

CSB Recommendations on Safety Data Sheets and Update on Revised Standards for SDSs and Precautionary Labeling

The U.S. Chemical Safety and Hazard Investigation Board (CSB) following its investigation of an explosion at the Barton Solvents distribution facility in Valley Center, Kansas concluded that the most likely cause of the explosion was a static spark resulting from a loosely-linked level-measuring float within the tank. The spark ignited the air-vapor mixture inside the tank as it was being filled. The CSB determined that the Material Safety Data Sheets (MSDSs or SDSs) for some of the most widely used nonconductive flammable liquids in industry, such as VM&P Naphtha, hexane and toluene, failed to recommend specific precautions beyond bonding and grounding.

The CSB has asked API and other petroleum and chemical industry associations to suggest to members that they consider improving the warnings on the SDSs for flammable liquids because these materials can accumulate static electricity. Specifically, the CSB suggests that companies preparing SDSs update them to:

- Identify and include a warning for materials that are static accumulators and may form ignitable vapor-air mixtures in storage tanks.
- Include a statement that bonding and grounding may be insufficient to eliminate the hazard from static-accumulating flammable liquids, and provide examples of additional precautions and references to the relevant consensus guidance (e.g., NFPA 77, Recommended Practice on Static Electricity (2007), and API Recommended Practice 2003, Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents (2008)).
- Include conductivity testing data for the material.

To view the CSB's full report of its investigation and recommendations, as well as a safety video, please use this link:

http://www.csb.gov/investigations/detail.aspx?SID=58&Type=2&pg=1&F_All=y

Related to the preparation of SDSs, a new American National Standard, ANSI Z400.1/Z129.1-2010 was recently issued. The document is entitled, *Hazardous Workplace Chemicals - Hazard Evaluation and Safety Data Sheet and Precautionary Labeling Preparation*. The newly revised standard resulted from a consolidation of two earlier, related standards and contains details on material identity, manufacturer information, hazard classification, emergency information, instructions on what to do if a hazardous situation has occurred, information on the prevention of hazardous situations and guidance on other technical information to be included in an MSDS.

Section 4.2.1.1.2.1 of the revised standard specifically mentions the CSB recommendation and refers readers to API RP 2003 and several other technical references.

According to the standard's Foreword, work on the combined new document was conducted during 2008-2009. In late 2009, OSHA published the Hazard Communication Proposed Rule to align the OSHA Hazard Communication Standard with the United Nations' (UN) Globally Harmonized System of Classification and Labeling of Chemicals (GHS). While the new ANSI standard is not fully aligned with GHS, it was decided that timely publication of the document would still provide value to users while OSHA completes its ongoing rulemaking process. Contact: David Soffrin at soffrind@api.org.