 20	6.0647	20 RDX/40 TNT/40 AN
Amatol	5.0501	20-60% AN/80-40% TNT
AMMO	9.0232	azidomethyl methyloxethane
AMS	11.0249	40 AN/15 sodium nitrate/10 carbamide/25 water/10 Al/polyacrilamide/0.4 additive
AN	6.0439	ammonium nitrate
AN	11.0086	Allynitrate
ANFO	3.0186	94.6 AN/5.4 fuel oil
ANFOAL-10	6.0546	87.4 AN/2.6 fuel oil/10 aluminum
ANT	10.0886	3-amino-5-nitro-1,2,4 triazole
AP	5.0139	ammonium perchlorate
ATEC	9.0539	acetyl triethyl citrate

## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
ATX-27R	10.0891	33 EDD/33 AN/1.4 urea/3.1 oil/1.7 emulsifier/27 RDX/0.4 casting agent
B 2141	7.0409	88 RDX/12 HTPB
B 2142	7.0409	77 PETN/23 PU
B 2161	8.0437	40 HMX/30 AP/20 Al/10 polyurethane binder
B 2169	8.0437	83 PETN/17 polyurethane
B 2174	8.0437	47 HMX/30 AP/11 lead nitrate/12 polyurethane
B 2190	8.0437	30 PETN/70 HTPB
B 2191	8.0437	37 HMX/40 AP/11 lead nitrate/12 polyurethane
B 2192	8.0437	27 HMX/50 AP/11 lead nitrate/12 polyurethane
B 2203	10.0115	RDX/inert binder
B 2208	10.0899	82 HMX/polyurethane binder
B 2209	10.0899	81.5 HMX/silicon(sic) binder
B 2210	10.0899	72 HMX/florinated binder
B 2214	9.1008	12 HMX/72 NTO/16 inert binder
B 2214	10.0115	HMX/NTO/inert binder
B 2220	10.0115	RDX/inert binder
B 2241	10.0899	82.8 HMX/HTPB
B 3003	8.0437	80 HMX/20 NC-NGI
B 3100	10.0646	42 HMX/9 AP/19 Al/30 binder
B 3103	10.0646	51 HMX/19 Al/30 binder
B 3108	10.0115	HMX/Al/energetic binder
B2211D	11.0385	20 RDX/43 AP/2 Al/12 HTPB
B2214B	11.0385	12 HMX/72 NTO/16 HTPB
B2248A	11.0385	42 HMX/46 NTO/12 HTPB
B3110A	11.0385	29 HMX/30 NTO/25 NC-NG binder
Baratol	3.0563	76 barium nitrate/24 TNT
Baratol	4.0361	70 barium nitrate/30 TNT
Baratol	6.0629	72 barium nitrate/28 TNT
Baratol 76	6.0647	76 barium nitrate/24 TNT
Baratol UK	9.0793	70 TNT/30 BaNO <sub>3</sub>
BDNPA	9.1018	bis (2,2-dinitropropyl)-acetal
BDNPA-F	9.1236	eutectic
BDNPF	9.1018	bis (2,2-dinitropropyl)-formal
BET	12.0087	Brunauer Emmett Teller theory
BFADNEN	13.0154	bis(2-difluoramino-2,2-dinitroethyl)nitramine
BH-1	8.0083	plastic-bonded RDX
blasting gelatin	3.0045	91 NG/8 NC/1 chalk
BO-1	8.0093	plastic-bonded HMX, similar to PBX 9404
Boracitol	10.0418	40 TNT/60 boric acid
Bridgwater Type A	10.0089	59.5 RDX/39.5 TNT/1.0 Beeswax
BTF	6.0712	benzotrifuroxane
BTFMA	6.0467	1-fluoro-1,1-dinitro-4,4-bis(trifluoromethyl)-3,5-dioxohexane
BTNEN	3.0070	bis-(2,2,2-trinitroethyl)nitramine
BTX	6.0460	5,7-dinitro-1-picrylbenzotriazole
BTZ	8.1019	bitetrazole
BWX	2.0661	beeswax
BX1	8.1106	60 TATB/35 (95 RDX/5 HMX)/5 Kel-F
BX2	8.1106	60 TATB/35 (95 RDX/5 HMX)/5 PTFE
BX3	8.1106	60 TATB/35 (90 RDX/10 HMX)/5 Kel-F

## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
BX4	8.1106	60 TATB/35 (90 RDX/10 HMX)/5 PTFE
C-4	4.0097	91 RDX/9 wax
CAB	9.0539	cellulose acetate butyrate
CACTP	6.0455	catena- $\mu$ -cyanotetraammine cobalt(III) perchlorate
CDB	10.0095	42 nitrocellulose/46 nitroglycerin (cast double base)
CDPI	13.0233	critical diameter for particle ignition
Cedosal 10	9.1082	B <sub>10</sub> H <sub>12</sub> (CsNO <sub>3</sub> ) <sub>2</sub>
CEF	4.0005	tris $\beta$ -chloroethylphosphate
CFD	12.0183	Computational Fluid Dynamics
CH6	9.0100	97.5 RDX/0.5 polyisobutylene/0.5 calcium stearate/0.5 graphite
CL	12.0311	compact tension specimen
CL-20	13.0342	hexanitroisowurtzitane
CMBD	9.0007	NC/NG/HMX/Al/AP
CN	13.0204	calcium nitrate
Comp A	3.0687	91 RDX/9 wax
Comp A	6.0647	92 RDX/8 wax
Comp A 3	9.1463	91 RDX/9 polyethylene
