



RADIANCE FR84 UV Curable Wood Coating Technical Data Sheet

RADIANCE FR84 is a single component, high solids, UV curable coating that has been formulated specifically for wood substrates. The material possesses excellent chemical resistance and is tack-free after exposure to UV light. The coating provides good flame retardancy and low flame spread (Class A) per ASTM E-84.

Properties of RADIANCE FR84

Density	1.05 +/- 0.05 g/cm ³
Minimum Solids Content	98 %
Viscosity, per Fed-Std-141, Meth. 4287	1100 +/- 250 centipoise
Recommended UV Cure*	See curing section below
Flame Spread Rating, per ASTM E-84	Class A
Hardness, Shore A	70

*Microwave UV cure ovens equipped with "H" style bulbs recommended

Application of RADIANCE FR84

Cleanliness of the substrate is of extreme importance for the successful application of a protective coating. Surfaces should be free of moisture, dirt, wax, grease, and all other contaminants. Contamination under the coating could cause problems that may lead to adhesion failures.

Brushing/Roller Coating

RADIANCE FR84 can be applied by brushing or roller coating. The use of solvent or thinners is not recommended. Uniformity of the film depends on operator technique. The brushing or roller coating should be done with adequate ventilation so that the vapors are carried away from the operator.

Curing

RADIANCE FR84 is a highly cross linked coating. In order to achieve maximum cross linking density the product must be exposed to the correct spectral output. The table below outlines the required dosage and irradiance values necessary to properly cure RADIANCE FR84 using a microwave style UV cure conveyers at speed of up to 30 m/min. After UV exposure and return to room temperature the coating should be tack free.

	DOSE J/cm ²				IRRADIANCE W/cm ²			
	UV A	UV B	UV C	UV V	UV A	UV B	UV C	UV V
MIN	0.700	0.700	0.150	0.750	0.700	0.700	0.150	0.700
MAX	3.000	3.000	0.600	3.500	1.150	1.150	0.240	1.300

Values measured with a Powerpuck II UV radiometer

RADIANCE FR84 was designed to be cured using a microwave UV conveyer equipped with an "H" style bulb.

Clean Up

To flush equipment and clean uncured RADIANCE FR84, non-alcohol based solvents, for example n- butyl acetate, and MEK etc. should be used.



Rework

RADIANCE FR84 is a highly cross linked UV cured coating. The cured film has a high degree of environmental and chemical resistance and will be more difficult to remove. The mechanical abrasion is suitable options for removal of RADIANCE FR84.

Storage

RADIANCE FR84 is photosensitive. The product should not be exposed to direct sunlight or full spectrum fluorescent lighting. RADIANCE FR84 should be stored away from excessive heat, in tightly closed containers at 0 °C to 25 °C to ensure maximum shelf life is achieved. Prior to use, allow the product to equilibrate for 24 hours at room temperature.

Caution

Application of Protective Coatings should be carried out in accordance with local and National Health and Safety regulations.

Use only in well-ventilated areas to avoid inhalation of vapors. Avoid contact with skin and eyes.

Consult SDS prior to use.

For further information on RADIANCE FR84 contact:

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