Rhino Linings®

DURATITE™ 1070

Data Sheet

DESCRIPTION: DuraTite® 1070 is single component, acrylic elastomeric roof coating that demonstrates excellent adhesion to polyurethane foam, concrete, masonry, primed metal, primed wood, and primed asphalt. Once fully cured, DuraTite 1070 demonstrates exceptional weatherability and UV resistance and can be used as a base coat/top coat roofing system, or as a top coat over urethane or butyl coatings. DuraTite 1070 features highly reflective, bright-white surface lowers roof surface temperatures, which reduces solar heat-gain, lowers cooling costs, and minimizes the effects of thermal shock on the roof and structure.

TYPICAL USES:

- Coating over spray polyurethane foam (SPF), concrete, masonry, metal, wood and asphalt (*contact Rhino Linings for primer recommendations*)
- Commercial and industrial roof coating

FEATURES & BENEFITS:

- Easy and convenient to apply
- Fast drying
- Extends roof life
- Can be applied with airless sprayer, brush or roller
- UL 790 Class A Rating over non-combustible deck
- UL 790 Class B Rating over combustible deck
- CRRC Rated. Meets ANSI/CRRC S100 Standards
- Energy Star® Certified Product
- Title 24 compliant

CHEMICAL PROPERTIES:	Test	Result
Specific Gravity (grams/cc)	ASTM D-2939	1.44
Specific Weight (lbs/gal)		12.02
Solids by Volume	ASTM D-1644	60% ± 3
Solids by Weight	ASTM D-1644	70% ± 3
Volatile Organic Compounds (g/l)	EPA Method 24	< 50
Flash Point	ASTM D-1310	>212°F (100°C)
Shelf Life - Unopened Containers		12 months

REACTION TIME & COVERAGE:	Test	Result			
Dry to Touch @ 77°F (25°C)*		1 hour			
Tack Free @ 77°F (25°C)*		4 – 8 hour			
Recoat Time @ 77°F (25°C)*		2 – 8 hours			
Theoretical Coverage**		DFT	WFT	Application Rate	Coverage Rate
		12 mil	20 mil	1.25 gal/sq	80 sqft/gal
		18 mil	30 mil	1.87 gal/sq	50 sqft/gal
		24 mil	40 mil	2.49 gal/sq	40 sqft/gal
		36 mil	60 mil	3.74 gal/sq	27 sqft/gal
		48 mil	80 mil	4.99 gal/sq	20 sqft/gal
Flash Point	ASTM D-1310	>212°F (100°C)			

*Dry and cure times are dependent upon mil thickness and temperature and relative humidity at the time of application. High temperatures and low relative humidity will accelerate the drying and curing process, while low temperatures and high relative humidity will slow the process. **Theoretical Coverage is based on 0% loss and is dependant on surface texture and porosity of substrate.

TYPICAL PHYSICAL PROPERTIES:	Test	Result
Hardness (Shore A):	ASTM D-2240	50 ± 5
Tensile Strength (psi):	ASTM D-2370	235 ±25
Elongation (%):	ASTM D-2370	125 ± 25
Tear Resistance (pli) Die C:	ASTM D-624	70.0
Permeability (perms) @ 22 mils:	ASTM D-1653	3.8

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DURATITE® 1070 *(continued)*:

Weathering/UV Resistance (6,000 hrs):	ASTM G-53	No degradation
Reflectivity (white):	ASTM C-1371	69% aged 3 yr
Emissivity (white):	ASTM C-1371	0.92 aged 3 yr
SRI Value:		99

PROCESS TEMPERATURE AND ENVIRONMENT CONDITIONS: DuraTite 1070 can be spray-applied using approved equipment. The system settings required to achieve a quality coating application will vary depending on environmental and substrate conditions. The following recommended parameters will help ensure optimum quality.

DO NOT APPLY WHEN ROOF SURFACE IS BELOW 50ºF (10°C), OR WHEN WEATHER CONDITIONS WILL NOT ALLOW ADEQUATE CURING OF THE COATING. DO NOT APPLY IF RAIN, DEW OR FREEZING TEMPERATURE ARE LIKELY TO OCCUR PRIOR TO WHEN THE PRODUCT WILL DRY AND CURE. DO NOT APPLY WHEN AMBIENT TEMPERATURE IS WITHIN 5 DEGREES OF THE DEW POINT OR IS EXPECTED TO BE WITHIN 5 DEGREES OF THE DEW POINT WITHIN 24 HOURS FOLLOWING APPLICATION.