Comp A 5	7.0551	97 RDX/3 wax
Comp A 5	7.0928	98 RDX/2 stearic acid
Comp A 5	8.0265	98.5 RDX/1.5 stearic acid
Comp B	2.0479	60 RDX/40 TNT, wax and other additives (1 to 1.5%)
Comp B	4.0048	60 RDX/40 TNT
Comp B	6.0493	60 RDX/40 TNT/1 wax
Comp B	6.0629	59.5 RDX/39.5 TNT/1 beeswax
Comp B	6.0647	63 RDX/36 TNT/1 wax
Comp B	7.0353	45 RDX/55 TNT/1 wax
Comp B (ISL)	7.0317	65 RDX/35 TNT
Comp B, Grade A	4.0005	64 RDX/36 TNT
Comp B, Grade A	5.0198	59.5 RDX/39.5 TNT/1.0 wax
Comp B-3	4.0361	64 RDX/36 TNT
Comp B-3	5.0004	60 $\pm$ 1.5 RDX/40 $\pm$ 1.5 TNT
Comp B-3	9.1236	60 RDX/40 TNT
Comp B-3 (ISL)	7.0317	60 RDX/40 TNT
Comp B3 (waxed)	5.0280	60 RDX/40 TNT/1 wax
Comp B4	7.0900	60 RDX/40 TNT, no wax
CP	6.0455	1-(5-cyanotetrazolato)pentaammine cobalt(III) perchlorate
CPeX	11.0193	divergnet flow code (see 8th symposium) p176
CPEX	12.0325	Commercial Performance of Explosives reaction model
CPX 200	11.0273	60 RDX/20 Al/10 binder/ 10 K10 liquid
CRZ	13.0319	chemical reaction zone
CTX-1	8.0265	15 RDX/40 AP/23 Al/22 TNT + additives
CV	13.0700	cyclic voltammetry
CW3	9.1323	analog of 60 RDX/40 TNT
CX	13.0245	cast-cured explosive
CX-84	8.0366	84 RDX/9.7 R45-HT/5.6 DOA/0.7 TDI
CX-84A	9.1482	84 RDX/16 HTPB
CX-85	10.0307	84.25 HMX/15/75 HTPB
Cyclonite	3.0437	RDX
Cyclotol	3.0502	65 RDX/35 TNT



## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
Cyclotol	5.0065	72 RDX/25 TNT
Cyclotol 25/75	9.1236	25 RDX/75 TNT
Cyclotol 60/40	9.1236	60 RDX/40 TNT
Cyclotol 77/23	6.0647	77 RDX/23 TNT
D-2	9.1236	84 D2 wax/14 NC/2 lecithin
DAC	13.0097	diamond anvil cell
DANTNP	10.0885	5-nitro-4,6 bis((5nitro,1H-1,2,4 triazole-3yl) amino pyrimidine
DAT	10.0588	3,6-diaminotetrazine
DATB	3.0761	1,3-diamino-2,4,6-trinitrobenzene
DBA	3.0379	Dense Blasting Agent, slurries of TNT or Composition B
DDI	10.0095	Dimeryl diisocyanate
DDNP	3.0012	diazodinitrophenol
Debrix 18AS	8.0265	95.5 RDX/2.5 wax/2 additives
Debrix-2	8.1106	95 RDX/5 wax
DECS	13.0145	differential equation for curved shock
DEGDN	7.0762	diethylene glycol dinitrate
DETA	10.0105	diethylenetriamine
DFB	6.0467	2,2-difluoro-2-nitroethyl-5,5-difluoro-2-(3',3'-difluoro-3'-nitro-1-oxopropyl)-5,5-dinitro-3-oxopentanoate
DFE	6.0467	bis(2-fluoro-2,2-dinitroethyl)difluoroformal
DFNT	6.0467	2,2-difluoro-2-nitroethyl-trifluoromethane-sulfonate
DFT	13.1007	density functional theory
DGDN	11.0086	Diethylene glycoldinitrate
DHE	8.0365	2-hydroxymethyl dimethylhydantoin
DICC	12.0044	Digital Image Cross-Correlation
dichloro TEDNCP	10.0157	derivative of cyclotriphosphazene
difluoro TEDNCP	10.0157	derivative of cyclotriphosphazene
DINA	3.0066	di-β-nitroxyethyl nitramine
DINGU	7.0540	dinitroglycoluril
DIPM	10.0414	C <sub>12</sub> H <sub>6</sub> N <sub>8</sub> O <sub>12</sub>
DiTeU	4.0435	dinitroethyl-uric ( <i>sic</i> )
Dithekite	3.0186	a mixture of 82.8% nitric acid, nitrobenzene, and water
Dithekite 13	3.0493	63 nitric acid/24 nitrobenzene/13 water
Dithekite 13/20	2.0648	dithekite with 13/20 wt% water
DNBF	9.0566	4,6-dinitrobenzofuroxan
DNCH	11.0086	Dinitrochlorohydrine
DNNC	9.0232	1,3,5,5-tetranitro-hexahydropyrimidine
DNP	7.0374	dinitrophenol
DNPA	4.0005	2,2-dinitropropylacrylate
DNPF	3.0685	bis-dinitropropyl fumarate
DNPP	6.0467	2,2-dinitropropyl perchlorate
DNPTB	3.0070	2,2-dinitropropyl 4,4,4-trinitrobutyrate
DNT	7.0374	dinitrotoluene
DNT	7.0802	3,5-dinitro-1,2,4-triazole
DOA	8.0363	dioctyl adipate
DOP	4.0005	dioctylphthalate
