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DESCRIPTION

Intumescent Coating is a single- component latex, intumescent fire retardant coating 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 **CAN/ULC S102** standards. **SafeCoat®** Latex is certified with UL/ULC listings for this rating.

QUICK REVIEW (For first-time use review entire TDS)

Application:



SafeCoat Latex can be applied by brush, roller or airless spray.

SurfacePreparation:

All surface preparation should be carried out in accordance with good painting practices

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.

PROPERTIES

Coating Type

Finish

Color

Latex
 White, flat finish
 Standard: White
 Special Order: Black

Tinting

May be tinted (light colors only)
 Use standard latex or universal colorants. Do not exceed 26 mL of tint per liter (3.32 oz./gallon) of **SafeCoat® Latex**.

Specific Gravity 10.9 lbs./US Gallon or 1.30 g/mL

Solids by Weight 58%

Solids by Volume 47%

Perm Rating 25

VOC 25 g/l or 0.2 lbs./USG

Dry Time

Touch: 30 minutes 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 NOT a Thermal Barrier

Wet: 21 mils (80 sq.ft./gallon)
Dry: 10 mils
 (For foam, **SafeCoat® Latex** provides an Ignition barrier only. OSB or plywood over foam is used when a thermal barrier is required by code.)

Flash Point

No Flash

StorageLimits

Keep from freezing
 (above 50° F, 10°C required)

Shelf Life

24 months

Packaging

Available in one, five, 55 and 275 US gallon quantities



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 (OSB).

Application:



SafeCoat® Latex 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 200mL per gallon. Surface and ambient temperature must be maintained at greater than 50°F (10°C) during application and must remain of or at least 48 hours following the application.

SafeCoat® Latex is intended for interior use only. If the coated substrate will be subject to frequent washing, ONE finish coat of a latex paint is required. Testing has shown **SafeCoat® Latex, with one top coat of another Latex paint** maintains its Class A Flame Spread Rating. Additional coats have not been tested and therefore cannot be recommended. 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 150ft.²/USG the wet film thickness should be 10.7mils and will yield a dry film thickness of 5.0mils.

To provide an ignition barrier on spray-foam insulation, apply at 80ft.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 pre-coated 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 SDS for additional information.

USES

- Imparts a Class A Flame Spread Rating to dimensional lumber, plywood and Oriented Strand Board (OSB) 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
- Used in lieu of drywall for Class A Flame Spread on plywood and OSB, providing greater strength and resilience than drywall

FEATURES

- **Non-toxic:** contains no asbestos, harmful ingredients, halogens or solvents and has low VOCs
- **Cost-effective:** applied at 150 ft.²/USG, to achieve a "Class A" flame spread rating
- **Fire-resistant:** 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 **adhesion** and **durability**
- **Tintable:** use a latex based "universal tint"
- **User-Friendly:** can be spray, brush, or roller applied

CERTIFICATION

Each container bears a label with the following marks:



Listing is BMQX.R19565. (QR Code for Listing access.)



