

KESEM Technology LLC



CEASEFIRE™ for Building Materials
Latex FIRE PROTECTIVE COATING
Patent Pending

One-Component Latex Flame Retardant and Intumescent Coating

CEASEFIRE™ Latex is a unique one component latex fire retardant – intumescent coating based on our proprietary non-halogenated phosphate technology. All of our phosphates are manufactured in house for our exclusive use. When exposed to heat and/or fire, CEASEFIRE™ Latex forms a continuous, dense char foam that protects products from both heat and flame. Additionally, CeaseFire™ Latex offers very low smoke generation during char formation. The active ingredients in CEASEFIRE™ Latex products are not soluble in water and will not leach out over time.

CeaseFire™ Latex is recommended for use as a coating for wood, composites, plastics or metals. The viscosity is easily reduced by the addition of tap water. Water based paste pigments for tinting or color, anti-settling agents, and other flame retardants may also be incorporated.

Specifications

| | |
|---------------------------|----------|
| %Solids | 60% |
| Working life @ 25°C | 1 hour |
| Tack free set time @ 25°C | 12 hours |
| Full Cure @ 25°C | 48 hours |

This char foam rises in 10 - 20 seconds. Once this char layer forms, smoke generation is almost entirely eliminated, the burning ceases, and coated surfaces are thermally insulated. The char foam formed is stable to temperatures of 1500°C.

Typical Properties:

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

UL94 (over polyethylene foam) passed VO

UL94 (over polypropylene foam) passed VO

UBC 26-2 (thermal barrier building) pass

User Notes:

Most applications are applied at a nominal 10 dry mils for a Class A flame spread; This thickness may vary, depending on what fire rating is being sought after. This means that the material needs to be applied at roughly 16+ wet mils. A vertical spray pattern for 10 linear feet, at 8 wet mils, then a second coat sprayed horizontal over the vertical pattern just painted at 8 wet mils (200 sq. ft/gal or 5 ft. high x 10 ft long sprayed twice). There is now 16 wet mils applied to the substrate surface which produces a nominal 9.6 dry mils application.

The CeaseFire latex is a finished latex but an unfinished paint. The latex material is used as a carrier and mechanical bonding agent that carries the CeaseFire powder to the substrate surface.

CeaseFire latex can be used as a finished primer on the substrates. It can be left on the surface by itself, but is most often painted over by paint to add color and the additional protection to the substrate. The latex can be used for indoor or outdoor applications.

CeaseFire latex should be mixed with 2000 - 2400 RPM drill and a shear painters mixing blade to get the CeaseFire powder off of the bottom of the container and back into suspension of the latex. The CeaseFire powder needs to be kept in suspension, to get an even coat of protection on the substrate it is intending to protect. The CeaseFire powder is normally ground between 6 to 10 microns. It has been ground to 400 microns for certain applications.

Landscapers are adding red, brown or whatever latex pigments to the CeaseFire latex and spraying it onto bark dust, wood chips, pine straw and other ground covers to eliminate the fire problems where these products are used in commercial enter ways or governmental buildings. The CeaseFire latex has been applied around residential homes to cut down on wild fire damage by spraying CeaseFire latex tinned to cover dried landscape materials (not recommended to be used on living landscape plants or garden foliage).

The CeaseFire latex, urethane, and epoxy materials are being sprayed onto all vent opening on a roof or walls to minimize, eliminate or stop burning embers from entering into the walls and roof attic spaces. Where wild fires are a danger, spraying the attic spaces with CeaseFire latex will add another level of fire protection against wild fire from burning house from the inside out.

Removal of Ceasefire Latex from your self or tools: Just use warm, not hot water and a mild soap to clean yourself or your tools.

Industrial uses: The CeaseFire latex is being added into pressure sensitive latex glues and used in spreader trays to glue carpet backing onto the carpet. It is being used by cardboard manufactures to make fire rated materials. It is being used by door manufactures to pass existing fire codes. It is being used to create Class A-B-C rating on many substrate materials.

Application: The CeaseFire latex can be painted on, rolled on, or sprayed on to any porous substrate. The latex is water based latex carrying the CeaseFire powder which is almost completely non water soluble.

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.