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## CHINESE (Corrosive) DRYWALL

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### Problem Manifestation

#### ***So how did this happen, and where did it come from?***

The hurricane season of 2005 was a particularly active season. Numerous hurricanes came ashore in Florida and culminated in hurricanes Katrina and Rita along the Gulf Coast. The obvious result of this active season was that a lot of property damage occurred, resulting eventually in large demands for building supplies. The domestic supply of drywall was depleted, and therefore suppliers looked for another source of drywall; China. Several years after the reconstruction of homes and commercial buildings, the problem started to be recognized, particularly in Florida and Louisiana. High heat and humidity triggered the manifestation, so these states were hardest hit first.

### Problem Description

So what is the problem with Chinese drywall? The first sign of a problem with your drywall is a distinct sulfur odor. This odor is the result of sulfides in the drywall itself, and when these sulfides mix with water, i.e., humidity, an acid is produced. The acid begins corroding various metal items in the structure. Metals that are affected are copper, aluminum, chrome, and stainless steel. Corrosion can be seen affecting electrical wiring, plumbing fixtures and air conditioning equipment.

### What We Know

How do you identify if you have a Chinese drywall problem? We know that the first noticeable manifestation is a sulfur odor similar to a rotten egg odor or the smell of burned matches. The second sign of a problem is the appearance of corrosion on metal. This may first be seen on kitchen and bathroom fixtures, but can also be found on air conditioning equipment and electrical wiring. If you are still uncertain if the problem is related to Chinese drywall, samples can be sent to a few laboratories which have the special expertise to do proper chemical characterization. Laboratory analysis is able to distinguish between the chemical constituents of domestic drywall and that of Chinese drywall. Air analysis has been done in test chambers, which has identified constituents

that may be responsible for the odor and the corrosion problems; however, these results have not translated with great success in the field. Research is ongoing by regulatory agencies such as the Environmental Protection Agency (EPA), Consumer Product Safety Commission (CPSC), Centers for Disease Control (CDC), and various state agencies, as well as a number of private consulting firms and laboratories.

### **What We Do Not Know**

The Occupational Safety and Health Administration (OSHA) has set occupational exposure limits to various sulfides, but these are set for the work place environment and may not apply to residential settings. What we don't know is the potential long term health effects of exposure from a house that is finished out with Chinese drywall.

We also do not know what constitutes effective remediation. Is it enough to remove and replace the drywall alone, or do you need to replace all of the electrical wiring, etc? If you leave the electrical wiring in place, does that create a potential fire hazard? Answers to these and many other questions must be developed as this problem is addressed.

### **Estimated Magnitude**

How big of a problem is this? It has been estimated that remediation of this problem may require about \$15 Billion, and some investigators think it may require even more.

Litigation is now a certified Federal Class Action, managed by a court in New Orleans.

### **About the Author:**

Mr. Kenoyer has eighteen years of experience in various aspects of the environmental industry. He has conducted numerous microbiological investigations and infection risk assessments in hospitals, schools, commercial buildings and private residences.

Mr. Kenoyer has performed indoor air quality assessments in hospitals and commercial buildings that have included temperature and humidity complaints, particulates, and VOC's, and has conducted numerous exposure reconstruction assessments associated with lawsuits, involving asbestos and formaldehyde.

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