

THERMAL-CHEM VAPORGARD PRODUCT #211

VAPOR BARRIER SEALER

PRODUCT DESCRIPTION

Thermal-Chem's **VaporGard** is a 100% solids, non-shrink, high-quality, polymer resin coating. This unique coating penetrates into the smallest fissures, sealing the concrete. It stops moisture penetration of both liquid and vapor passing through the concrete surface. The material is easily applied on dry surfaces by conventional tools such as squeegees and rollers. Its excellent potlife allows sufficient time for application. The balanced properties of the cured coating protects the concrete without causing any stresses to the structure.

PRODUCT USE

Thermal-Chem VaporGard has many potential applications for sealing concrete structural slabs, parking decks, bridge decks, highway pavements, airport runways, industrial and commercial floors.

Coatings applied over concrete with vapor transmission rate greater than 3.0 lbs. Per 1,000 square feet per 24 hours (ASTM F 1869 Calcium Chloride Test) period will typically blister and fail. VaporGard's unique formulation is designed to reduce or eliminate vapor transmission through concrete.

COLORS AND TEXTURES

- Only available in straw
- Cures to a smooth, glass-like finish
- Mix ratio is by weight

LIMITATIONS

- Do not thin the epoxy with solvents.
- Do not apply on ice or frost covered surfaces.
- Do not apply on moist or wet surfaces.
- May blush in high humidity conditions.
- Do not broadcast sand into VaporGard.
- If vapor transmission rates are greater than 6 lbs./1000 s.f./24 hr., consult Thermal-Chem.

TYPICAL PHYSICAL PROPERTIES

PHYSICAL PROPERTY COMPLIANCE

ASTM C881 90

Type 3, Grade 1, Classes: A+B+C

Density, lbs./gal., ASTM D1475 9.0 ± .2

Viscosity, cps., ASTM D2393 30-50

Flash Point, °F, ASTM D3278 210

TYPICAL CURED PROPERTIES

COMPRESSIVE STRENGTH, ASTM D695 10,100 psi

TENSILE STRENGTH ASTM D638 7,000 psi

ELONGATION ASTM D638 7-9%

FLEXURAL STRENGTH ASTM D790 8,800 psi

FLEXURAL MODULUS OF ELASTICITY,
ASTM D790 800,000
psi

SHORE D HARDNESS, MIN., ASTM D2240 70 ± 5

PRODUCT APPLICATION

Surface Preparation:

The concrete surface must be free of paints, coatings, sealers, oils, grease, waxes, curing compounds, dust and other debris which could inhibit the epoxy from wetting and penetrating the substrate.

Contaminates can be removed with a dry abrasive method such as sand or steel shot blasting. Vacuum as necessary to remove debris.

Coverage:

The rate of coverage is dependent upon the concrete porosity. Typical application is 35-200 square feet per gallon. Each project should be individually tested to determine amount of product required and the vapor transmission reduction. Porous concrete absorbs more epoxy.

Curing:

The product may be used on substrate temperatures between 38°F to 120°F (1°C to 49°C). The warmer the temperature, the faster the cure, the lower the temperature, the slower the cure. The warmer the substrate temperature, the deeper the penetration.

Mixing:

To assure product consistency, pour the "B" component into the "A" component and mix thoroughly for approximately two minutes using a mechanical paddle type mixer. When pre-measured units (1 and 5 gallon) are used, no weighing is necessary. When larger volume containers are used, refer to product label for proper mixing ratios.

Application of Product:

Thermal-Chem **VaporGard** can be applied to the dry substrate by pouring the mixed epoxy in wind rows and using a squeegee to spread the epoxy evenly over the concrete surface. Back roll the epoxy (with a short nap, 1/4 in., roller cover) to assist the penetration into the portland cement concrete. It is of paramount importance to put pressure on the roller during the rolling process to assist the epoxy penetration into the concrete. The material should be worked into

the surface for 5 to 10 minutes to insure penetration. An even amount of resin creating a film should be present upon the surface. If a film does not develop, apply a second coat to create the film.

NOTE: Do not apply any sands or other fillers into the wet surface. It must dry as a neat film.

Recoating of Thermal-Chem systems should be performed within 24 hours of the **VaporGard** application. In high humidity conditions, a greasy film may be seen on the exposed upper surface of the epoxy due to amine blush. This film will wash off with a detergent and water solution. Remove blush, if present, before applying next coat.

Clean-Up:

All tools that are not disposed of must be immersed or cleaned with mineral spirits, toluene, methyl ethyl ketone or xylene before curing occurs. Do not allow any epoxy to harden on tools, equipment or areas where adhesion is not desired. Read all labels and Material Safety Data Sheets before using solvents. Some solvents are flammable.

AVAILABILITY

Products are manufactured and available through the Thermal-Chem Corporation, 2120 Roberts Drive, Broadview, IL 60155 U.S.A.

Tel: 800/635-3773 ■ 847/288-9090

Fax: 847/228-1189

E-mail: sales@thermalchem.com

Website: www.thermalchem.com

TECHNICAL SERVICES

Additional Product Data, complete Technical Support and Product Specifications are all available through the Thermal-Chem Corporation or its local representatives.

Every reasonable precaution and effort has been taken in the manufacturer of all Thermal-Chem products to comply with the published product data. Actual product performance may

vary slightly due to environmental influences and/or conditions.

PRODUCT HANDLING

Read the Material Safety Data Sheet thoroughly before use.

Warning: For professional use only. Avoid contact of uncured material with skin and eyes. Contact with skin may result in irritation. Wash skin with soap and water. If contact with eyes should occur, flush with water for 15 minutes and seek immediate medical attention.

LIMITED WARRANTY

Thermal-Chem Corporation warrants its product to be of good quality and will replace any product proved defective. Satisfactory results depend not only upon quality products but also upon many factors beyond our control. Therefore, except for such replacement, **THERMAL-CHEM CORP. MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, RESPECTING ITS PRODUCTS**, and Thermal-Chem Corporation shall have no other liability with respect thereto, including without limitation, liability for incidental or consequential damages. Any claim regarding product defect must be received in writing within one hundred and eighty (180) days from the date of shipment. No claim will be considered without such written notice or after the specified time interval. The user shall determine the suitability of the products for the intended use and assume all risks and liability in connection therewith.