DREV-Explosive	8.0363	84 RDX/16 polybutadiene
DSC	13.0131	Differential scanning calorimeter
DSR	12.0049	Digital Speckle Radiography

## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
DXD-01	9.0475	84% RDX/16% binder
E1	12.0297	AN/ 0.08 Al
E2	12.0297	AN/0.08 Al
E3	12.0297	AN/0.12 Al
E4	12.0297	AN/0.02 Al
E5	12.0297	AN
E6	12.0297	AN
EA	7.0548	50 EDD(ethylenediamine dinitrate)/50 AN
EAK	8.1002	46 ethylenediamine dinitrate/46 ammonium nitrate/8 potassium nitrate
EAR	7.0551	42.5 EDD/42.5 AN/15 RDX
EARK	7.0551	42.5 EDD/36.1 AN/15 RDX/6.4 potassium nitrate
EARL-1	7.0551	40.3 EDD/40.3 AN/14.2 RDX/5.2 Al
EARL-2	7.0551	36.2 EDD/36.2 AN/12.8 RDX/14.8 Al
EDC1	11.0273	70 HMX/4 RDX/25 TNT/1 Wax
EDC-29	9.0793	95 HMX/5 polyurethane
EDC-32	9.0793	85 HMX/15 Viton
EDC-35	9.0123	95 TATB/5 Kel-F 800
EDC-37	11.0067	91 HMX(bi-modal)/1 NC/8 K10
EDD	6.0439	ethylenediamine dinitrate
EDNA	6.0314	ethylenedinitramine
EDNP	5.0139	ethyl-4,4-dinitropentanoate w/1% Cab-O-Sil gelling agent
EE	9.0585	emulsion explosive
EFI	12.0330	Exploding Foil Initiator
EGD	3.0456	ethylene glycol dinitrate
EGDN	3.0438	ethylene glycol dinitrate
EGN	2.0659	ethylene glycol dinitrate
EIE	4.0159	exchanged-ion explosive (10 NG/90 stoichiometric ammonium chloride-potassium nitrate mixture)
EJC-90	9.1236	26 HMX/14 NC/32 NG/5 AP/18 Al/5 O
Emulite	8.1071	AN/FO/water with gas-filled microspheres
EN	3.0813	ethyl nitrate
Estane	4.0005	trademark for polyester-urethane of adipic acid 1,4-butanediol, diphenylmethane diisocyanate
ET	3.0744	homogeneous mixture of ethyldecaborane in tetranitromethane
EtDP	4.0005	ethyl 4,4-dinitropentanoate
eutectic	9.1015	50 BDNPA/50 BDNPF
EXP-D	10.0414	C <sub>6</sub> H <sub>6</sub> N <sub>8</sub> O <sub>12</sub> (ammonium picrate)
FDA	6.0467	bis(2-fluoro-2,2-dinitroethyl) acetal
FDE	6.0467	1,1,4-trifluoro-1,4,4-trinitro-3-oxobutane
FDEE	6.0467	1,5,-difluoro-1,1,5,5-tetranitro-3-oxopentane
FDEK	7.0804	2.55 AN/0.3 ADNT/1 EDD/0.36 potassium nitrate, the numbers are vol%
FDNE-A	6.0467	1,9-difluoro-1,1,5,5,9,9-hexanitro-3,7-dioxononane
FDNE-N	6.0467	2-fluoro-2,2,-dinitroethyl nitrate
FDNEP	6.0467	2-fluoro-2,2-dinitroethyl perchlorate
FDNE-S	6.0467	bis(2-fluoro-2,2-dinitroethyl)sulfate
FEFO	6.0467	bis(2-fluoro-2,2-dinitroethyl)formal
FNR	4.0005	tetrafluoroethylene-trifluoro-nitroso methane copolymer
FO	6.0546	fuel oil #1
FOX-7	12.0617	1,1-diamino-2,2-dinitroethylene, DADNE

## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
FOX-7	12.0286	1,1-diamino-2,2-dinitroethylene
FOX-12	13.0121	N-guanylurea-dinitramide
FT-1	9.0879	21 thiokol/8 Al/65AP
FT-2	9.0879	11 HTPB/18 Al/68 AP
FTE	6.0467	1,1,1,4-tetrafluoro-4,4-dinitro-3-oxobutane
G111L	12.0023	20 RDX/43 AP/25 LiF (5 μm)/12 wax
G111M	12.0023	20 RDX/43 AP/25 Al (5 μm)/12 wax
G111N	12.0023	20 RDX/43 AP/25 Al (100 nm)/12 wax
G258L	12.0023	50 RDX/24 AP/12 LiF (5 μm)/14 wax
G258M	12.0023	50 RDX/24 AP/12 Al (5 μm)/14 wax
G258N	12.0023	50 RDX/24 AP/12 Al (100nm)/14 wax
GAP	10.0603	glycidyl azide polymer binder
GBFO	6.0467	1,12-difluoro-1,1,12,12-tetranitro- 3,5,8,10-tetraoxododecane
GD	11.0086	Glycerin dinitrate
GGO	11.0037	generalized geometrical optics
GMB	8.0993	glass microballoons
GN	11.0086	Glycidol nitrate
GuDN	13.0121	N-guanylurea-dinitramide
Gurit	8.1071	NG/EGDN/SiO <sub>2</sub>
H/HN	9.0487	21 hydrazine/79 hydrazine nitrate
H19	9.1061	32 Al/5 AP/51 KCl/9 HTPB/2 DOA
H-6	5.0255	45 RDX/30 TNT/20 Al/5 wax
