



## Magna Coatings Technology Inc.

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### **SAFE*COAT*<sup>®</sup> Latex Fire Retardant Coating**

#### **Product Description**

**SAFECOAT Latex Fire Retardant Coating** is a single component latex-based, intumescent fire retardant coating ideally suited for interior applications to SPF Plywood (Spruce/Pine/Fir), Oriented Strand Board (OSB), wood trusses and rough stud construction, where Flame Spread Ratings of 25 or less ("Class A" or Class 1) and low Smoke Developed Ratings are required. It limits flame spread by expanding to many times the original dry film thickness when exposed to heat. This expanded material forms a char which insulates the substrate against heat, and reduces available oxygen to the surface, thus limiting flame spread to a "**CLASS A**" rating on OSB, SPF plywood and Douglas Fir Decking as tested under **ASTM E84-91a** and **CAN4-S102-M88** standards in a single coat application sprayed at 150 ft<sup>2</sup>/USG. **SAFECOAT Latex** dries quickly to a flat (matte) finish, having the appearance of conventional flat paint.

#### **Uses:**

- imparts a Class A Flame Spread Rating to dimensional lumber, plywood and Oriented Strand Board (OSB).
- acts as a thermal barrier to protect foamed plastic insulation when used in conjunction with OSB.
- used in lieu of drywall on plywood and OSB for greater strength and resilience.
- replaces sprinklers in combustible concealed spaces, under NFPA-13.
- can be applied as a mandatory upgrade to assist owners and property managers to meet the latest fire and building code requirements. It may also be applied as a voluntary upgrade to lower fire risks and reduce insurance costs.

#### **Features:**

- is **non-toxic**. It contains no asbestos, harmful ingredients or solvents.
- is **cost effective**. A single coat applied at 150 ft<sup>2</sup>/USG achieves a "Class A" Flame Spread Rating.
- is **fire resistant**. It will not burn in liquid or solid state. Under fire conditions, it forms a char, preventing the spread of flames, and slowing the penetration of heat through the substrate (Fire Endurance).
- has excellent **adhesion** and **durability**.
- may be **tinted** with a latex based "Universal Tint".
- will adhere to **metal** and acts as a **rust-inhibitor**.
- is **easy to apply** – may be applied by brush, roller or spray.



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## **Technical Data *SAFE*COAT Latex**

### Typical Properties of **SAFECOAT** Latex Fire Retardant Coating:

<b>Coating Type</b>	Latex
<b>Finish</b>	White, flat finish
<b>Color</b>	<b>Standard</b> White <b>Optional</b> Black
<b>Tinting</b>	May be tinted. Use standard latex or universal colorants. Do not exceed 26 mL of tint per liter of Safecoat Latex.
<b>Specific Gravity</b>	10.9 lbs/US Gallon or 1.30 g/mL
<b>Solids by Weight</b>	58%
<b>Solids by Volume</b>	47%
<b>VOC</b>	16.3 g/l      0.14 lbs/USG
<b>Dry Time</b>	<b>Touch</b> 30 min. to 1 hour (varies with temperature and humidity) <b>Re-coat</b> 1 to 2 hours <b>Full cure</b> 48 hours
<b>Film Thickness</b>	<b>Wet</b> 10.7 mils <b>Dry</b> 5.0 mils
<b>Flash Point</b>	No Flash
<b>Storage Limits</b>	Keep from freezing (above 50°F recommended)
<b>Shelf Life</b>	24 months
<b>Packaging</b>	Available in one, five and fifty US gallon quantities.



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### ***Instruction for use of SAFE<sup>GOAT</sup>® Latex***

#### **Surface Preparation:**

All surface preparation should be carried out in accordance with good painting practices. Remove all loose, peeling or powdery paint from the surface. All dirt, grease, oil, wax and other foreign material must be removed with a suitable cleaner and allowed to thoroughly dry. Repair all cracks, holes and surface imperfections. All smooth or glossy surfaces should be dulled with sandpaper. New wood surfaces which will be exposed should be coated with a suitable sealer such as **SAFECOAT 725** to prevent tannin staining of the **SAFECOAT Latex** topcoat. This is particularly recommended when coating Oriented Strand Board.

