

DESCRIPTION: Rhino Eco-Coat® 11-85 is a fast set, rapid curing plural component aluminized hybrid polyurea spray applied lining for commercial and industrial roofing applications. Designed for rejuvenating aged recreational vehicle and trailer roofs, Rhino Eco-Coat produces a tough, abrasion and chemical resistant film that can be applied to flat, vertical and overhead surfaces in a single or multiple pass application from 10 mils to 50 mils without sags or runs. This bondable, paintable, versatile product remains flexible in cold temperatures and contains UV stabilizers for enhanced UV stability. It can be sprayed using high pressure plural component spray equipment. For proper application, it is essential to use approved plural component equipment.

TYPICAL USES:

- Recreational vehicle roof
- Commercial and industrial roofing

FEATURES & BENEFITS:

- Fast Cure – Can be walked on within minutes of being sprayed
- Water Proof – Prevents penetration of water
- Flexible – For long term impact and crack resistance
- Durable – High tensile strength, chemical and abrasion resistance
- Labor Savings – Required mils can be applied in one coat
- Excellent adhesion to most surfaces
- Thermal Stability – From -30°F to 230°F (-34°C to 110°C)
- Environmentally Friendly – low VOCs

CHEMICAL PROPERTIES:	Test	Isocyanate (A)	Resin (B)
Specific Gravity (grams/cc)	ASTM D-792	1.14	1.01
Viscosity, cps		300 – 450	850 – 1100
Solids by Volume/Weight		100%	100%
Volatile Organic Compounds		0 g/l	30 g/l
Mix Ratio, parts per volume		1	1
Gel Time, seconds		8	
Tack Free, seconds		40	
Recoat, max		1 – 2 hrs	
Return to Service		1 – 2 hrs	
Cure Time		1 hr min @ 70°F (21°C) (longer at lower temp)	
Theoretical Coverage		160 sqft/gal @ 10 mils 107 sqft/gal @ 15 mils 80 sqft/gal @ 20 mils 54 sqft/gal @ 30 mils 40 sqft/gal @ 40 mils 32 sqft/gal @ 50 mils	
Odor		Sweet	Slight solvent
Color		Clear/Yellow	Silver/Metallic
Shelf Life - Unopened Containers		12 months	12 months

TYPICAL PHYSICAL PROPERTIES:	Test	Result
Hardness (Shore A)	ASTM D-2240	85±5
Tensile Strength (psi)	ASTM D-638	1850 – 1950
Tear Resistance (pli) Die C	ASTM D-624	300 – 400
Elongation (%)	ASTM D-638	380 – 420
Taber Abrasion Resistance (mg of loss/1000 cycles) H18 Wheel; 1000 grams weight	ASTM D-4060	170

(continued)

RHINO ECO-COAT® 11-85

TYPICAL PHYSICAL PROPERTIES (continued):

	Test	Result
Permeability (perms)	ASTM E-96	0.022
Weathering/UV Resistance (2,000 hrs):	ASTM G-53	No integrity loss
Solar Reflectance*		76%
Solar Reflectance Index*		77
Thermal Emittance*		.27

*Properties were checked on the standard color - silver metallic

PROCESS TEMPERATURE AND ENVIRONMENT CONDITIONS: The system settings required to achieve a quality spray application will vary depending on environmental and substrate conditions. The following recommended parameters will help ensure optimum sealant quality.

Equipment	Process Pressure	Spray Gun
1:1 ratio proportioner that maintains pressure and temp specs	2000 – 3000 psi (static)	Various - see mfg specs

Process Temperatures

Iso & Resin Component	Substrate Surface
170° – 190°F (76.7° – 87.8°C)	>40°F (4°C) & 5°F above dew point

DRY FILM THICKNESS: Varies based on application, typically a minimum of 25 mil (0.635 mm) up to unlimited thickness

PREPARATION: Any physical damage to the roof must be repaired prior to coating application. Roof surface must be clean, dry and free of any mildew, oil, grease, dirt, loosely adhered roofing materials, or other foreign contaminants that would prevent proper adhesion. Oily or painted surfaces may require solvent cleaning and abrading or scarifying of the surface to provide mechanical adhesion of the coating. Non-painted surfaces should be clean and rough enough to provide good mechanical adhesion. Metal or concrete may need to be sandblasted to achieve a surface profile similar to 80-grit sandpaper for proper adhesion of primer (if applicable) and coating. After contaminants are removed, and roof surface has been rinsed, application surfaces must be checked for compatibility. Always perform a coating adhesion test before doing the entire roof. Depending on the roof surface type and condition, a primer may be required to ensure proper adhesion.