HAV-10	5.0139	74.7 HMX/10.6 Al/14.7 Viton
HAV-20	5.0139	65.7 HMX/18.9 Al/15.4 Viton
HBX	2.0737	45 RDX/30 TNT/25 Al
HBX	5.0073	75 Composition B/25 Al
HBX-1	5.0524	40 RDX/38.1 TNT/17.1 Al/4.8 Wax
HBX-1	9.1236	40 RDX/36 TNT/19 Al/5 D-2
HBX-3	9.1236	30 RDX/26 TNT/38 Al/6 D-2
HCX	8.1011	heterogeneous composite explosive
HDBA	8.0365	4-hydroxy-N-N-dimethylbutyramide
heat powder	9.1082	88 Fe/12 KP
HEDM	13.0263	high-energy-density material
HEP	8.0883	high-energy propellant
HEP-1	10.0956	60 wt% solids propellant (RDX/AP) 0.8 wt% PbCO <sub>3</sub>
HEP-2	10.0956	60 wt% solids propellant (HMX/AN)
HEP-3	10.0956	60wt% solid propellant (RDX/AN)
Hexatol 60/40	6.0546	59 RDX/40 TNT/1 wax
Hexatonal 15	6.0546	42.1 RDX/42.1 TNT/0.8 wax/15 Al
Hexogen	4.0159	RDX
Hexol	10.0115	60 RDX/40 TNT
Hexotol 60/40	6.0511	60 RDX/40 TNT
Hexotolif 15	6.0511	42.5 RDX/42.5 TNT/15 LiF
Hexotonal 15	6.0511	42.5 RDX/42.5 TNT/15 Al
HH	9.0940	hydrazine hydrate
HMA	12.0292	Heavy metal azide
HMTA	4.0184	hexamethylenetetramine
HMX	6.0712	cyclotetramethylene tetranitramine
HN	1.0027	hydrazine mononitrate

## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
HNAB	7.0416	hexanitroazobenzene
HNB	7.0647	hexanitrobenzene
HNDZ	9.0232	1,3,3,5,7,7-hexanitrodiazacyclooctane
HNS	5.0222	hexanitrostilbene
HRDX	12.0079	Regular RDX
HTPB	8.1036	hydroxyl-terminated polybutadiene
HU-28	12.0122	85 HMX
HV4	5.0280	85 HMX/15 Viton
HW4	5.0280	95 HMX/5 wax
HX72	9.0963	80 RDX/20 PB
HX78	9.0963	55 NQ/30 RDX/15 PB
HXA123	9.0963	70 RDX/15 PB/15 AI
IBA	5.0237	1,2-bis(difluoramino)-2-methylpropane (isobutylene adduct)
ICCP	6.0455	isothiocyanatopentaammine cobalt(III) perchlorate
ILDm	12.0183	Intrinsic Low Dimensional Manifold
IPDI	8.1036	isophorone diisocyanate
IPFT	12.0141	Intense Pressure Friction Test
IPN	12.0781	Isopropyl nitrate
IRDX	12.0079	Insensitive RDX
IRX-1	10.0732	Coarse HMX/HTPB
IRX-3	10.0732	Coarse HMX/HTPB/AI
ISLS	11.0491	Impulsive Stimulated Light Scattering
IZO-PN	11.0086	Iso-propyl nitrate
JA2	9.0539	59 NC/15 NG/25 DEGDN
JAGUAR	12.0195	Thermodynamic equation of state
K10	11.0067	2,4-dinitroethylebenzene, 2,6-dinitroethylbenzene, 2,4,6-trinitroethylbenzene
K-6	10.0862	1,3,5-trinitro-2-oxo-1,3,5-triazacyclo-hexane
keto-RDX	10.0862	1,3,5-trinitro-2-oxo-1,3,5-triazacyclo-hexane
KHNO	9.1082	potassium salt of hexanitro diphenylamine
KP	5.0139	potassium perchlorate
LAC	9.0975	$\beta$ -lactose
LG/UW-4	10.0732	AP/AI/TMETN/Other
LIS-2	12.0289	50 FOX-7(250-355 $\mu$ m)/FOX-7(<70 $\mu$ m)/21 PolyGlyN/5 Bu-NENA/4 H <sub>12</sub> MDI(Desmodur-W)/DBTDL
LLM-105	12.0440	2,6-diamino-3,5-dintropyrazine-1-oxide
LP	5.0139	lithium perchlorate
LPEOS	12.0140	Low Pressure Equation of State
LS	8.0711	lead styphnate, Pb(C <sub>6</sub> O <sub>9</sub> N <sub>3</sub> H <sub>3</sub> )
LX-01	10.0414	C <sub>1.52</sub> H <sub>3.73</sub> N <sub>1.69</sub> O <sub>3.39</sub>
LX-03-0	9.1236	70 HMX/20 DATB/10 Viton A
LX-04-1	4.0489	85 HMX/15 Viton, "1" denotes fine-particle-sized HMX
LX-07	5.0065	90 HMX/10 Viton
LX-07-0	4.0005	90 HMX/10 Viton
LX-09	5.0065	93.3 HMX/4.2 DNPA/2.5 FEFO
LX-10	5.0065	95 HMX/5 Viton
LX-10-1	10.0786	94.5 HMX/5.5 Viton, "1" denotes fine-particle-sized HMX
LX-11	5.0139	80 HMX/20 Viton
LX-13	8.1091	80 PETN/20 Sylgard (see XTX-8003)
LX-14	8.0614	95.5 HMX/4.5 Estane 5702-F1

## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
LX-15	8.1106	95 HNS/5 Kel-F 800
LX-16	11.0423	96% PETN
LX-17	7.0488	92.5 TATB/7.5 Kel-F (formerly RX-03-BB)
