Convoy Distribution Ltd.
Convoy Engineering
FireRetardantCoatings.com

SafeCoat® Latex Intumescent Coating

PRODUCT DESCRIPTION

SafeCoat Latex Intumescent Coating is a single component latex, intumescent fire retardant coating ideally suited for interior applications on various combustible substrates including 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. It provides a **"Class A"** Flame Spread rating of 25 or less as tested under **ASTM E84** and **CAN4-S102** standards and various Fire Resistance tested floor/ceiling/wall assemblies as tested under **ASTM E-119 Floor/Ceiling, NFPA 251, Small Scale Test, CAN4-S101. Meets the CAN/ULC S-101 and S-102 on 3/8" OSB for Edmonton and Calgary.**

USES

- imparts a Class A Flame Spread Rating to dimensional lumber, plywood and Oriented Strand Board (OSB)
- 16 minute fire resistance on 3/8" OSB sheathing
- 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 or as a voluntary upgrade to lower fire risks

FEATURES

- is **non-toxic.** It contains no asbestos, harmful ingredients, halogens or solvents with low VOCs
- is **cost-effective.** Applied at 150 ft^2/USG, it will 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
- has excellent **ahesion** and **durability**
- may be **tinted** with a latex based "Universal Tint"
- is **easy to use** - may be spray, brush, or roller applied

TECHNICAL DATA and PROPERTIES

Coating Type	Latex
Finish	White, flat finish
Color	**Standard:** White **Optional:** Black
Tinting	May be tinted (light colors only) Use standard latex or universal colorants. Do not exceed 26 mL of tint per liter of **SafeCoat Latex.**
Specific Gravity	10.9 lbs/US Gallon or 1.30 g/mL
Solids by Weight	58%
Solids by Volume	47%
VOC	25 g/l 0.2 lbs/USG
Dry Time	**Touch:** 30 min. to 1 hour (varies with temperature and humidity) **Recoat:** 1 to 2 hours **Full cure:** 48 hours
Film Thickness	**Wood** **Wet:** 10.7 mils (150 sq.ft./gallon) **Dry:** 5.0 mils **Foam** **Wet:** 21 mils (80 sq.ft./gallon) **Dry:** 10 mils (Class A Ignition Barrier only. Use with OSB for a thermal barrier)
Flash Point	No Flash
Storage Limits	Keep from freezing (above 50° F, 10°C required)
Shelf Life	24 months
Packaging	Available in one, five and 55 and 275 US gallon quantities

PRODUCT 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. The purchaser of this product must rely on his own judgement in determining suitability for his purpose, and in applying directions as to handling and use. Quantum makes no warranty, expressed or implied, except that if this product proves on inspection to be defective, Quantum will replace such quantity of the product proven to be defective or refund the purchase price of defective product. Labour costs and other consequential damages are hereby excluded. No representative or purported agent of Quantum has the authority to change this warranty. The information contained herein is subject to change without notice. If in doubt, contact your Quantum Representative for current Technical Data Sheets (TDS).

APPLICATION INSTRUCTIONS

Surface Preparation:
All surface preparation should be carried out in accordance with good painting practices. Remove all loose, peeling or powdery paint, dirt, grease, oil, wax and other foreign material with a suitable cleaner and allow to thoroughly dry. Repair cracks, holes and surface imperfections and dull smooth or glossy surfaces with sandpaper. To prevent tannin staining, new wood surfaces should be coated with a stain blocking primer**.** 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 used in an area of constant high humidity >70%, one finish coat of **Aquatherm Plus** is recommended. In-house weather testing has shown **SafeCoat Latex, with one topcoat of Aquatherm Plus** maintains its fire resistance**.** Please note that the addition of more than one finishing coat of **Aquatherm Plus** or other compatible latex paint, can adversely affect the flame spread and smoke developed ratings of the product. 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 ensure sufficient **SafeCoat Latex** has been applied. At an application rate of 150 ft^2/USG the wet film thickness should be 10.7 mil and will yield a dry film thickness of 5.0 mil. To provide an ignition barrier on spray-foam insulation, apply at 80 ft^2/USG. If a thermal barrier is required for foam to satisfy fire codes, 3/8" OSB top coated with **SafeCoat Latex** will provide both a thermal and ignition barrier. The application of **SafeCoat Latex** should be uniform and leave no exposed uncoated surfaces or edges. If the lumber is precoated it should be checked following installation to ensure that construction procedures have not created any exposed uncoated areas. Touch-up any exposed areas with **SafeCoat Latex.**

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.

TEST RESULTS

FLAME SPREAD INDEX

Testing was conducted in accordance with **ASTM E84** and **CAN4-S102** "Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies".

Material	[1]**FSR**	[2]**SDC**
Douglas Fir Lumber, coated by **SafeCoat Latex** at a rate of 150 Ft.^{2}/Gallon	**5**	**0**
S-P-F Plywood coated by **SafeCoat Latex** at a rate of 150 ft.^{2}/gallon and a top coat of **SafeCoat 725** at 300 ft.^{2}/gallon.	**5**	**0**
Oriented Strand Board 11 mm nominal thickness, coated by **SafeCoat Latex** with at a rate of 150 ft.^{2}/gallon	**10**	**20**
High density polyurethane foam coated with **SafeCoat Latex** at 80 ft^2/USG	**<25**	**<150**

[1]**FSR** - flame spread rating
[2]**SDC** - smoke developed classification
[3]**Aquatherm Plus,** a low VOC product, provides a durable and scrubable finish on the **SafeCoat Latex** when required. Other latex paints may also be applied in 1 coat for color, etc.

FIRE RESISTANCE RATING

Testing conducted in accordance with **CAN/ULC-S101/ ASTM E-119-08A, Fire Endurance Test of Building Construction and Material**

3/8" OSB Sheathing	**Time to Flame-Through**
SafeCoat Latex @150 ft^2/gallon	**17 minutes**

Testing conducted in accordance with **ASTM E-119 "Floor/Open Ceiling Assembly Fire Test", NFPA 251** "Small Scale Test" and **CAN4-S101** by Guardian Fire Testing Laboratories Inc. of Buffalo, NY.

Assembly NO GYPSUM	**Time to Flame-Through**
2"x10" nominal SPF floor joists, 16" on centre. 3/4" oriented strand board, tongue and groove flooring.	**46 minutes**
Underside assembly coated with **SafeCoat Latex** at a rate of 150 ft^2/gallon	**37 seconds**

Assembly WITH GYPSUM	**Time to Flame-Through**
2"x10" nominal SPF floor joists, 16" on centre. 3/4" oriented strand board, tongue and groove flooring.	**> 1 hour and 45 minutes**[1]

Ceiling: 5/8" type X gypsum wallboard. Exposed side of gypsum coated with **SafeCoat Latex** at a rate of 150 ft^2/gallon

[1]**No flame-through.** Test terminated due to heavy smoke

Assembly WITH TIN	**Time to Flame-Through**
TIN ROOF ASSEMBLY tested to the **CAN ULC S101**	**1 hour**

Test terminated at 1 hour with no flame through. Closed Ceiling/Floor Assembly 3/4" OSB with 24-Gauge Sheet Metal Ceiling with SafeCoat Latex at 150 ft^2/gallon

CERTIFICATION

Each container bears a label with the following marks:

CLASSIFIED UL ULC LISTED MPI LISTED #64

ULC Listing number is BMQXC.R19565.