CORINTHIAN
CAST STONE, INC

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COLD WEATHER SETTING PRACTICES FOR CORINTHIAN CAST STONE

Corinthian Cast Stone Inc. Technical Bulletin
Updated November 2024

Prepared for Contractors, Restoration Architects, and Engineers

INTRODUCTION

Cold weather construction is often unavoidable, requiring specialized practices to protect masonry, including architectural cast stone, from the risks of freezing. Improper handling and installation during cold conditions can compromise the durability and aesthetics of cast stone. This bulletin provides detailed guidelines to help contractors, architects, and engineers maintain best practices when setting cast stone in cold weather.

COLD WEATHER RECOMMENDATIONS

Ambient Temperature Guidelines

Temperature Range	Recommendations
Above 40°F	Use normal masonry practices. Cover walls at the end of the workday to prevent water entry into masonry.
40°F - 25°F	Heat mixing water to achieve mortar temperatures between 40°F and 120°F. Cover walls with plastic or canvas.
25°F - 20°F	Heat mixing water and sand to achieve mortar temperatures between 40°F and 120°F. Cover and insulate walls.
20°F - 0°F	Heat mixing water and sand. Provide enclosures with heat to maintain masonry at 32°F or above for 24 hours.

Additional Guidelines

1. **Protection of Materials:**
   - Store cast stone and mortar materials in a dry, protected environment.
   - Never set cast stone on frozen or ice-covered walls.
2. **Avoid Freezing Conditions:**
   - Do not set cast stone in temperatures below 40°F unless all environmental controls are in place.
   - Maintain masonry above freezing for 16–24 hours post-installation using auxiliary heat or insulated blankets.
3. **Use of Admixtures:**
   - Non-chloride, non-corrosive admixtures complying with ASTM C1384 can be used to accelerate mortar set.
   - Avoid chloride-based admixtures, as they can damage cast stone and surrounding masonry.
4. **Repairs and Touch-Ups:**
   - Avoid touch-ups or repairs when freezing temperatures are expected within 72 hours unless proper conditioning is provided for both materials and the environment.

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BEST PRACTICES FOR COLD WEATHER SETTING

Preheat Materials:
Heat sand and water to maintain proper mortar temperatures. Ensure mixing water does not exceed 120°F.

Cover Walls:
Use plastic or canvas to prevent moisture accumulation and freezing.

Enclosure Heating:
In extreme cold (below 20°F), provide enclosures and auxiliary heat to maintain a controlled environment.

End-of-Day Protection:
Cover walls and materials thoroughly at the end of each workday to prevent water penetration and subsequent freezing.

CORINTHIAN CAST STONE SUPPORT

Corinthian Cast Stone Inc. adheres to the highest quality standards, including ASTM C1364 for cast stone manufacturing and ASTM C1194 and C1195 for strength and absorption testing. Our team provides technical support tailored to meet IBC Chapter 21 Masonry requirements and ACI 530.1 guidelines.

For additional assistance with product specifications, installation practices, or maintenance strategies, contact our technical services department at **631-920-2340 or info@corinthian-usa.com.**

REFERENCES

This bulletin is informed by the following standards and resources:

- ASTM C1364 – Standard Specification for Architectural Cast Stone
- ASTM C1194, C1195 – Strength and Absorption Testing for Cast Stone
- ASTM C1384 – Non-chloride Admixtures for Accelerated Set
- Cast Stone Institute® Technical Bulletins #37 (Job Site Handling and Installation) and #41 (Cold Weather Setting Practices)
- TMS 404-504-604 Standards for Design, Fabrication, and Installation of Architectural Cast Stone

For additional guidance, consult the Cast Stone Institute® Technical Manual at caststone.org.

This Technical Bulletin outlines best practices for setting Corinthian Cast Stone in cold weather. Following these guidelines ensures the longevity and performance of cast stone installations, even in challenging climates.
For further information, visit www.corinthian-usa.com.

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