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EnerFlect Glass Roof Coating

Technical Data & Application Protocol

APPEARANCE:	TYPE		Elastomeric Coating
	COLOR		White
	SHEEN		Flat
APPLICATIONS:	Roofs, walls, ducts, pipes, tanks, etc.		
ENERGY:	SOLAR REFLECTANCE	0.85 (CRRC initial rating)	
	THERMAL EMITTANCE	0.89 (CRRC initial rating)	
	EMISSIVITY (OR TRANSMISSIVITY)		0.206 (E)
WEIGHT:	SOLIDS WEIGHT	60%	
	SOLIDS VOLUME	56.56%	
	VEHICLE WEIGHT	50.3%	
	PIGMENT WEIGHT	24.1%	
	GALLON WEIGHT	8.25 lbs.	
	VISCOSITY		127 KU
GENERAL:	FLASH POINT		n/a
	DRYING TIME		3 – 6 hours
	TOUCH		1 hour
	RECOAT		2 – 3 hours
	FULL CURE		24 hours
	REDUCING SOLVENT		water
	CLEAN UP		soap & water
	TINTING		up to 4oz. universal colorant (must shake longer than normal paint)
	COVERAGE		75 – 200+ sq.ft./gallon Application should be thick
WARRANTY:	10-year	Valid only if EnerFlect is applied at	125 – 200 sq ft over EnerFlect Primer.
	15-year	Valid only if EnerFlect is applied at	75 – 100 sq ft over EnerFlect Primer.

The Enerflect goes on at about 20 mils wet and dries to about 12 mils dry. These numbers are in line with most of the quality elastomerics. The solids of good elastomerics are typically in the 60% range, so if you apply 20 mils wet they end up at 12 mils dry.

75 sf./gal=	**.0213"**	**thickness (Wet Applied)**	**Dries to .0128" thickness**
100 sf./gal=	**.016"**	**"**	**Dries to .01" thickness**
125 sf./gal=	**.0123"**	**"**	**Dries to .008" thickness**
150 sf./gal=	**.0106"**	**"**	**Dries to .0064" thickness**
200 sf./gal=	**.008"**	**"**	**Dries to .005" thickness**

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Surface Preparation:

Good surface preparation is extremely important and if not carefully followed will void the warranty. Three conditions must be adhered to:

1. Surface integrity - refers to the surface material being free of holes or cracks and being firmly attached to the supporting structure or material. Mechanical attachments, such as nails, screws, or bolts are to be secured to mating parts and, when appropriate, sealed with sealer/caulk. **Silicon caulking is not to be used.** All holes and cracks are to be sealed and closed using any standard non-silicon sealer/caulk.
2. Surface cleanliness - refers to the surface being free from dirt, grease, oil, loose rust or loose coating material which could interfere with or degrade adhesion. Metal surfaces which do not have tightly adhered oxides, such as steel, or similar metals, require sanding or wire brushing, followed by power washing. Simply sweeping a wall surface to remove dirt or debris is ineffective. For metal surfaces that have strongly adhered oxides such as aluminum, power washing is required. For non-metal surfaces, power washing is recommended. Power washing may require a cleaner, such as TSP (Tri-sodium phosphate) for tough dirt. After power washing the debris must be removed from the cleaned surfaces, by vacuuming. **Wet surfaces must be allowed to dry for at least 48 hours before applying EnerFlect.**
3. Surface, and materials beneath the surface, dryness. Dryness is extremely important and must be assured. Moisture degrades the coating and adhesion of the coating to the surface if moisture is present during the coating process. Sufficient time, approximately 48 hours, and energy input are needed to remove and eliminate the moisture. Layered substrate surfaces, such as overlapping layers, must be examined between the layers to assure dryness. **If moisture is detected, application must be suspended until the moisture is eliminated.**

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Cleaning Protocol:

