

## **GUIDELINES FOR USING GYPSUM-BASED UNDERLAYMENTS IN FLOORING INSTALLATIONS**

Gypsum-based underlayments are commonly used in various flooring applications; however, certain considerations must be addressed before proceeding with their use. Key concerns include reduced adhesive bond strength and performance, as well as the potential for cracking or surface dusting over time.

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### **Industry Standards and Testing Requirements**

Proper installation of gypsum underlayments should comply with ASTM F2419, which outlines procedures for the installation of thick-pour gypsum concrete underlayments and the necessary surface preparation for resilient flooring.

Before applying any floor coverings, it's critical to assess the substrate for moisture content. This should be done using a non-invasive electronic moisture meter as specified by the underlayment manufacturer. Refer to ASTM F2659 for guidance on moisture testing procedures appropriate for gypsum-based substrates.

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### **Priming and Surface Preparation**

To ensure a strong adhesive bond and reduce dust-related issues, **Lighthouse Adhesives recommends priming gypsum underlayments** using an approved primer such as **Lighthouse Adhesives B4 GLU**. The primer helps:

- **Improve adhesive bond performance**
- **Seal any residual surface dust**
- **Prevent premature absorption of adhesive into the underlayment**
- **Improve the loss of the adhesives trowel coverage**

Both the underlayment and the primer should be applied strictly in accordance with the manufacturer's instructions.



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Additionally, a **test bond** should be conducted before installation to verify that the adhesive performs properly on the primed substrate.

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### **Performance Concerns and Material Strength**

Gypsum underlayments with insufficient thickness or compressive/tensile strength may be unable to withstand stress from building movement or heavy traffic loads. These conditions can lead to cracking or subfloor instability, which in turn may compromise the integrity of the flooring system.

Industry guidelines recommend that underlayments and self-leveling compounds used in commercial applications have a minimum compressive strength of 3,500 psi.

While newer gypsum products on the market feature enhanced compressive strength, minimizing the risk of failure, it is important to select the appropriate product for the intended use environment.

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### **Liability and Responsibility**

It's important to note that Lighthouse Adhesives does not accept responsibility for issues that arise from the use of gypsum underlayments or any other type of substrate preparation product. Any performance issues, failures, or claims resulting from the underlayment must be directed to the underlayment manufacturer or the contractor who performed the installation.

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#### **⚠ Note:**

This document is for general reference only. While the information provided is based on the industry's best practices, Lighthouse Adhesives does not accept responsibility for any errors or liabilities resulting from the use or interpretation of this guidance.