Application in direct sunlight or on hot metal surfaces may skin too quickly resulting in blistering if product is applied too heavily. DuraTite 1070 should not be applied on a roof surface where ponding water can collect.

Equipment	Processing Pressure	Equipment Output	Filter Screen
30:1 or 45:1 airless sprayer	3000 – 4000 psi	> 2.5 gallons per minute	30 mesh or larger

Acrylic Temperature	Ambient Temperature	Substrate Temperature	Humidity
>65°F (18.3°C)	50 – 110°F (10 – 43.3°C)	50 – 135°F (10 – 57.2°C)	<85% RH

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. Any such contaminants must be removed from the application surface via power washer, and/or broom using the appropriate detergents and/or bleach and then roof surface rinsed with clean water. 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.

MIXING INSTRUCTIONS: DO NOT THIN. Prior to use, thoroughly mix DuraTite 1070 with an air or electrically driven power mixer for a minimum of 5 minutes. Mixer speed should be set fast enough to uniformly mix the entire container but not so fast as to introduce air into the coating while mixing. For 5 gallon pail, use a minimum 3" mixing blade, for drums use a minimum 6" mixing blade. Previously opened containers, or containers that have been stored for an extended length of time, may develop a skin on top of the coating, which must be removed prior to mixing.

APPLICATION INSTRUCTIONS: The successful installation of DuraTite 1070 will depend on the equipment capabilities and settings, the temperature of the coating in the container, ambient temperature and relative humidity, 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 to storage at cold temperatures, store material for a sufficient length of time in a warm area prior to application to bring material temperature to 65°F. No thinning or reducing is necessary. DuraTite 1070 is an evaporative cure product and must be applied in ambient conditions that enable evaporation in order to cure properly.

DuraTite 1070 can be sprayed, brushed, or rolled. When using airless spray equipment, to ensure proper pressure and delivery to the spray gun, use the following rules for hose diameter and length:

Min. 3/8" ID up to 75' Min 1/2" ID up to 200'
Min 3/4" ID greater than 200' Min 3/8" ID and Max 6' L for whip hose if applicable

ALWAYS use larger diameter hose sections nearest the pump. Use reversible, self-cleaning gun tip with an orifice size of .027-.039 with a 40°-50° fan angle. ALWAYS use components with the proper pressure ratings that are in good working order. A natural bristle brush or a medium nap roller can be used for touch-up and edge work, or for small areas that are not practical for spray application. Avoid rapid rolling to minimize pinholes and bubbling. Do not apply at a rate greater than 1.25 gallons per 100 sq.ft. per coat.

Polyurethane foam should be coated within 24 hours after foam has been sprayed and additional coats of DuraTite 1070 should be applied as soon as previous coat is dry and cured to ensure full, uniform adhesion.

It is recommended that DuraTite 1070 be 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 DuraTite 1070 should be applied in perpendicular direction to the previous coat. It is recommended that the edges, joints, and seams, in the roof be precoated. For application in high humidity or low temperature environments, apply product in thin passes to promote proper drying and curing.

It is the responsibility of the building owner(s) to verify that the roofing contractor maintains proper credentials, insurance, and

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DURATITE® 1070 *(continued)*:

licenses and is properly trained to safely install roof coating products.

SUBSTRATES: Polyurethane foam, concrete, masonry, primed metal, primed wood, and primed asphalt

HOW SUPPLIED: Chemical is packaged in 55 gallon (208 L) drum with net weight of 633 pounds (287.1 kg) or 5 gallon (18.9 L) pail with net weight of 56 pounds (25.4 kg).

DuraTite 1070 White Part #: FFRC-DURATITE 1070 WHITE
DuraTite 1070 Gray Part #: FFRC-DURATITE 1070 GRAY
DuraTite 1070 Light Gray Part #: FFRC-DURATITE 1070 LT GRAY

COLOR OPTIONS: Standard colors: white, light gray and gray. All other colors are custom matched for the specific application. Color chips or samples must be furnished for all custom colors and samples must be approved by customer prior to mass production.

STORAGE: DuraTite 1070 should be stored between 35 – 75°F (1.7 – 23.9°C) out of direct sunlight. Do not allow material 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.

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Rhino Linings Corporation
9747 Businesspark Avenue, San Diego, CA 92131
858-450-0441 • Fax 858-450-6881
1-800-422-2603
www.rhinolinings.com

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