

U.S. Consumer Product Safety Commission
November 23, 2009

Press Statement on Corrosion in Homes and Connections to Chinese Drywall

Results from a major indoor air study of 51 homes are being released today along with initial reports from two studies of corrosion in homes with Chinese drywall. We now can show a strong association between homes with the problem drywall and the levels of hydrogen sulfide in those homes and corrosion of metals in those homes.

By identifying this association, the Interagency Drywall Task Force can now move forward to develop protocols that will identify homes with this corrosive environment and can determine the effectiveness of remediation methods. The Task Force continues to work with Congressional and White House officials to determine the best approaches to design and fund these identification and remediation efforts to help the families dealing with this issue.

“We now have the science that enables the Task Force to move ahead to the next phase – to develop both a screening process and effective remediation methods. Ongoing studies will examine health and safety effects, but we are now ready to get to work fixing this problem,” said U.S. Consumer Product Safety Commission Chairman Inez Tenenbaum.

The Studies

The 51 home study contracted by CPSC was done by Environmental Health & Engineering (EH&E), an internationally known environmental testing firm based in Massachusetts.

In addition, today two preliminary reports on corrosion safety issues are being released. The Sandia National Laboratories’ (SNL) Materials and Engineering Center is studying the long-term electrical safety hazards of conductor metal components. The National Institute of Standards and Technology (NIST) is studying the corrosion effects on fire safety components taken from complaint homes.

Findings

EH&E compared 41 “complaint” homes in five states selected from CPSC’s consumer incident report database, with 10 noncomplaint homes built around the same time in the same area as the complaint homes. Homes were sampled between July and September 2009.

The EH&E findings are that hydrogen sulfide gas is the essential component that causes copper and silver sulfide corrosion found in the complaint homes. Other factors, including air exchange rates, formaldehyde and other air contaminants contribute to the reported problems.

In ways still to be determined, hydrogen sulfide gas is being created in homes built with Chinese drywall. Earlier studies found large amounts of elemental sulfur in the Chinese drywall. CPSC is investigating drywall from other sources that may mimic the problems found with Chinese drywall. CPSC is meeting with drywall manufacturers and others who are studying this issue to take their findings into consideration.

EH&E exposed copper and silver test strips, known as coupons, in homes for a period of about two weeks. The coupons showed significantly higher rates of corrosion in complaint homes than in the control homes. The dominant species of corrosion on the coupons was copper sulfide and silver sulfide, as determined by additional laboratory tests. Visual inspection and evaluation of ground wire corrosion also revealed statistically significant greater ground wire corrosion in complaint homes compared to non-complaint homes.

The EH&E study also found that by using hand-held x-ray fluorescence (XRF) and Fourier Transform Infrared (FTIR) instruments, they were able to detect markers that could identify Chinese-made dry wall at a sheet-by-sheet level.

While drywall-related corrosion is clearly evident, long term safety effects are still under investigation. Like the EH&E study, initial reports available today from SNL and NIST show copper and silver sulfide corrosion on samples of metal taken from homes with problem drywall. These ongoing investigations will help the CPSC identify the nexus of problem drywall and long term safety issues.

In addition, the EH&E study found elevated formaldehyde readings in both the control and complaint homes. This is typical for new, more air-tight homes due to items such as cabinets and carpets which emit formaldehyde. Both formaldehyde and hydrogen sulfide are known irritants at sufficiently high levels. The concentrations measured in this study were below those levels. Investigators believe that the additive or synergistic effects of these and other compounds in the subject homes could cause irritant effects evident in the homes.

Next Steps

First, CPSC continues to search for homes exhibiting the corrosion and health effects under study. In addition to a direct call to consumers, CPSC is contacting governors of all states, all territories and the District of Columbia, to ensure that all homes with these problems have been reported to CPSC.

Second, the Interagency Task Force established an Identification and Remediation Protocol Team of scientists and engineers. This Team will use the results of the EH&E study and other information to design a cost-effective screening protocol to identify homes with this problem. Professional air sample testing, and destructive testing of drywall can carry high costs. The Protocol Team will develop quick, cost-efficient evaluation methods to identify homes with these problems. The Protocol Team will also look at remediation protocols, to see what cost-efficiency improvements to current remediation practices, if any, may be available, and what guidance should be issued on doing the work safely.

Third, investigations currently underway by Lawrence Berkeley Laboratories, SNL and NIST and others will continue toward identifying additional information on any possible long-term health and safety issues.

The Identification and Remediation Protocol Team will use information from the EH&E study and other information to begin evaluating remediation protocols. Homes that have undergone remediation are expected to yield valuable information that will be helpful for homeowners.

The Interagency Task Force is actively talking to Congressional and White House officials about the best approaches to design and fund both the Identification and Remediation efforts.

Other Ongoing Efforts

The Interagency Task Force, working with U.S. Customs and Border Protection, is monitoring imports of possible Chinese drywall. We believe that no new Chinese drywall has entered the United States in 2009. Owners of known U.S. inventories of Chinese drywall have been notified of this ongoing investigation. They have indicated that the drywall boards will not be sold. Further, CPSC has secured the cooperation of the Chinese Government to help identify the sources and causes of this problem.

CPSC is working with an ASTM committee that has just initiated discussions on the formulation of a proposed new standard on inspection of drywall for air quality issues.

Recommendations to Affected Homeowners

To date, CPSC has received more than 2000 reports from 32 states, the District of Columbia and Puerto Rico from consumers and homeowners concerned about problem drywall in their homes.

Homeowners who believe they may have problem drywall should immediately report to CPSC by calling 800-638-2772 or logging on to www.CPSC.gov. Hearing- or speech-challenged individuals may access the phone number through TTY by calling the toll-free Federal Relay Service at 800-877-8339.

Federal and state health experts suggest these steps to improve indoor air quality and to reduce exposure to substances that can cause health concerns:

- Open windows as much as possible to let in fresh air.
- Keep the temperature inside homes at the lowest comfortable setting.
- Run the air conditioner or dehumidifier.
- Also, spend as much time outdoors in fresh air as possible.
- Do not smoke, and especially do not smoke indoors. Cigarette smoke contains, among other contaminants, formaldehyde.

To read the technical research reports or for more information, log on to www.DrywallResponse.gov.

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