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**Committee C11 on Gypsum and Related Building Materials and  
Systems  
Subcommittee C11.02 on Specifications and Test Methods for  
Accessories and Related Products**

**Research Report C11-1002**

**Interlaboratory Study to Establish Precision Statements for ASTM  
C474-13, Test Methods for Joint Treatment Materials for Gypsum  
Board Construction**

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**1. Introduction:**

Interlaboratory Study 547 was conducted to establish a precision statement for C0474, Test Methods for Joint Treatment Materials for Gypsum Board Construction.

**2. Test Method:**

The Test Method used for this ILS is C474-13. To obtain a copy of C0474, go to ASTM's website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service by phone at **610-832-9585** (8:30 a.m. - 4:30 p.m. Eastern U.S. Standard Time, Monday through Friday) or by email at [service@astm.org](mailto:service@astm.org).

**3. Participating Laboratories:**

The following laboratories participated in this interlaboratory study:

ASHLAND Chemical  
500 Hercules Rd., Bldg 8136  
Wilmington, DE  
19808  
US  
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302-995-3280  
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2424 Lakeshore Road West  
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30084  
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Libertyville, IL  
60048-5041  
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Mr. Guy Rosenthal  
847-970-5041  
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4. **Description of Samples:**

There were 2 samples of varying targeted results used for this study. Each sample was supplied, prepared and distributed by US Gypsum. Below is a list of the samples:

Sample A: A representative conventional weight ready-mixed all-purpose joint compound prepared specifically for the round-robin test and distributed to all testing laboratories.

Sample B: A representative low-viscosity wall texture compound prepared specifically for the round-robin test and distributed through to all testing laboratories.

5. **Interlaboratory Study Instructions**

Laboratory participants were emailed the test program instructions. For a copy of the instructions, please see Annex A.

6. **Description of Equipment/Apparatus<sup>1</sup>:**

For information on the equipment/apparatus used by each laboratory, please see Annex B.

7. **Data Report Forms:**

Each laboratory was provided with a data report form for the collection of data. A copy of the data is provided in Annex C.

Please note: The laboratories have been randomly coded and cannot be identified herein.

8. **Statistical Data Summary:**

A summary of the statistics calculated from the data returned by the participating laboratories is provided in Annex D.

9. **Precision and Bias Statement:**

9.1 The precision of this test method is based on an interlaboratory study of C474, Standard Test Methods for Joint Treatment Materials for Gypsum Board Construction, conducted in 2011. Seven laboratories using Brookfield equipment and eight laboratories using Brabender equipment tested two different materials, by alternative methods. Every test result represents an individual determination, and each lab was asked to report five replicate results for each material / instrument combination. Except for the limited amount of data reported for several of the material / instrument combinations, Practice E 691 was followed for the design and analysis of the data; the details are given in ASTM Research Report No. C11-1002.<sup>1</sup>

9.1.1 *Repeatability limit (r)* - Two test results obtained within one laboratory shall be judged not equivalent if they differ by more than the

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<sup>1</sup> The equipment listed was used to develop a precision statement for C474-13. This listing is not an endorsement or certification by ASTM International.  
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