M2	9.0539	75 NC
M5	9.0539	82 NC/20 NG
MA	6.0467	1,1,7-trifluoro-4-methyl-1,7,7-trinitro-3,5-dioxoheptane
MAEC	13.0137	mechanically activated energetic composite
MAN	6.0439	methylammonium nitrate
MDF	9.1510	mild detonating fuse or fuze
MEDINA	3.0674	CH <sub>4</sub> N <sub>4</sub> O <sub>4</sub> , methylene dinitramine
MEN-II	10.0414	C <sub>2.06</sub> H <sub>7.06</sub> N <sub>1.33</sub> O <sub>3.10</sub>
MF	6.0467	1,1,7-trifluoro-1,7,7-trinitro-3,5-dioxoheptane
MF	8.0711	mercury fulminate, Hg(ONC) <sub>2</sub>
MFDNB	6.0467	methyl-4-fluoro-4,4-dinitrobutyrate
M-FEFO	6.0467	1,7-difluoro-4-(1-oxomethyl)-1,1,7,7-tetranitro- 3,5-dioxoheptane
MFF	6.0467	1,4,4,7,7-pentafluoro-1,1,7-trinitro-3,5-dioxoheptane
Minol 2	4.0463	aluminized ammonium nitrate/TNT
MMAN	7.0374	monomethylamine nitrate
MN	5.0267	methylnitrate
MNCH	11.0086	Mononitro-Chlorohydrine
N-100	12.0012	Demodur N-100
NB-40	6.0771	60 pyroxyline/40 nitroglycerine
NC	4.0005	nitrocellulose
NCSH	12.0079	noncatastrophic self-heating
NDAG	10.0588	Diaminoguanidinium nitrate
NDNAZ	11.0239	1-nitroso-3,3-dinitroazetidine
NEPE	13.0948	nitrate ester plasticized polyether propellant
NF	9.0995	nitroform
NG	3.0066	nitroglycerin
NGI	7.0043	nitroglycol
Nigu	8.0577	nitroguanidine
Nitromixture	2.0648	83% nitromethane/17 2-nitropropane
NLTE	13.1151	Non-local thermodynamic equilibrium
NM	4.0126	nitromethane
NME	9.1019	nitromethane
NOBEL	12.0058	Eulerian reactive hydrodynamic code
NONA	5.0222	nonanitroterphenyl
NQ	7.0566	nitroguanidine
NTO	9.1001	3-nitro-1,2,4 triazole-5-one
NTODAG	10.0588	NTO-diaminoguanidinium
O	9.1236	other material
Octogen	9.1236	HMX
Octol	4.0005	78 HMX/22 TNT
Octol	6.0647	77 HMX/23 TNT
Octol	9.0069	64 RDX/36 TNT
OCTOL	12.0303	70 HMX/30 TNT
Octol 75/25	10.0307	75 HMX/25 TNT
Octol-A	5.0280	80 HMX/20 TNT/1 Wax
Octol-B	5.0280	70 HMX/30 TNT/1 Wax

## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
Octorane 86A	9.1047	84 HMX/16 PU
ORA 86	9.1008	86 HMX/14 inert binder
ORA86B	11.0385	86 HMX/14 PU
ORVIS	13.0128	Optically recorded velocity interferometer system
OTTO	6.0467	1,1,1,7,7,13,13,13-octafluoro-4,4,10,10-tetranitro-2,6,8,12- tetraoxotridecane
P1	12.0235	modified double-base propellant
P2100 B	8.0626	88 HMX/12 HTPB
PA	3.0700	picric acid
PAX-3	12.0200	66 HMX/15.9 plasticizer/ 18.1 Al
PB	5.0139	hydroxyterminated polybutadiene
PB	8 1132	polybutadiene
PBH-9D	9.0144	HMX, plastic bonded
PBX-0280	9.1463	95 RDX/5 Estane
PBX-0280/PE	9.1463	95 RDX/5 polyethylene
PBX-1	10.0956	RDX/single cast-cured non-energetic binder
PBX-2	10.0956	TATB/HMX/HTPB binder
PBX-9007	10.0415	$C_{1.97}H_{3.22}N_{2.43}O_{2.44}$
PBX-9010	4.0005	90 RDX/10 Kel-F
PBX-9010	9.1082	90 HMX/10 Kel-F 800
PBX-9011	4.0005	90 HMX/10 Estane
PBX-9205	5.0599	92 RDX/6 polystyrene/2 dioctyl phthalate
PBX-9404	5.0060	94 HMX/3 nitrocellulose/3 tris-β-chloroethyl phosphate
PBX-9404-03	4.0005	94 HMX/3 NC/3 CEF
PBX-9407	7.0928	94 RDX/6 EXON 461
PBX-9501	6.0647	95 HMX/2.5 Estane/1.25 BDNPA/1.25 BDNPF
PBX-9502	7.0052	95 TATB/5 Kel-F 800 (formerly X-0290)
PBX-9503	8.1106	80 TATB/15 HMX/5 Kel-F 800
PBXC-117	9.1236	71 RDX/17 Al/12 other
PBXC-121	9.1236	82 HMX/18 other
PBXE-1	12.0012	11 GAP/11 TEGDN/TMETN/1.7 IDPI/N-100/66 HMX/10 AI H-15
PBXE-2	12.0012	11 GAP/11 TEGDN/TMETN/1.7 IDPI/N-100/66 HMX/10 AI ALEX
PBXI-1	12.0012	9.6 HTPB/5.6 DOA/0.8 TDI/74 HMX/10 AI H-15
PBXI-2	12.0012	9.6 HTPB/5.6 DOA/0.8 TDI/74 HMX/10 AI Alex
