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**Review of**  
*Experimental Composite*  
*Propellant*

*An Introduction to Properties and  
Preparation of Composite Propellant  
Design, Construction, Testing and  
Characteristics of Small Rocket Motors*

Terry W. McCreary  
Self Published, 2000  
[No ISBN]

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There are many references available to address design, construction, and evaluation of chemical propulsion devices. Terry McCreary has provided a fresh look at the science and specific processes associated with development of ammonium perchlorate composite propellant (APCP) solid rocket motors in his recently self-published book, *Experimental Composite Propellant*. There is little content in this book that

has not already been explored in other publications, but presentation of the material has never been more kind to the reader.

*Experimental Composite Propellant* delivers a variety of topics that the beginner and journeyman solid rocket motor technician will find useful, from simple step-by-step instructions for formulating and casting high energy polybutadiene acrylic acid acrylonitrile prepolymer (PBAN) bound APCP, to the complete discussion and explanation of the combustion processes of a solid rocket motor. Information for use of hydroxyl-terminated polybutadiene (HTPB) to bind APCP is also well detailed, though largely relegated to the Appendix.

This book is more of an associate than a text, with discussions moving along as if a friend were close at hand providing guidance, slowing down when operations get complex or dangerous. Each step of PBAN-APCP rocket motor construction is detailed with the safety and success of the beginner in mind, as well as providing new insights to the veteran.

Many of the digested topics are expanded in the 107-page Appendix, including details of propellant and polymer chemistry, optimization of nozzle design, construction of a thrust measuring test stand, as well as scores of other topics.

*Experimental Composite Propellant*, with a pleasant, almost entertaining demeanor, explores great depths of safety, the applicable mathematics, and discussion paramount to successful solid rocket motor development. This 243-page reference sets a new standard for publishers of experimental motor "How-To" books.

For procurement information, contact the author by email at: [pfesser@hotmail.com](mailto:pfesser@hotmail.com) or write to him at: Experimental Rocketry Group, PO Box 1414, Murray, KY 42071, USA. Additionally, a web site will soon be available at:

[www.experimentalrocketry.com](http://www.experimentalrocketry.com)

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