



Restoration Services / Defective Drywall Remediation

WHAT IS CHINESE DRYWALL?

The defective drywall – also known as wallboard, gypsum board or plasterboard – arrived at about 2 dozen ports around the country with 7 of them in Florida, also including New York, Texas, New Orleans and California. During the housing boom and after the hurricanes from 2004 through 2006, the strain on the supply of domestic drywall required many drywall supply companies to use international suppliers to fill the demand. Many imported drywall from a German based company named Knauf with subsidiaries in China (such as Knauf Tianjim). Reports are showing that millions of pounds of Chinese drywall entered the US during this timeframe and installed across the country in thousands of homes, condos, and office buildings. Most foreign manufacturers stopped shipping drywall to the US in 2007, after the building boom was over. However, it has been discovered that another manufacturer, Taian Taishan (based in Taian, China), continued to ship large quantities of drywall to New York and Port Everglades into the summer of 2007. It appears that at least 550 million pounds of Chinese drywall have arrived at US ports since 2006. That is enough to construct about 60,000 average-size homes.

The cause of the problem is sulfur derivatives. Gypsum is supposed to be 100 percent calcium sulfate, Gypsum is supposed to be inert. The problem was caused by gypsum being contaminated or mixed in with other biologically active ingredients. The Chinese drywall contains ash from the many coal-fired power plants in China. China has low quality coal that has high sulfur content. The ash from the plants may have been mixed with the gypsum used to make drywall.



Problems and Symptoms

- Frequent replacement of A/C system or refrigerator components (such as air coils)
- Wiring that has turned black and/or is corroded. Light fixtures pitted or rusting.
- Piping that has turned black and/or needs replacing. Faucets pitted or rusting.
- Mirrors that discolor or delaminated
- Silver jewelry turning black / picture frames
- Television, computer failure, appliance failure

Symptoms to Watch Out For

- Apnea (a sudden shortness of breath)
- Irritated eyes
- Respiratory system irritation
- Dizziness
- Headaches
- Fatigue
- Insomnia

Symptoms reported thus far:

- Eye irritations
- Respiratory difficulties
- Nose bleeds
- Headaches

The Chinese made drywall is known to produce foul smelling odors (resembling rotten eggs), which may be caused by hydrogen sulfide or other sulfide gases being emitted from the defective Chinese drywall. Air quality tests have been administered in several homes built in South Florida, and results have found at least three different sulfide gases in the air: carbon disulfide, carbonyl sulfide, and dimethyl sulfide among others.

Test administered directly from the Chinese drywall material itself, by Environ Corp an air quality management organization, revealed that hydrogen sulfide was indeed present. Knauf Tianjin, a Chinese drywall manufacturer who has had reports of problems with their drywall, reported that tests administered on the drywall in 2006 also found hydrogen sulfide.



Remediation Process

1. **Due to the current Florida Building Code and local ordinances your home may have to be upgraded to meet current codes and regulation.**
2. Remove and dispose of all carpet, pad and tack strip.
3. Remove and save all base trim/casing, crown molding and cabinets and store in a containment area.
4. Remove and dispose of all mirrors and window sills. (mirrors and sills will break.)
5. Remove and dispose of all defective drywall material and other contaminated building material.
6. Remove and dispose of all insulation.
7. Defective material should be double bagged, sealed with tape, removed and disposed of.
8. Furnish and use scaffolding that may be required for remediation.
9. Continuous jobsite cleanup during remediation.
10. Final Clean, HEPA vac, complete cleanup and wipe down of all cavity walls with proprietary solution.
11. Duct cleaning must be completed under negative pressure created by a **HEPA** filtered exhaust unit
12. Coordinate indoor air quality testing by a licensed air hygienist, upon clearance, start of re-construction.
13. Coordinate with licensed Electrical, HVAC, and Plumbing Professionals for inspection and estimates.
14. The removal of any damaged property and the replacement of the same, HVAC, electrical wiring, plumbing
15. Replacement of all defective drywall with high quality American made drywall.
16. Replacement of all interior items that were affected to pre-defective conditions.

AIR SCRUBBERS

1. Should be equipped with **HEPA** filters and operate range of 600-2000 cfm
2. They should be operated for a minimum of 48 hours before any new construction can begin
3. All windows and doors must be closed and air vent sealed
4. Dehumidifiers should have **HEPA** filters

Claims of treatment involving ozone, coatings, and air cleaners should be scrutinized for evidence of proven effectiveness. The Department of Health recommends against the use of ozone generators in occupied spaces, since ozone is a highly reactive and irritating molecule and is considered hazardous to people and pets. Please see the US Environmental Protection Agency report "Ozone Generators That Are Sold as Air Cleaners".

We will work closely with members of the technical and scientific communities to provide strategic risk management services and can help you determine the right approach.



FINE LUXURY HOME BUILDERS