PBXI-3	12.0012	9.6 HTPB/5.6 DOA/0.8 TDI/64 HMX/20 AI H-15
PBXI-4	12.0012	9.6 HTPB/5.6 DOA/0.8 TDI/64 HMX/20 AI Alex
PBXN-103	9.1236	23 TT/40 AP/27 Al/10 other
PBXN-110	10.0732	formerly PBXW-113 II
PBXN-111	10.0732	formerly PBXW-115
PBXN-5	7.0928	95 HMX/5 Viton A
PBXN-9	11.0077	92 HMX(1.2:1 Class 1:5)/6 dioctyl adipate
PBXS 9501	12.0049	95 sugar/ 2.5 Estane/2.5 BDNPA-F by weight
PBXW	8.0883	RDX/inert binder
PBXW-106 E	9.1236	75 RDX/18 BDNPA-F/7 other
PBXW-108 I	9.1236	85 RDX/15 other
PBXW-109 E	9.1236	64 RDX/20 Al/16 other
PBXW-109 I	9.1236	65 RDX/20 Al/15 other
PBXW-113 II	9.1236	68 HMX/12 other
PBXW-114 II	9.1236	78 HMX/10 Al/12 other
PBXW-115	9.0806	20 RDX/43 AP/25 Al/12 HTPB

## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
PBXW-115(AUST)	12.0323	43 AP/25 Al/20 RDX/12 HTPB (Australian version of PBXN-111)
PBXW-121	10.0732	NTO/Al/HTPB/RDX
PBXW-122	10.0732	NTO/AP/Al/HTPB/RDX
PBXW-123	10.0063	aluminum/AP/TMETN (ratios not specified)
PBXW-7	9.0106	36 RDX/60 TATB/5 Viton A
Pc	3.0323	Primacord
PCP	10.0095	polycaprolactone
PE	6.0543	86 PETN/14 wax
PE 4	8.0265	88 RDX/12 plasticizer
PE 6	5.0139	6-polyethylene
PE4	10.0089	88 RDX/12 grease
PEG	10.0095	polyethylene glycol
Pentanex	6.0546	45 PETN/37 AN/2 glycol/15.5 water/0.5 guar
Pentolite	1.0014	50 PETN/50 TNT
PETN	3.0012	pentaerythritol tetranitrate
PGDN	11.0086	1,2 Propylene glycodinitrate
PGN	13.0408	Poly glycidyl nitrate
PHX31	9.0963	85 RDX/15 Cariflex 1107
Picratol	10.0415	52 EXP-D/48 TNT
PLM	12.0087	polarized light microscopy
PN	11.0086	PropylNitrate
PolyNIMMO, PN	13.0302	Poly 3-nitratomethyl-3-methyloxetane
Polystyr	4.0005	polystyrene
PS-1	12.0114	70 AP/20 Al/10 HTPB
PSC	11.0013	propagation of surfaces under curvature
PSF	9.0822	polysulfone
PTFE	6.0626	polytetrafluoroethylene
PU	11.0385	polyurethane binder
PVA	2.0712	polyvinyl alcohol
PYX	8.1106	2,6-bis(picrylamino)-3,5-dinitropyridine
QMAN	6.0439	tetramethylammonium nitrate
RB-100 - 90	10.0803	aluminum/AP/HMX/PEG/microballoons
RDX	5.0222	cyclotrimethylenetrinitramine
RDX	7.0928	1,3,5-trinitro 1,3,5-tetrazacyclohexane
REAXFF	13.0786	Reactive force field molecular dynamics model
RECONEX	13.0857	Response of CONfined Explosives model
Reolit	4.0435	slurry with 62.6% nitrate/25% TNT/12% water/0.4% guar
REX-20	6.0467	2,2,2-trifluoroethyl-4-fluoro-4,4-dinitrobutyrate
RGPA	8.0265	70 RDX/19 plasticizer/5.5 polyurethane/5.5 ?
Rowanex 1001	11.0273	88 HMX/12 HTPB
Rowanex 1301	11.0273	20 RDX/44.5 AP/25 Al/10.5 HTPB
Rowanex 1400	11.0273	66 RDX/22 AL/12 HTPB
Rowanex 2000	11.0273	92 HMX/8 HTPB
RT 60/40Type A	11.0273	60 RDX/40 TNT + 1wax
RU -119	12.0122	80 RDX/ binder & chain extender
RU -120	12.0122	81 RDX/ binder & chain extender
RU-81	12.0122	85/ RDX/ no chain extender
RX-03-BB	7.0488	92.5 TATB/7.5 Kel-F (new name is LX-17)
RX-04-AT	4.0005	88 HMX/12 carborane-fluorocarbon copolymer

## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
RX-04-AU	5.0139	92 HMX/8 Viton
RX-04-AV	4.0005	92 HMX/8 PE
RX-04-BM	5.0139	81.6 HMX/4 Al/14.4 Viton
RX-04-BN	5.0139	79 HMX/6.6 Al/14.3 Viton
RX-04-BO	5.0139	72.7 HMX/13.3 Al/14.0 Viton
RX-04-BT	5.0139	76 HMX/10 LiF/14 Viton
RX-04-BY	4.0005	86 HMX/14 FNR
RX-04-DS	5.0139	81 HMX/9.9 Al/9.1 Viton
RX-04-P1	4.0005	80 HMX/20 Viton
RX-05-AA	4.0005	80 RDX/8 polystyrene/2 DOP
RX-08-EL	9.1312	73 HMX/25 FEFO/1 PCL 240/other
RX-08-FL	9.0007	75.9 HMX/22.2 FEFO/1.9 polyvinyl binder
RX-08-GB	9.0026	61 HMX/36 FEFO/3.1 urethane