PREPARATION:		Proper surface preparations are very essential. Surface must be clean free of all debris, loose granules, mildew and algae growth, as well as any stains. Any stains remaining will ruin the appearance of an EnerFlect Roof. Shingle and Roofs: shingle and roofs should be cleaned chemically rather than high pressure cleaned. Metal roofs may be pressured washed. When chemicals have cleaned surfaces, including all stains, rinse thoroughly with clean water. The following are recommended solution and cleaning procedures:
CHLORINE SOLUTION:		Pool Chlorine (liquid): Approx. strength at time of delivery to your supplier is 10 %. For 2% Chlorine Solution: Mix 4 parts water to 1 part Chlorine ratio.
CLEANING ROOFS:		With the recommended 2 % Chlorine Solution, wet the surface to be cleaned repeatedly until all areas are well saturated, but not excessively wet, taking care not to have too much Chlorine Solution run over the edge of roof on to shrubbery.
MANTAIN WET SURFACE:		It is most important to keep the chlorine solution that has been applied to the surface wet with water at all times until the rinse cycle is completed. Allowing the surface to dry will set stains making pressure cleaning useless. By maintaining a wet surface, the chlorine in the wet surface will do its purpose and evaporate rapidly , leaving very little of the chlorine to be rinsed off during pressure cleaning, therefore limiting the damage to shrubbery and grass.
FOR LARGER ROOFS:		Do smaller sections at one time, large sections will dry too fast. Do only enough roof area so that directions can be easily followed.
PRESSURE CLEANING MACHINE:		MACHINES delivering 7 gal. per min. or more:
Step 1.		Start at hip of roof, clean area parallel to hip or ridge. Continue this pattern until reaching edge of roof. DO NOT hold fan of water any closer than needed to flush dirt off granules. Holding fan too close destroys shingles. (see CAUIONS following this sections). Hold fan pf pressure cleaning gun as high as you can to flush dirt from shingles, this also minimizes of granules.
Step 2.		Starting at top or ridge, rinse until no more dirt floats up from between the granules on shingle.
Step 3.		After pressure cleaning . If any stains still remain, treat stains again with a chlorine solution. Leave on for 1 to 2 minutes, then rinse again.

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Cleaning Protocol: (Cont.) FOR PRESSURE WASHING MACHINES DELIVERING LESS THAN 7 GAL. PER MINUTE		
		Follow steps 1 thorough 3 but also include steps 4 and 5.
Step 4.		On pressure cleaning cycle, keep the remainder of the roof wet with a water hose while cleaning area.
Step 5.		On final rinse, flood area to be rinsed with a water hose while using pressure to push water furnished by hose over the edge of the roof. This will raise the dirt from the granules allowing it to be pushed over the edge. Now that the Roof is thoroughly cleaned and dry, you are ready for an application of EnerFlect. For suggested instructions of EnerFlect application, see data sheet: EnerFlect application.

******CAUTIONS ******

Do not allow any part of the surface to dry from time Chlorine solution applied to the final rinse.

NEVER:		Point pressure cleaning gun up hill, this will lift edges of shingles and force dirt and debris under the shingle. Point the pressure cleaning gun down hill, in this way shingle are not lifted and dirt is flushed down the roof as intended.
DO NOT LEAVE:		Chlorine solution on shingle any longer than it takes to saturate the roof. Pressure clean immediately following thereafter. When a Chlorine solution is left on the shingles too long it will dry oils from the shingles.
DO NOT HOLD PRESSURE TOO CLOSE:		To shingle surface, as the friction of high pressure will create heat and again dry oils from shingles. Hold fan of pressure cleaner high while flushing dirt from shingles.
FINALLY:		If chlorine solution is left too long or pressure is held too close it will result in drying the oils from shingles. If either or both of the methods are used, curling of the shingles will result in 30 to 90 days, destroying the shingle roof.
NOTE:		Curling that occurs only in sections of roof indicate faulty bundles of shingles. It is not a problem created by cleaning.

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Application Protocol:

APPLICATION:		Can be applied with brush or roller. However, for best results use spray equipment. Use lowest pressure possible to maintain spray pattern.
STEP 1.		Apply one wet flow coat of EnerFlect. Apply uniformly to eliminate lap marks. Puddled areas where EnerFlect is applied too heavily may take longer to dry. Allow first coat to dry to the touch before applying second coat. Approximately 3 - 6 Hours depending on weather conditions.
STEP 2.		The second coat should be dusted on lightly by cross spraying. Under normal drying conditions a second coat can be applied as soon as the first coat has a tack-free surface.
RECOMMENDED PRIMER:		EnerFlect Primer for best adhesion and durability.
FINISH:		White. Color may be added with decrease in thermal performance.
DRYING TIME:		3 - 6 hours depending on atmospheric conditions. Under normal drying conditions a second coat can be applied as soon as the first coat has become dry to the touch.
CLEAN UP:		Soap and water.
COVERAGE:		5 gallons of EnerFlect will provide approximately 500+ sq. ft.
COLOR:		EnerFlect may be tinted and it is suggested that the colors stay on the lighter pastel side.
MAINTENANCE:		For the extended life and best overall performance we suggest a good maintenance program after the first EnerFlect application. A cleaning should be done approximately every 3-4 years. This adds years of service and beauty to the roof. If the roof surface is exposed to leaves or other matter, a cleaning is suggested after 18 to 24 months from time of application, This will prevent a premature breakdown of the coating.
NOTICE:		If shingles are already damaged due to curling, cracking and dry shingles, or severe loss of granules, the roof should be replaced. EnerFlect cannot restore a severely damaged roof. Replace the roof, then apply EnerFlect for all the added benefits.

*** * * * C A U T I O N S * * * ***

Do not apply when air, surface, or product temperatures are below 50° F.

Spray Masks:	Should always be worn when any material is being sprayed. When using this product, use OSHA approved protective safety equipment.

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