

Date: Tue, 07 Jan 2003 15:55:12 -0500
From: Sells_List_Server%DOELNC@DOE.GOV
Subject: YELLOW/Caution: Hazards from Modifying Finished Products
Sender: ListServer@HQLNC.DOE.GOV
Title: Yellow Alert- Hazards from Modifying Finished Products

Date: 1/2/2003 Identifier: LL-2002-LLNL-31

Lessons Learned Summary: It is important to identify any hazards involved with the modification of a "finished" commercial product.

Discussion of Activities: Finished products do not require a label for material hazards information, such as a Material Safety Data Sheet (MSDS). However a finished product may require modification for experimental use. A recent event at LLNL emphasizes the importance of identifying the hazards involved when modifying a "finished" product. In this incident, a piece of fingerstock shielding that appeared to be copper was slightly modified by grinding. The metal shielding had no hazardous warning label, however the fingerstock was not pure copper, but a beryllium (Be) copper alloy (i.e., 2% Be). Other examples of items that may contain unidentified beryllium alloys are computers (the ground strap on disk drives), xray machine windows, and ultra high-speed camera rotors. Products in the home that may contain beryllium alloys include golf club heads, dental bridges, bicycles, auto air bags, and stereo speakers. If the material is copper-colored, thin, and springy, it may contain beryllium. Although it was unlikely that the worker exceeded the occupational exposure limit for beryllium because of the short duration of the work and type of alloy, the work area required extensive cleanup before work activities could resume.

Analysis: - Do not rely on the manufacturer's packaging information to disclose the hazardous material content of a finished product.

- Finished products are often shipped without an MSDS or other safety information.
- Potential hazards were not identified before initiating the work. As a result, the controls were inadequate for the type of activity performed.

Recommended Actions:

1. Before modifying a finished product, recognize the hazards inherent to the proposed modification. This is especially important if the modification process will result in particulates becoming airborne, e.g., sanding, grinding, or welding.
2. Ascertain the type of material or alloy the product is composed of, and determine if a danger of releasing hazardous materials exists. Review the MSDS, if available. Further information can be obtained by reading the catalog description or product specifications, or by calling the manufacturer.
3. Prior to starting work, ensure that you understand the hazards associated with the modification, and that the proper controls are in place.

Priority Descriptor: Yellow / Caution
Function/Work Category: Machining & Fabrication
Hazard: Personal Injury / Exposure - Beryllium

ISM Core Function: Analyze Hazards

Originator: Sheri Ann Dante, LLNL

Contact: Sheri Ann Dante, 925-422-6582, dante3@llnl.gov

Authorized Derivative Classifier: Hazel Burris

Reviewing Official: Becky Failor

Keywords: grinding, Be, finished part