



**Corrosion
Engineering™**

AN ERGONARMOR COMPANY

TECHNICAL INFORMATION

**CES-210
03/00 SUPERSEDES 01/99**

THAWING DIRECTIONS FOR FROZEN SILICATE SOLUTIONS, SILICA BINDERS, AND LATEX BINDERS

PRECAUTIONS FOR FROZEN MATERIAL

1. SCOPE

- 1.1 This specification shall cover the following materials:
CORLOK® B Mortar Solution
HB® Mortar Solution
K-14® Mortar Solution
PENNTROWEL® Latex Underlayment Binder
TUFCEM® Silicate Solution

_____ 1.2 PENNTROWEL Latex Underlayment Binder (Part B)

- 1.2.1 IT IS PERISHABLE IF FROZEN. It should be stored between temperatures of 40°F and 100°F (4°C and 38°C) and it should be used within a year of its manufacturing date.

_____ 1.3 CORLOK B Mortar Solution, HB Mortar Solution, K14 Mortar Solution, TUFCEM Silicate Solution

- 1.3.1 These potassium silicate solutions will freeze at temperatures slightly below 32°F (0°C). However, they can be thawed and recovered by use of the following suggested techniques. Even if these solutions have not been frozen, the technique noted can also be used to ensure that a uniform solution consistency is attained before the product is used.

2. THAWING INSTRUCTIONS

- 2.1 Read precautionary information on the labels of the containers before handling.

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- 2.2 Place the containers (drums or pails) into a heated area or into a temporary enclosure which can be heated, supporting the containers on wooden pallets or other supports so they do not rest on the ground or the floor surface.
- 2.3 In the case of drum containers, the top bung should be loosened, while in the case of pail containers, the lid should be loosened during the period in which the solution is thawing to avoid pressurization of the containers.
- 2.4 The contents of the containers should be warmed to approximately 70°-85°F (21°-30°C). Indirect fired heaters or radiant heaters may be used for heating the containers. The use of open flame devices (i.e. wood fires, oil fires, torches, etc.) is not recommended.
- 2.5 The time required to reach a temperature of 70°-85°F (21°-30°C) will depend on the size of the solution container, the degree to which the solution is frozen, and the concentration of heat being applied. For a small pail, 2-4 hours is generally sufficient, while for a full drum of solution, 8-16 hours may be required. It should be noted that if the contents of the containers are stirred during the warming up process, the warming time will be reduced. Band-type drum heaters may be used.
- 2.6 The silicate solution should be thoroughly mixed in the container in which it is supplied to yield a homogenous liquid of an opaque, translucent appearance, and free any floc or precipitates. If the mixed solution is not as described, consult the manufacturer.
- 2.7 To aid in the thawing, warming and reconstitution to a uniform, homogenous consistency, it is recommended that the contents within the containers be stirred. A recommended method for stirring the contents within drum containers is to weld a 6-8" piece of 1" steel chain to the end of a 3/8" shaft of suitable length to reach the bottom of the drum, and then utilizing the stirrer in a variable speed drill mixer. In the case of stirring the contents of pails, this same technique can also be used or a manual method of stirring can be utilized.
- 2.8 A thermometer should be available for measuring the temperature of the solution after it has been thawed and mixed. The solution should be brought to a temperature of 70°-85°F (21°-30°C).
- 2.9 The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the

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- 2.10 Please contact Corrosion Engineering for specific recommendations at +1-610-833-4000 or fax +1-610-833-3040.

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