

**DESCRIPTION:** DuraTite® 1380 is a ready-to use, single component, moisture cure, fluid applied, silicone coating suitable for use in new and recoat applications. As a standalone product, DuraTite 1380 forms a breathable membrane that provides elemental protection for exposed and covered roofing architectural surfaces such as vertical/horizontal walls and surfaces, masonry, concrete, metal, single-ply membranes and sprayed-in-place urethane foam systems. DuraTite 1380 silicone coating is resistant to chemical attack and abrasion and can be successfully installed in a wide range of ambient temperatures and humidity levels and will cure under cold, ponded water. It is not affected by ponding water; however roofing systems should be designed and built to ensure positive drainage.

**TYPICAL USES:**

- Coating over spray polyurethane foam (SPF), concrete, masonry, metal and single-ply membranes
- Commercial and industrial roof coating
- Topcoat for elastomeric basecoats for added traffic and impact resistant characteristics

**FEATURES & BENEFITS:**

- Fast drying
- Extends roof life
- Can be successfully installed in a wide range of ambient temperatures and humidity levels
- Can hold up to ponding water
- Can be applied with high pressure airless sprayer, brush or roller

**CHEMICAL PROPERTIES:**

	Test	Result
Specific Gravity (grams/cc)	ASTM D-792	1.24
Specific Weight (lbs/gal)		10.34 (1.24 kg/l)
Viscosity (cps) @ 77°F (25°C)		5000 – 10,000
Solids by Volume	ASTM D-2697	69% ± 2
Solids by Weight	ASTM D-1644	80% ± 2
Volatile Organic Compounds (g/l)	EPA Method 24	< 250
Flash Point	ASTM D-93	>105°F (40°C)
Shelf Life - Unopened Containers		12 months

**REACTION TIME & COVERAGE:**

	Result			
Tack Free Time*	1 hour			
Recoat Time* (min – max)	2 – 24 hours			
Cure Time* @ 100°F (37.8°C) w/ 90%RH	2 hours			
40°F (4.4°C) w/ 20%RH	8 hours			
Theoretical Coverage**	DFT	WFT	Application Rate	Coverage Rate
	20 mil <sup>†</sup>	35 mil	2.2 gal/sq (.90L/m <sup>2</sup> )	46 sqft/gal (1.13m <sup>2</sup> /L)
	25 mil	53 mil	3.3 gal/sq (1.34L/m <sup>2</sup> )	31 sqft/gal (.76m <sup>2</sup> /L)
	30 mil	70 mil	4.4 gal/sq (1.79L/m <sup>2</sup> )	23 sqft/gal (.56m <sup>2</sup> /L)

\*Dry and cure times are dependent upon mil thickness and temperature & 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. \*\* Actual coverage rates will be determined by substrate texture, roof conditions, and the skill and experience of the applicator. Theoretical coverage based on 100% transfer efficiency. <sup>†</sup>20 mil minimum recommended thickness.

**TYPICAL PHYSICAL PROPERTIES:**

	Test	Result
Hardness (Shore A)	ASTM D-2240	50 ± 5
Tensile Strength (psi) @ 73°F (22.8°C):	ASTM D-412	485 ± 20 (34.1±1.406 kgf/cm <sup>2</sup> )
0°F (-17.8°C):		700 ± 20 (49.21±1.406 kgf/cm <sup>2</sup> )
Elongation (%) @ 73°F (22.8°C):	ASTM D-412	265 ± 20
0°F (-17.8°C):		285 ± 20

(continued)

**DURATITE® 1380 (continued):****TYPICAL PHYSICAL PROPERTIES:**

Test	Result
Tear Resistance (pli) Die C:	ASTM D-624 35 ± 2
Permeability (perms):	ASTM E-96 5.9
Water Absorption (after 2 weeks @ 75°F)	ASTM D-471 0.1%
Temperature Stability Range	-80 – 350°F (-62.2 – 176.7°C)
Maximum Continuous Service Temperature	185°F (85°C)
Weathering/UV Resistance (8,750 hrs):	ASTM G-53 No degradation
Reflectivity (white):	ASTM C-1549 65% aged 3 yr
Emissivity (white):	ASTM C-1371 .90 aged 3 yr
SRI Value:	105 initial

**PROCESS TEMPERATURE AND ENVIRONMENT CONDITIONS:** DuraTite 1380 can be spray-applied using approved equipment. The system settings required to achieve 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 50°F (10°C) or if rain is expected within 1 hour of application. Application below recommended temperatures will extend cure time.