#### **Application:**

**SAFECOAT Latex Fire Retardant Coating** can be applied by brush, roller or airless spray. Airless equipment is most desirable. Use Graco Model 450 or larger or other long-stroke piston type units. Alternatives include gravity fed "Hero" or other diaphragm units. Use a 16 to 21 thousand aperture, with a 12" fan for optimum results. Apply uniformly to entire surface. If thinning is required use clean water only and do not exceed 200 mL per gallon. Surface and ambient temperature must be maintained at greater than 50°F (10°C) during application and must remain so for at least 48 hours following the application.

**SAFECOAT Latex** is intended for interior use only. If the coated substrate will be subject to repeated washing or prolonged contact with moisture a finish coat of **SAFECOAT 725** is recommended. Please note that the addition of any finishing coat will affect the flame spread rating and smoke developed classification. Before applying any finishing coat consult the manufacturer or their representative.

A wet film thickness gauge can be used at the start of the application to check that sufficient **SAFECOAT Latex** has been applied. At an application rate of 150 ft<sup>2</sup>/USG the wet film thickness should be 11.7 mil and will yield a dry film thickness of 5.0 mil. The application of **SAFECOAT Latex** should be uniform and leave no exposed uncoated surfaces or edges. If the lumber is pre-coated it should be checked after installation to ensure that construction procedures have not created any exposed uncoated areas.

#### **Clean Up**

All application tools can be easily cleaned with water. If product has dried on use hot soapy water to soften and remove it.

#### **Precautions**

**SAFECOAT Latex** is not "WHMIS" regulated nor is it subject to the "Transportation of Dangerous Goods Act and Regulations". See MSDS for detailed precautions.



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## Test Results

Testing was conducted in accordance with **ASTM E84-91a and CAN4-S102-M88** "Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies" by Underwriters Laboratories of Canada. Following is a summary of the results of those tests.

Material	<sup>1</sup> FSR	<sup>2</sup> SDC
Douglas Fir Lumber, coated by <b>SAFECOAT</b> Latex with a single coat at a rate of 3.7 m <sup>2</sup> per liter.	5	5
S-P-F Plywood Coated by <b>SAFECOAT</b> Latex with a single coat at a rate of 3.7m <sup>2</sup> per liter and a single coat of <b>Safecoat</b> 725 overcoat at 7.4m <sup>2</sup> per liter. <sup>3</sup>	5	0
Oriented Strand Board 10 mm nominal thickness, coated by <b>SAFECOAT</b> Latex with a single coat at a rate of 3.7 m <sup>2</sup> per liter.	10	10-25

<sup>1</sup> FSR - flame spread rating

<sup>2</sup> SDC - smoke developed classification

<sup>3</sup> Safecoat 725 is not a fire retardant but is used solely to change gloss and scrubability of the Safecoat Latex

**NOTE:** The flammability characteristics of different species of lumber vary. However, the practice of using Douglas Fir as a standard test substrate provides a basis for the comparison of various coatings. **Oriented Strand Board (OSB) has a very high flame spread rating and as such requires an individual fire test as shown above. Do not extrapolate OSB Flame Spread rating based on Douglas Fir test results.**

It is accepted that the above mentioned values for Douglas Fir can be attributed to other species of lumber predicted to have a flame spread of 100 or less providing the lumber is minimum nominal 25 mm thick. These other species include:

Eastern White Pine	Western Hemlock
Lodgepole Pine	Western Red Cedar
Pacific Coast Yellow Cedar	Western White Pine
Select Red Oak Flooring	White Spruce

## Identification and Certification

Each container bears a label reading "Underwriters Laboratories of Canada" or "Warnock Hersey Laboratories of Canada - Listed - Fire Retardant Coating."

## Guarantee/Warranty:

Recommendations for the use of our products are based on tests carried out at government approved labs. Manufacturer and seller are not responsible for results where the product is used under conditions beyond our control. Under no circumstances will Magna Coatings Technology Inc be liable for consequential damages or damages to anyone in excess of the purchase price of the product or services.