Precautions must be taken when applying Rhino Eco-Coat 11-85 to occupied buildings to ensure that air conditioners and ventilation units are turned off and covered to prevent vapors from entering the building. Windows should be closed during application. Signs should be posted around application area to restrict entrance into application area and to warn building occupants or passerby of the respiratory risk.

APPLICATION INSTRUCTIONS: The successful installation of Rhino Eco-Coat 11-85 will depend on the equipment capabilities and settings, the temperature of the coating in the container, ambient temperature and relative humidity percentage, substrate temperature and moisture content, substrate type and condition. It is the responsibility of the applicator to take these factors into consideration prior to installation. If material appears thickened due storage at cold temperatures, store material for a sufficient length of time in a warm area prior to application to bring material temperature to 70°F (21°C). Thinning is not recommended.

All polyurethane foam should be coated the same day it was applied. If it cannot be coated until the next day, a primer should be applied prior to continuing the application. Additional coats should be applied as soon as previous coat is dry and cured to ensure full, uniform adhesion (generally within 1 hour).

It is recommended that the edges, joints, and seams, in the roof be precoated.

Rhino Eco-Coat 11-85 is applied in two or more separate coats to ensure proper coverage, cure rate, and to provide a continuous, durable film without pinholes. Individual coats of Rhino Eco-Coat 11-85 should be applied in perpendicular direction to the previous coat. Rhino Eco-Coat 11-85 can be reinforced with glass fiber mat or nylon mesh, particularly over seams and joints, to increase tensile strength and improve the consistency of the application surface. The mat or mesh should be open enough that the coating can penetrate to the substrate or previous coat, as the speed of reactivity will prevent incorporation of the mat or mesh into the middle of the applied coating. Be advised that adding the mat/mesh will increase tensile strength, it will reduce elongation.

In high-traffic areas, it is recommended that Rhino Eco-Coat 11-85 be reinforced and have sand or similar aggregate broadcast onto it for increased abrasion resistance.

It is the responsibility of the building owner(s) to verify that your roofing contractor maintains proper credentials, insurance, and licenses and is properly trained to safely install roof coating products.

NOT RECOMMENDED FOR: Applications where direct contact with extremely high or low pH will occur.

CHEMICAL RESISTANCE: Rhino Eco-Coat provides good resistance to many commercial and industrial chemicals such as acids, alkalis, oils and cleaning chemicals. For specific applications and information, please consult a Rhino® representative.

SUBSTRATES: Rhino Eco-Coat 11-85 is compatible with all common building & roofing materials including electrical wiring, wood, metal, concrete, plastic (PVC), copper, vinyl, glass, asphalt, EPDM rubber, TPO, aggregate, spray foam, and others.

(continued)

RHINO ECO-COAT® 11-85 (continued):

COLOR OPTIONS: Standard colors – reflective silver, black, dark gray. Custom colors available on request.

HOW SUPPLIED: Chemical is packaged in drums or pails. A drum set of Rhino Eco-Coat consists of one (1) 55 gallon (208 L) drum of 'A' component and one (1) 55 gallon (208 L) drum of 'B' component.

Part A - iso, part #: FFPU-ARNTFLEX 85AH PT A

Part B - resin, part #: FFPU-ARNTFLX85AH B ALUM

STORAGE: Rhino Eco-Coat 11-85 should be stored between 50 – 95°F (10 – 35°C). It is affected by moisture and must be protected from moisture contamination. Rhino Eco-Coat must never be stored in direct sunlight or allowed to freeze.

SAFETY PRECAUTIONS: Health Considerations: Consult the Rhino Linings® Safety Data Sheets (SDS)

This chemical system requires the use of proper safety equipment and procedures. Please follow the Rhino Linings® product SDS and Safety Manual for detailed information and handling guidelines.

For Your Protection: The information and recommendations in this publication are, to the best of our knowledge, reliable. Suggestions made concerning the products and their uses, applications, storage and handling are only the opinion of Rhino Linings Corporation. Users should conduct their own tests to determine the suitability of these products for their own particular purposes and of the storage and handling methods herein suggested. The toxicity and risk characteristics of products made by Rhino Linings Corporation will necessarily differ from the toxicity and risk characteristics developed when such products are used with other materials during a manufacturing process. The resulting risk characteristics should be determined and made known to ultimate end-users and processors.

Because of numerous factors affecting results, **Rhino Linings Corporation makes no warranty of any kind, express or implied**, other than that the material conforms to its applicable current Standard Specifications. Rhino Linings Corporation hereby disclaims any and all other warranties, including but not limited to those of merchantability or fitness for a particular purpose. No statements made herein may be construed as a representation or warranty. The liability of Rhino Linings Corporation for any claims arising from or sounding in breach of warranty, negligence, strict liability, or otherwise shall be limited to the purchase price of the material.

©2015 Rhino Linings Corporation. All rights reserved.