Equipment	Processing Pressure	Equipment Output	Transfer Pump
High pressure airless sprayer	3500 psi (at gun)	3 gallons per minute	Minimum 5:1 feed

Hose (do not use hose used for acrylics or water borne coatings)	Spray Tip
BUNA-N jacketed with 3/4" ID	Reversible self-cleaning, >0.030 orifice, 50° fan tip

Silicone Temperature	Ambient Temperature	Substrate Temperature	Humidity
>65°F (18.3°C)	50 – 115°F (10 – 43.3°C)	50 – 135°F (10 – 57.2°C)	<90% RH

**PREPARATION:** Any physical damage to the roof must be repaired prior to coating application. Application 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. Be aware that a primer may be necessary to enhance adhesion.

**MIXING INSTRUCTIONS:** DO NOT THIN. DO NOT USE an electric mixer as solvents used in DuraTite1380 are flammable. Before use, mix well with a 3/4 horsepower or larger air operated mixer with a blade capable of uniformly mixing the entire container. When product is in 5-gallon pails, use a 3" minimum diameter-mixing blade. Handmixing with a suitable mixing blade is acceptable. When product is in drums, use a 6" minimum diameter-mixing blade. 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. 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:** Keep DuraTite 1380 away from all sources of heat, sparks, flame or any other ignitions source. Pumping equipment should be grounded to avoid accidental ignition due to static sparks. DuraTite 1380 can be sprayed, brushed, or rolled. Due to its high viscosity, DuraTite 1380 is best suited for application through airless spray equipment with a minimum output of 3 gpm (gallons per minute) and minimum operating pressure of 3500 psi at the gun. The sprayer should be fed with a minimum 5:1 transfer pump to prevent sprayer cavitation. The successful installation of DuraTite 1380 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. DuraTite 1380 is a moisture cure product. Do not use hose that has been used for acrylics or other waterborne coatings as the liner absorbs moisture and initiates the silicone cure process. 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). No thinning or reducing is necessary.

SPF should be coated within 24 hours after foam has been sprayed and additional coats of DuraTite 1380 should be applied as soon as previous coat is dry and cured to ensure full, uniform adhesion.

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

DuraTite 1380 may be applied in two or three separate coats of contrasting colors, each applied perpendicular to the previous coat. Application of multiple coats ensures proper coverage, cure rate, and to provide a continuous, durable film without pinholes. Each coat should be applied within 24 hours of the prior coating and as soon as previous coat is dry and cured to ensure full, uniform adhesion. Typical cure time is 2 – 8 hours per coat depending on ambient conditions. If any contamination

(continued)

**DURATITE® 1380 (continued):**

of a thoroughly cured surface occurs, it must be washed with a chemical cleaner before applying subsequent coats. Coating must be extended beyond the substrate to create a self-terminating flashing.

For improved aesthetics and durability #11 ceramic roofing granules may be installed in the topcoat.

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.

**CLEAN-UP:** DuraTite 1380 cures by reacting with moisture. If equipment doesn't have moisture lock hoses, fittings and seals and will sit for prolonged periods of time, flush equipment including the spray gun and hoses with VM&P Naphtha or mineral spirits. Equipment without moisture lock components will allow moisture to gradually form cured material causing increased operating pressure and restricted material flow.

**NOT RECOMMENDED FOR:** Do not use for continuous immersion service, in cryogenic tank or cold storage roofing applications without a vapor barrier, or directly over modified Bitumen, asphalt or coal tar built-up roofing systems without a sealer.

**SUBSTRATES:** Horizontal, inclined and vertical surfaces, polyurethane foam, concrete, masonry, metal and single-ply membrane

**HOW SUPPLIED:** Chemical is packaged in 55 gallon (208 L) drum with net weight of 517 pounds (234.5 kg) or 5 gallon (18.9 L) pail with net weight of 51.7 pounds (23.5 kg).

DuraTite 1380 White Part #: FFRC-WATERSHED 1385 WH-P, FFRC-WATERSHED 1380 WH-D

DuraTite 1380 Gray Part #: FFRC-WATERSHED 1380 GR-P

DuraTite 1380 Light Gray Part #: FFRC-WATERSHED 1380 LGRAY-P

**COLOR OPTIONS:** Standard colors: white, gray and light gray. All other colors are custom matched for the specific application. Allow up to 20 days for non-standard colors. Color chips or samples must be furnished for all custom colors and samples must be approved by customer prior to mass production.

**STORAGE:** DuraTite 1380 should be stored between 35 – 75°F (1.7 – 23.9°C) out of direct sunlight.

**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.

©2017 Rhino Linings Corporation. All rights reserved.