

Standardization of Sensitivity and Reactivity Characterization Testing for Energetic Materials Processing Meeting

Energetic material characterization is vital when designing or operating processes that handle energetic materials. Material characterization is achieved by performing sensitivity and reactivity standardized tests. The data obtained from these tests can be used to determine safety margins for in-process, storage, or transportation conditions of energetic materials and articles.

Storage and transportation characterization test data can be mistakenly applied to in-process handling conditions, placing personnel, the process, and the facility at risk. The applicability and interpretation of the test data is important. The majority of the available standardized tests provide only qualitative, or relative, data. In many instances, the qualitative data may not be applicable to the conditions at hand. In industry, test equipment is available to provide quantitative data that can be directly applied to in-process, storage, and transportation conditions. This quantitative test data allows one to statistically determine the probability of initiation (probit) under given conditions, thus ensuring accuracy when determining the safety margins for energetic material in-process, storage, and transportation conditions.