RX-08-GG	9.0026	61 HMX/36 FEFO/3.1 urethane
RX-08-HD	11.0423	73.6% HMX/19.9 % TMETN
RX-09-AA	4.0005	93.7 HMX/5.7 DNPA/0.6 EtDP
RX-11-AF	5.0139	52 HMX/43 KP/5 PE
RX-11-AI	5.0139	52 HMX/43 KP/5 PE
RX-11-AJ	5.0139	52 HMX/43 KP/5 PE
RX-11-AW	5.0139	51 HMX/35 KP/14 PB
RX-11-AX	5.0139	51 HMX/35 KP/14 PB
RX-11-AY	5.0139	33.4 HMX/53.4 KP/13.2 PB
RX-11-AZ	5.0139	33.4 HMX/53.4 KP/13.2 PB
RX-11-BA	5.0139	51 HMX/39 AP/10 Viton
RX-18-AB	5.0139	51 HMX/20 AP/29 EDNP
RX-18-AE	5.0139	51 HMX/20 AP/29 EDNP
RX-18-AG	5.0139	51 HMX/20 AP/29 EDNP
RX-18-AH	5.0139	71 HMX/29 EDNP
RX-18-AJ	5.0139	52.6 HMX/34.7 KP/12.7 PB
RX-18-BA	5.0139	31 HMX/45 KP/24 EDNP
RX-22-AG	5.0139	73.6 HMX/26.4 LP
RX-23-AA	6.0712	79 hydrazine nitrate/21 hydrazine
RX-23-AB	6.0712	70 hydrazine nitrate/5.9 hydrazine/24.1 water
RX-23-AC	6.0712	30 hydrazine nitrate/70 hydrazine
RX-25-AA	5.0139	22 HMX/58 AP/10 Al/10 Viton
RX-25-BF	9.0526	38 HMX/36 AP/22 ZrH <sub>2</sub> /4 Estane
RX-25-BH	9.0526	19 HMX/47 AP/30 ZrH <sub>2</sub> /4 Estane
RX-25-BP	9.0526	38 HMX/36 AP/22 ZrH <sub>2</sub> /4 Estane
RX-25-BQ	9.0526	38 HMX/36 AP/22 ZrH <sub>2</sub> /4 Estane
RX-26-AF	7.0059	49.3 HMX/46.6 TATB/4.1 Estane
RX-30-AA	6.0731	60.8 AP/38 NM/1.2 guar
RX-30-AB	6.0731	61.1 AP/37.9 NM/1 guar
RX-30-AC	6.0731	47.6 KP/50.8 NM/1.6 guar
RX-30-AD	6.0731	47.1 KP/51.3 NM/guar 1.6
RX-30-AE	6.0731	57.9 AN/40.8 NM/1.3 guar
RX-30-AF	6.0731	57.9 AN/40.8 NM/1.3 guar
RX-31-AA	6.0731	28.8 AN/47 NM/22.8 Al/1.4 guar
RX-31-AB	6.0731	43.2 AN/47 NM/8.3 Al/1.5 guar
RX-35-AP	9.1313	60 HMX/40 NG, TA, PEG binder



## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
RX-36-AA	8.1020	1 HMX/1 TATB/1 BTF, note mole ratios
RX-36-AB	8.1020	1 TATB/1 BTF, note mole ratios
RX-36-AC	8.1020	4 HMX/1 TATB/1 BTF, note mole ratios
RX-36-AD	8.1020	1 HMX/3 TATB/1 BTF, note mole ratios
RX-36-AE	8.1020	1 HMX/1 BTF, note mole ratios
RX-36-AF	8.1020	1 HMX/1 TATB, note mole ratios
RX-36-AG	8.1020	1 HMX/1 TATB/3 BTF, note mole ratios
RX-40-AA	10.0629	95 PETN/5 Al(5 μm)
RX-40-AB	10.0629	90 PETN/10 Al(5 μm)
RX-40-AC	10.0629	80 PETN/20 Al(5 μm)
RX-40-AF	10.0629	95 PETN/5 Al(18 μm)
RX-40-AG	10.0629	90 PETN/10 Al(18 μm)
RX-40-AH	10.0629	80 PETN/20 Al(18 μm)
RX-40-CA	10.0629	95 TNT/5 Al(5 μm)
RX-40-CB	10.0629	90 TNT/10 Al(5 μm)
RX-40-CF	10.0629	95 TNT/5 Al(18 μm)
RX-40-CG	10.0629	90 TNT/10 Al(18 μm)
RXAC	8.0802	70 hydrazine/30 hydrazine nitrate
S-2	9.1236	63 RDX/22 TNT/15 Al
SANS	12.0087	Small angle neutron scattering
SAXS	12.0087	Small angle x-ray scattering
SCB	11.0136	small scale cook-off bomb
SCE	13.0145	shock-change equation
SHG	12.0103	Second harmonic Generation
SHPB	12.0235	split-Hopkinson pressure bar
SPIS-44	7.0620	20 HMX/49 AP/21 Al/10 binder
SRI-1	6.0467	1,1,1-trifluoro-4,4,4-trinitro-2-oxobutane
SRI-2	6.0467	1,1,1,4-tetrafluoro-4,4-dinitro-2-oxobutane
SRI-3	6.0468	1,1,1-trifluoro-4,4-dinitro-2-oxopentane
SRI-4	6.0468	1,1,1,7,7,7-hexafluoro-4,4-dinitro-2,6-dioxoheptane
SRI-5	6.0468	1-fluoro-1,1,3,3-tetranitro-5-oxohexane
Startex	4.0435	60% DiTeU/20% nitrates, 17.5% water/2% hydrocarbons/0.5% guar
s-TCB	7.0425	symmetrical 1,3,5-trichlorobenzene (precursor to TATB)
STEX	12.0384	Scaled Thermal Explosion Experiment
SW-21	10.0732	Fine HMX/Other
SX-2	6.0493	RDX/filler, sheet explosive
SYEP	6.0468	4,4-bis(difluoramino)-1,7-difluoro-1,1,7,7-tetranitro-3,5-dioxoheptane
T	7.0697	95.5 TATB/4.5 Viton
T1	8.0151	95.5 TATB/?
T2	8.0151	97 TATB/?