TEST RESULTS

FLAME and SMOKE DEVELOPED RATING

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

Material	Application Description	Flame Spread Rating	Smoke Developed Classification
Douglas Fir Lumber	SafeCoat® Latex at a rate of 3.7 m ² /L or 150 sq. feet per gallon	5	5
SPF Plywood	SafeCoat® Latex at a rate of 3.7 m ² /L or 150 sq. ft. per gallon.	5	0
Oriented Strand Board High Density	OSB (11 mm nominal thickness), coated with SafeCoat® Latex at a rate of 3.7m ² /L or 150 sq. ft. per gallon.	10	20
Polyurethane Foam Ignition Barrier Note the additional instructions included when used as a Thermal Barrier	Coated with SafeCoat® Latex at 80 sq. feet per gallon meets the ignition barrier. This does not qualify the product as a thermal barrier over polyurethane spray foam which is part of the Canadian code requirement for residential/commercial applications. The addition of 3/8" OSB or SPF plywood coated with the SafeCoat® Latex as per above, over the spray foam would satisfy the thermal and ignition requirement.	25	150
3/8" OSB Sheathing for Residential Construction. Coated boards must bear the ULC-approved stamp.	Mineral & Fibre Board Listing CAN/ULC-S102 satisfies code requirements for residential construction for flame spread in Edmonton and Calgary jurisdictions for side-walls closer than 1.5 meters or outside the 10-minute response time. SafeCoat® Latex is listed and the application must also be listed. This requires the application to be done in a controlled environment by a certified applicator. Boards must bear the ULC Listed Stamp for Mineral and Fibre Boards. These boards meet the Class A Flame Spread requirement as well as the 15-Minute Fire Resistance requirement (see test below). Contact Quantum for additional information on availability of coated boards. SafeCoat® Latex Black at a rate of 3.7 m ² /L or 150 sq. feet per gallon	10	20
Douglas Fir Plywood		0	60

*Suitable latex paints may be applied in 1 coat on the **SafeCoat® Latex** to achieve a different colour, sheen, or more cleanable finish or when the product will be subject to frequent cleaning. Contact Quantum Chemical or our Quantum distributors for additional information if required.



TEST RESULTS

FIRE RESISTANCE RATING

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

Material	Application Description	Time to Flame Through
3/8" OSB Sheathing	CAN/ULC S101-07 Standard Method of Fire Endurance Tests of Building and Construction Materials. 3/8" OSB Sheathing coated with SafeCoat® Latex at 160 square feet per gallon.	17 minutes
Floor/Ceiling Assembly with 3/4" OSB	Tested in accordance with the ASTM E-119-05A Floor/Ceiling; NFPA 251-06, Small Scale Test, and CAN 4-S101-04. 2"x10" nominal SPF floor joists 16" on centre. 3/4" oriented strand board flooring. Underside assembly coated with	46 minutes 37 seconds
Floor/Ceiling Assembly with 3/4" OSB and 5/8" Type-X Gypsum	Tested in accordance with the ASTM E-119-05A Floor/Ceiling; NFPA 251-06, Small Scale Test, and CAN 4-S101-04. 2"x10" nominal SPF floor joists, 16" on centre. 3/4" oriented strand board flooring, 5/8" Type X Gypsum with the exposed side of the gypsum coated with SafeCoat® Latex at 150 square feet per gallon. There was no flame-through as the test was terminated due to heavy smoke at 1-3/4 hours.	1-3/4 hour
Floor/Ceiling Assembly with 3/4" OSB and 24-Gauge Sheet Metal	Tested in accordance with CAN/ULC S101 Closed Floor/Ceiling Assembly with 3/4" OSB and 24-Gauge Sheet Metal Ceiling coated with SafeCoat® Latex at 150 square feet per gallon. Test was terminated at 60 minutes with no failure.	1 hour
1/2" Regular Gypsum Wall Assembly	Tested in accordance with CAN/ULC S101-07 Standard Test Method for Fire Tests of Building Construction and Materials. Assembly consisted of 1/2" drywall; 2x4 wood stud frame; unbacked horizontal seam taped and mudded; 3.5" thick R-12 fibreglass insulation; and SafeCoat® Latex applied at 100 square feet per gallon. The assembly met burn-through and temperature rise requirements for 63 minutes.	63 minutes

Disclaimer: Product recommendations are based on tests conducted in government-approved laboratories. Quantum Chemical is not responsible for results where products are used under conditions beyond our control. Purchasers are responsible for determining product suitability for their specific application and following all handling directions. Quantum provides no warranty, expressed or implied, other than replacement of defective product or refund of purchase price. Labour costs and consequential damages are excluded. Product information is subject to change without notice. For the most current Technical Data Sheets (TDS), please contact your Quantum Representative.