

Testing of Drywall Associated Corrosion (Chinese Drywall)

U.S. homes built between 2001 and 2009 may contain imported drywall, known in the press as 'Chinese Drywall'. The Consumer Product Safety Commission (CPSC) makes the following recommendations. If drywall was installed between 2005 and 2009, at least two of the below conditions must be met. For installations between 2001 and 2004, at least four of the following conditions must be met:

- Elemental sulfur in the drywall core (requires outside lab testing) *EMSL TEST 2*
- Copper sulfide on coupons, grounding wires, and/or air conditioning coils (requires outside lab testing) *EMSL TEST 3*
- Elevated sulfide gas emissions from drywall (requires outside lab testing) *EMSL TEST 1*
- Corrosion induced by drywall in test chambers (requires outside lab testing) *EMSL TEST 4*
- Chinese markings on drywall (This does not imply that all Chinese drywall or that only Chinese drywall is associated with these problems, but that among homes with the characteristic corrosion, Chinese drywall is a corroborating marker for the characteristic problems.) Such markings may not be present or easily discerned in all problem drywall homes.

Test 1. Analysis for presence of Volatile Organic Compounds (VOCs, especially for organic sulfides) – Call for Pricing and TAT

EMSL Test Code: TO-CDW / Analysis Performed: EMSL Cinnaminson Industrial Hygiene Laboratory

This test indicates if the drywall sample emits sulfur-based gases capable of producing corrosion. Sample requirements: Piece of suspected drywall, at least 6"x6". \$388 - 2 Week TAT (Faster turn-around-times available)

Test 2. Analysis of the drywall sample for elemental sulfur/BNA – Call for Pricing and TAT

EMSL Test Code: IHSulfurCDW / Analysis Performed: EMSL Cinnaminson Industrial Hygiene Laboratory

This test indicates if the drywall sample contains elemental sulfur, associated with the emission of sulfur-based gases capable of producing corrosion. Corroborating observations can also include corrosion on copper wiring, or HVAC and/or refrigerator compressor failures due to drywall induced corrosion and loss of freon. Sample requirements: Piece of suspected drywall, at least 2"x2" and not more than 6"x6". \$242 - 2 Week TAT (Faster turn-around-times available)

Test 3. Analysis of copper wires/surfaces by SEM/EDX – Call for Pricing and TAT

EMSL Test Code: MS088 SEM/EDX - Cu Corrosion / Analysis Performed: EMSL Cinnaminson Materials Science Lab

This test indicates if the corrosion of copper surfaces is associated with the components of the drywall. Sample requirements: Option 1: Alcohol prep wipes used for collecting deposits on copper surfaces. Option 2: Piece of the copper wire with deposits indicative of corrosion. \$242 - 2 Week TAT (Faster turn-around-times available)

Test 4. Accelerated Corrosion Test – Call for Pricing and TAT

EMSL Test Code: MS088 Accelerated Corrosion / Analysis Performed: EMSL Cinnaminson Materials Science Lab

Qualitative analysis of the drywall for its propensity to corrode copper in environmental chamber exposure. 4 Week TAT Only. No shorter TAT available due to the time-sensitive nature of the test. Sample requirements: Piece of suspected drywall at least 3"x3" and not more than 6"x6". \$1,618 - 4 Week TAT (No faster turn-around-time available)

All samples should be submitted to EMSL Analytical, Inc's Cinnaminson, NJ Laboratory under proper Chain of Custody. Chain of Custody documents can be found [here](#).

For reference and latest news on the Chinese Drywall issue, please visit the CPSC website [here](#).