



CERAMIC EX-16

Product Bulletin

Ceramic EX-16 is a clear, water based liquid that can be used either as a coating or saturant for paper, paperboard or wood based products. EX-16 dries to a clear, hard, fire resistant ceramic like coating or if impregnated into paper or paperboard produces a higher compressive strength and somewhat brittle product.

TYPICAL PROPERTIES

Appearance:	Colorless Liquid
Odor:	Slight Sweet
Weight/gallon:	10.8 ± 0.2 lbs.
Specific gravity:	1.30 (calc.)
Viscosity:	200 cps ± 500 cps (Brookfield, #3 at 12 rpm)
Solids:	35-40.0% ± 1.0%
pH:	11.5 ± 0.2

APPLICATIONS

Ceramic EX-16 is applied by spray, dip, roller, brush, or roll coaters. It imparts excellent flame retardancy to:

- ? paperboard and paperboard products, including corrugated sheets
- ? wood and particle board
- ? wood-based construction products

APPLICATION DATA

As a coating EX-16 is applied directly to liner board or corrugated sheets by spray or rod coaters without diluting. A minimal degree of flame retardancy is achievable with coat weights of about two gallons/msf. Higher levels of coating make the paper or paperboard too brittle for fabrication. Corrugated sheets may be made to achieve a "Class A" fire rating if spray coated with EX-16 at a coat weight of one gallon/50 square feet. Excellent flame retardancy is achieved by thoroughly saturating paper or paperboard with EX-16 diluted with water 1:1 by weight. The amount of EX-16 to obtain flame retardancy is between 18 and 20 percent on a dry weight basis

A "Class A" fire rating can be achieved on various wood based materials when EX-16 is applied as a coating of two coats of one gallon/100 square feet/coat. *Wood and wood based products are difficult to flame retard by saturation with EX-16 and is not recommended.* The EX-16 coating will develop a chalky appearance over time. EX-16 coated products are for interior use only where appearance conditions are not important.

Mixing: the coating must be thoroughly mixed before using.

Thinning: thinning of the product is NOT RECOMMENDED. If thinning has to be done, use a minimum amount of water (½ pint/gallon). If thinning is done, remember it may affect the flame spread rating unless the proper dry mil thickness is built up.

Drying time: drying time depends on temperature, humidity, and degree of air movement. Generally the coating will dry to touch in 30 minutes. To recoat, it is recommended that the coating be allowed to dry for one hour.

PRODUCT BENEFITS

Ceramic EX-16 is a flame retardant that can be used with as a coating or a saturant for paper, paperboard or wood based product.

Fiberboard, wood, and wood products coated with **Ceramic EX-16** produce a smooth, hard, fire resistant surface. With proper curing or the application of a top coat, the coating becomes water resistant and washable. Since the product is completely inorganic it will not burn and, therefore, no toxic or corrosive gases are given off.

NOTE: While **Ceramic EX-16** functions extremely well on many materials, it does not provide flame retardancy to every fibrous substrate. The buyer accepts liability for determining whether the product is suitable for the buyer's intended use.

PACKAGING

The product is available in 5-gallon pails or 55-gallon drums. It should not be repackaged without consulting FRC PyroTech.

STORAGE

The recommended storage temperature for **Ceramic EX-16** is between 50° F and 100° F. If the product is stored below freezing, it should be brought back slowly to room temperature and stirred.

HANDLING AND USE

Ceramic EX-16 is alkaline (pH 11.5) and appropriate precautions should be taken when handling. Wear a protective mask, gloves, and safety goggles to avoid potential nasal, throat, skin, or eye irritation while applying the product.

Before using **Ceramic EX1** it must be stirred well to re-disperse.

Ceramic EX-16 can only be applied to surfaces which have not been previously painted or sized. Before application, it is best to clean and sand the surface. Clean all equipment immediately following use with warm water and mild detergent.

SAFETY AND FIRST AID

Ceramic EX-16 contains no solvents or toxic ingredients. Because the product is alkaline, it is considered corrosive and proper care should be taken in handling the product.

1. Use proper breathing apparatus to protect from misting when product is sprayed.
2. Flush eyes with water for at least 15 minutes if product contacts them.
3. Wash skin thoroughly with warm water if product is in contact. If irritation occurs, seek medical attention.
4. If product is ingested, induce vomiting and seek medical attention.

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