TA	2.0659	triacetin
TACOT	10.0416	C <sub>12</sub> H <sub>4</sub> N <sub>8</sub> O <sub>8</sub>
TATB	6.0659	1,3,5-triamino-2,4,6-trinitrobenzene
TBP	9.1236	tris-β-chloroethyl phosphate
TCE	7.0374	trichloroethylene
TCTNB	7.0425	1,3,5-trichloro-2,4,6-trinitrobenzene (precursor for TATB)
TDI	8.0363	toluenediisocyanate
TDPF	6.0468	1,1,1,13,13,13-hexafluoro-4,4,10,10-tetranitro-2,6,8,12-tetraoxotridecane
TEDNCP	10.0157	derivative of cyclotriphosphazene

## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
Tetryl	6.0427	N-methyl-N-nitro-2,4,6-trinitroaniline
TFA	6.0468	1,7-difluoro-1,1,7,7-tetranitro-4-trifluoromethyl-3,5-dioxoheptane
TFMA	6.0468	1-fluoro-1,1-dinitro-4-trifluoromethyl-3,5-dioxohexane
TFMDA	6.0468	1-fluoro-4-difluoronitromethyl-1,1-dinitro-4-trifluoromethyl-3,5-dioxoheptane
TFMFF	6.0468	1,1,1,4,4,7-hexafluoro-7,7-dinitro-3,5-dioxoheptane
TFNA	8.0802	1,1,1-trifluoro-3,5,5-trinitro-3-azahexane
TGDN	11.0086	Triethylene Glycoldinitrate
THA	12.0112	Thermal Threat Assessment
TMETN	3.0813	trimethylolethane trinitrate
TNA	8.0746	trinitroaniline, picramide
TNAZ	11.0239	1,3,3-trinitroazetidine
TNB	3.0066	1,3,5 trinitrobenzene
TNB	11.0491	2,4,6 trinitrobenzene
TNETB	3.0070	2,2,2-trinitroethyl-4,4,4-trinitrobutyrate
TNM	4.0126	tetranitromethane
TNRL	12.0307	lead trinitroresorcinate
TNT	3.0066	2,4,6-trinitrotoluene
TNTAB	8.0802	1,3,5-triazido-2,4,6-trinitrobenzene
TO	9.1001	1,2,4-triazole-5-one
Torpex	4.0463	aluminized RDX/TNT
Torpex 2B	8.0265	42 RDX/40 TNT/18 Al/5 desensitizer
TPH12076	9.1061	Al/AP/HTPB
Tritonal	2.0735	80 TNT/20 Al
Trotyl	9.1236	TNT
TS3659	9.0297	79.9 NC/21.6 NG
TT	9.1236	trimethylolethane trinitrate
TTF	6.0468	1,1,1-trifluoro-7,7,7-trinitro-3,5-dioxoheptane
TZL-4	9.0232	1,5-dinitro-tetrazole
TZX	10.0588	3,6-diaminotetrazin-1,4-dioxide
UFD	9.0407	ultrafine diamonds
UGS	9.1062	20 DBP/5 Al/65 Na <sub>2</sub> SO <sub>4</sub> /9 HDAP
UP	6.0450	ureamonoperchlorate
UPS	6.0450	90 wt% aqueous solution of UP
VCCT	11.0428	Variable confinement cook of test
VID	11.0171	Viscous Internal Damage model
Viton	5.0139	vinylidene fluoride-hexafluoropropylene copolymer
WAK2	9.1062	Al/HMX/AP
WBL	11.0012	Witham Bidzil Lamborn detonation model
WC 140	9.0297	98 NC
WC 231	8.0883	75 NC/25 NG "commercial reloading powder"
WC 231	9.0297	74.8 NC/25.2 NG
WG-2	6.0546	MMAN-sensitized watergel explosive 7% Al
WG-4	6.0546	MMAN-sensitized watergel explosive 13% Al
X-0204	4.0005	83 HMX/17 Teflon
X-0219	6.0647	90 TATB/10 Kel-F 800
X-0233	8.0979	85.48 tungsten/13.22 HMX/0.8 polystyrene/0.5 DOP
X-0242	9.1015	94 HMX/3 Estane/5 eutectic
X-0242-92-04-04	11.0077	92 HMX (3:1 Class 1:2)/4 Estane/4BDNPA-F
X-0290	6.0637	95 TATB/5 Kel-F 800 (changed to PBX 9502)

## D. Acronym and Code Name Index (Continued)

Name	Sy.Pg	Makeup
X-0319	7.0567	50 TATB/45 HMX/5 Kel-F 800
X-0320	7.0567	60 TATB/35 HMX/5 Kel-F 800
X-0321	7.0567	75 TATB/20 HMX/5 Kel-F 800
X-0341	7.0567	90.25 TATB/4.75 HMX/5 Kel-F 800
X-0342	7.0567	85.5 TATB/9.5 HMX/5 Kel-F 800
X-0343	7.0567	80.75 TATB/14.25 HMX/5 Kel-F 800
X-0344	7.0567	71.25 TATB/23.75 HMX/5 Kel-F 800
X-0407	8.0123	70 TATB/25 PETN/5 Kel-F
X-0420	9.0487	94 DINGU/5 Exon/1 titanate
X-0430	9.1015	88 HMX/6 Kraton/6 Tufflo oil
X-0432	9.0487	57 DINGU/43 TNT
X-0444	9.1015	88 HMX/6 Estane/6 eutectic
X1	8.0151	96 HMX/?
XLDB	10.0115	HMX/AP/Al/energetic binder
XM39	9.0539	76 RDX/15 NG/12 CAB/8 ATEC
XRD	12.0070	x-ray diffraction
XTX-8003	6.0647	80 PETN/20 silicone rubber
XTX-8004	10.0418	80 RDX/20 Sylgard 182
Z TACOT	8.0528	$C_{12}H_4N_8O_8$
ZOX	9.0995	zero-oxygen-balance explosive
ZOX	9.0995	2,2,2-trinitro ethyl-N-nitroethylenediamine
ZPCP	9.1083	azidopentamine cobalt (III) perchlorate