

TPR² FIRE EXTINGUISHING INSULATIVE/ NON - FLAMMABLE COATING**AFES^{*} Flexible coatings – Intumescent & non intumescent versions**

TPR² Fire Extinguishing formulations react to flame by rapidly absorbing significant amounts of heat. The layer also acts as an insulating, fireproof, smoke free barrier separating the substrate from flames.

AFES^{*} Flexible series of coatings are water-based, ultra low-VOC, non-toxic, non-smoking, non-fuming coatings. They can either be painted over or applied over other **TPR²** coatings. They are odorless and flat, and aggressively react to subside heat and flame. They are designed for and can be applied to flexible surfaces, blankets, cloth and foam materials (among other surfaces) to reduce flame spreading and smoke.

**SURFACE PREPARATION**

General – The entire surface area to be painted shall be clean, dry sound, fully cured and free from dirt, grease, oils, waxes, curing agents and any other surface contaminants that may cause paint failure. Remove any loose, scaling, cracked or peeling paint from previously painted surfaces by hand scraping, sanding, wire brushing or by power tool cleaning methods, such as electric sanders or grinders.

Mildew – Surface areas affected by mildew should be thoroughly cleaned with a soft – medium bristle scrub brush and a solution of one (1) cup of Tri-Sodium Phosphate – (TSP), mixed with a 3:1 solution of warm water and household bleach, per gallon solution. Allow solution to remain on the affected surface areas for 10 – 20 minutes, then rinse thoroughly with clean water. Allow a minimum of 24 hours to dry thoroughly.

**PRODUCT APPLICATION**

AFES series fire-extinguishing & barrier coatings may be easily applied with airless spray equipment, conventional sprayer, heavy knap roller, or a quality brush (recommended). For best performance, it is recommended to apply two coats. Thinner first coats reduce wait time to spray second coat.

When applying by airless spray equipment, it is recommended to use a unit such as a Glidden Speeflo Power Twin (1 gpm min.) or 30:1 Graco 1000 series with 3/8" I.D. high-pressure line and a Graco silver gun with a LTX431 or LTX531 spray tip. If applying two coats, allow drying thoroughly between first and second coat applications.

For conventional spraying, use a Binks 2001 gun or equivalent with a 68SS-68PB air cap Ass'y and a 2 qt pressure cup. When applying by brush, apply an even and generous coat application in an "W" or crisscross motion, avoiding any excessive re-spreading or reworking. Always maintain a wet edge during application by brushing or rolling into previously applied coating area.

Apply when surface and ambient temperatures are above 68°F (20°C) and below 95 ° (35c), and when relative humidity is below 80%.

Drying times can be reduced significantly by warming the area as little as 5 deg F from conditioned temperatures. In borderline humidity situations, make sure there is good air(fan induced) movement. Any high ceilings applications require fan air movement.

RECOMMENDED COATING

*****SEE SPECIFIC LAB REPORTS FOR REQUIRED THICKNESS*****

Apply 1 or 2 coats, depending on required dry film needed. Several thinner coats dry faster than 1 thick coat. Wet film thickness-per coat: 20-25 wet mils per coat, achieves a Dry film thickness (DFT) of 12-14 mils/coat. **Recommended final DFT thickness, 20-30 mils or more(see lab reports).**

Sag Resistance: 40 mils.

SPECIAL NOTE: All new cementitious substrates, such as Masonry, Concrete, Cinder Blocks, etc. should be allowed 30 – 90 days to properly dry and cure, in accordance with industry standards. TPR² will not be held responsible for product failure if these types of substrates are painted too soon. If the surface requires painting prior to the 30-day minimum dry time, it is recommended to prime the substrate with a quality primer.

**ESTIMATED COVERAGE**

Covers approximately 125 square feet per gallon at 10mils dry, depending on the method of application and the porosity of the surface to be coated.

ESTIMATED DRY TIME

Dries to touch in approximately 60 minutes. Allow at least 4 hours of drying time between coats. Full cure does not occur for up to 2 weeks. Damp or humid weather may lengthen the drying time.

To touch.....	60 minutes.	Firm.....	48 hours
Flash dry	4 hours	Fully cured.....	10-14days

**CLEAN UP & THINNING**

Clean Up – Clean up any minor spills or spatters immediately with soap and water, as well as any painting tools and airless spray equipment. Serious spills should be contained and removed with inert absorbent material. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

Thinning – Stir contents thoroughly and apply as it comes from the container.

Thinning Is Not Necessary! However, if thinning is required, you may add **Clean Water** up to 6oz per gallon. Spraying with conventional air sprayers might require thinning as stated above.

*Automatic Fire Extinguishing System

KEEP OUT OF REACH OF CHILDREN!

CAUTIONS: Avoid prolonged contact with skin, and breathing of dust, vapors and/or spray mists. Overexposure may cause kidney damage. Causes eye irritation. **USE ONLY WITH ADEQUATE VENTILATION!** Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor / mist levels are above applicable limits, wear an appropriate, properly fitted respirator, (NIOSH approved), during and after application. Follow respirator manufacturer's direction for respirator use. Avoid contact with eye. Use chemical safety glasses, goggles, or a face shield for proper eye protection. Wash thoroughly after handling and before eating or smoking. **KEEP FROM FREEZING!** Close container after each use. **DO NOT TAKE INTERNALLY!**

FIRST AID: In case of skin contact, wash thoroughly with plenty of warm soapy water. In case of eye contact, immediately flush with plenty of water for 15 minutes, and get medical attention immediately. If you experience difficulty breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately. If swallowed, do not induce vomiting, get medical attention immediately.

The technical data and suggestions for uses contained herein are correct to the best of our knowledge, and offered in good faith. The statements do not constitute a warranty, whether expressed, or implied as to the product performance. TPR² can guarantee this product to conform to our standards of quality, and our liability, if any, shall be limited to replacement of defective materials. Any or all-technical information is subject to change without notice. All express or implied warranties of merchantability, fitness, and fitness for any particular purpose are disclaimed.

SEE THE MATERIAL SAFETY DATA SHEET (MSDS) AND LABEL WARNINGS FOR ADDITIONAL SAFETY INFORMATION.

THERMAL PRODUCT RESEARCH

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