

# KESEM Technology LLC



**CEASEFIRE™ Waterborne Epoxy**  
***FIRE PROTECTIVE COATING***  
**Patent Pending**  
Flame Retardant and Intumescent Coating

CEASEFIRE™ Waterborne Epoxy is a two-part intumescent coating. It is engineered to be a protective coating that combines toughness, good wear resistance with low flame spread, low heat transfer, and low smoke. In addition, the smoke generated is low in toxicity. The char foam starts to rise in 20 - 40 seconds. Once this char layer forms, smoke generation is almost entirely eliminated; the burning ceases, and coated surfaces are thermally insulated.

CEASEFIRE™'s Waterborne Epoxy cures within 24 hours at room temperature to a tack-free coating while providing close to 3 hours of working life.

For ease of application or for spraying, CEASEFIRE™'s Waterborne Epoxy is readily thinned with tap water. It can also be color tinted using a water based paste pigment.

## Properties

	<u>Part A</u>	<u>Part B</u>
Color	Light tan to pink	Light yellow
Viscosity	paste - highly thixotropic	800 – 1,000 cps
Mix Ratio	100 pbw	25 pbw
% Solids	100	73

Mixed viscosity @ 25 degrees C 20,000cps

The wet weight is 9.5 lbs/gal. The Dry Weight is 8 lbs/gal.

Flame Spread (E84 equivalent based on known standards) – Class A

Thermal Expansion of foam - >10 times thickness of coating

UL1709 – Outside lab certificate 25-minutes rating for 2000 degrees F applied as a coating at 32 dry mil thickness .

## **Typical Properties:**

15 dry mil coating on most substrates for Class A flame spreads

Part A is a paste and Part B is a liquid. To decrease the viscosity of part A, add up to 5% water, or with 5 lbs of Part A material, add 1/4 lb of water. This is about 5 oz of water to 5 lbs of material. When mixed into the Part A, the part A paste will become a thick self leveling material. To make Part A thinner, heat Part A to about 85 degrees F. Add in the Part B and mix it well and this mixture is like a standard very thick one coat latex paint. This mixture can now be sprayed, spread with a brush, 3/16 inch lambs skin roller cover, or a stipple roller cover. By increasing the temperature of the epoxy to anything over 70 degrees F, the pot life of the material is reduced,. At 80 degrees F, the pot life is roughly one hour. Leaving the material inside a container will decrease the pot life down to 25 minutes of working time.

Inexperienced applicators of epoxy should mix up a small amount of the material and spread it out onto a piece of plywood. A mixture of Part A and Part B is about 90% solids, if you add 5% water to the mixture, you will have a mixture just above 85% solids. So using 85% solids, when you apply 10 wet mils of product to your substrate, you should get 8.5 dry mils. At that rate, you would need to apply four coats at 11 wet mils to get 44 wet mils, or 37.4 dry mils. The mixture will sag on the vertical at thickness greater than 12 wet mils.

This material will pass the UL 1709 25 minute flame test with 32 dry mils of product applied to a substrate.

**Clean up** is with warm, not hot water.

**Testing:** For an application that needs a specific flame spread or other fire retardant certificate other than what our in house or outside lab tests show, our staff is available to assist and guide the client in obtaining those certificates.