

SELECTION & SPECIFICATION DATA

Generic Type	A single component, water based, intumescent fire resistive coating which is applied directly to interior wood substrates.
Description	Thermo-Lag [®] 220 is designed to limit the spread of flame across interior wood substrates.
Features	<ul style="list-style-type: none"> • Class A fire hazard classification from ASTM E84 testing at Underwriter's Laboratories, Inc. • Durable finish - provides a hard, durable finish resistant to normal wear • Thin film coating • VOC compliant • Easy repair - if damaged, it can be repaired easily using a brush or roller
Color	Antique White
Finish	Flat
Primer	No primer required. Thermo-Lag [®] 220 should be applied directly to a clean wood substrate.
Wet Film Thickness	Application of two coats at 4 mils (100 microns) wet is recommended. *During the drying process, the coating will shrink due to the evaporation of water. In order to calculate the wet film thickness required, the following formula can be used: WFT=(DFT/Volume Solids)x100
Fireproofing Dry Film Thickness	4.5 mils DFT
Solids Content	By Volume 56%
Theoretical Coverage Rates	200 ft ² at 4.5 mils (112.5 microns)
VOC Values	As Supplied : 1.05 lbs/gal (126 g/l)
Topcoats	No topcoat required

SUBSTRATES & SURFACE PREPARATION

General	All surfaces must be clean, dry and free of oil, grease, dirt, dust or other materials which would impair the bond of Thermo-Lag [®] 220 to the substrate.
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MIXING & THINNING

Mixer	Use 1/2" electric or air driven drill with a slotted paddle mixer (300 rpm under load).
Mixing	Thermo-Lag [®] 220 must be mixed using a 1/2" electric or air driven drill with a slotted paddle or Jiffy mixer blade. Mix material for a minimum of 5 minutes to achieve the necessary texture required before spraying.
Thinning	Do not thin.

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Airless Spray	Use 1.0 gal. per minute electric airless (minimum) to provide an operating pressure of 3000 p.s.i. (320 kg/cm ²). Must have 30 mesh inline filter installed. Remove rock catcher from siphon tube.
Spray Gun	Silver Gun with gun swivel, Contractor Gun (with filter removed) or equivalent
Spray Tips	0.015" - 0.017" (Use Graco heavy duty RAC non diffuser tips and housing)
Fan Size	4"-10" (depending on section being sprayed)
Hose Length	150' (45 m)
Material Hose	3/8" I.D. minimum
Whip Hose	1/4" I.D. minimum (optional)

APPLICATION PROCEDURES

Airless Spray	It is recommended to apply two thin coats at 4 mils (112.5 microns) wet rather than one thick coat. The first coat must be dry before applying the second coat.
Application Rates	<p>At an ambient temperature of 70°F (21°C), the following application rates are applicable:</p> <p>4 mils (100 microns) per coat (wet) 2 coats per day 4 hours of dry time between coats</p> <p>*Two 4 mils coats (wet) will dry to a final DFT of 4.5 mils to meet a class A rating on Douglas Fir.</p>
Wet Film Thickness	Frequent thickness measurements with a wet film gauge are recommended during the application process to ensure uniform thickness.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	70°F (21°C)	41°F (5°C)	41°F (5°C)	0%
Maximum	100°F (38°C)	100°F (38°C)	105°F (41°C)	85%

CURING SCHEDULE

Surface Temp.	Handle	Recoat	Touch
77°F (25°C)	24 Hours	4 Hours	4 Hours

Drying Time will vary with temperature and humidity conditions. Air movement and thinner coats will assist drying.

CLEANUP & SAFETY

Cleanup	Pump, Gun, Tips and Hoses and mixer should be cleaned at least once per day with water.
Safety	Follow all safety precautions on the Thermo-Lag® 220 Material Safety Data Sheet. It is recommended that personal protective equipment be worn including spray suits, gloves, eye protection and respirators when applying Thermo-Lag® 220.

CLEANUP & SAFETY

- Overspray** | All adjacent and finished surfaces shall be protected from damage and overspray.
- Ventilation** | In enclosed areas, ventilation shall not be less than 4 complete air exchanges per hour until the material is dry.

MAINTENANCE

- General** | Damaged areas should be touched up or repainted by airless spray, brush or roller.

TESTING / CERTIFICATION / LISTING

- Underwriters Laboratories, Inc.** | Tested in accordance to ASTM E84 at Underwriter's Laboratories, Inc.

PACKAGING, HANDLING & STORAGE

- Packaging** | 5 gallons
- Shelf Life** | 12 Months
*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
- Storage** | Store indoors in a dry environment between 32°F - 100°F (0°C - 38°C). Protect from freezing.
- Shipping Weight (Approximate)** | 11 lbs. per gallon

WARRANTY

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated.