

## **Challenges in classification of reactive chemicals**

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### **ABSTRACT**

The evaluation of reactive hazards is necessary for the safe working of chemical process industries. The classification of reactive chemicals has received considerable attention recently especially from regulatory bodies. An important objective is the establishment of a classification approach for reactive chemicals and associated testing methodologies. In this paper we review the existing methods for reactive hazard evaluation and existing classifications of reactive chemicals and reactive hazards, e.g. the NFPA rating system. We also propose a classification for reactive chemicals, based on calorimetric data, which can serve as a guideline for selecting compositions for detailed testing. Further, a reactivity risk index (RRI) that takes into account the process conditions is proposed to quantify risks posed by reactive chemicals in a process.