



Coatings: Commercial Roof Coating Systems

1-Hour ELE

FBE Course Provider #0008780

About Advanced Roofing Inc.



All Under One Roof



HVAC
A-LICENSE



LIGHTNING
PROTECTION



RE-ROOFING



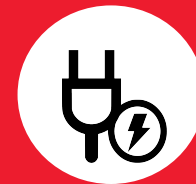
REPAIRS &
MAINTENANCE



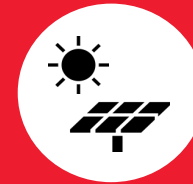
COATINGS



ROOF ASSET
MANAGEMENT



ELECTRIC



SOLAR ENERGY

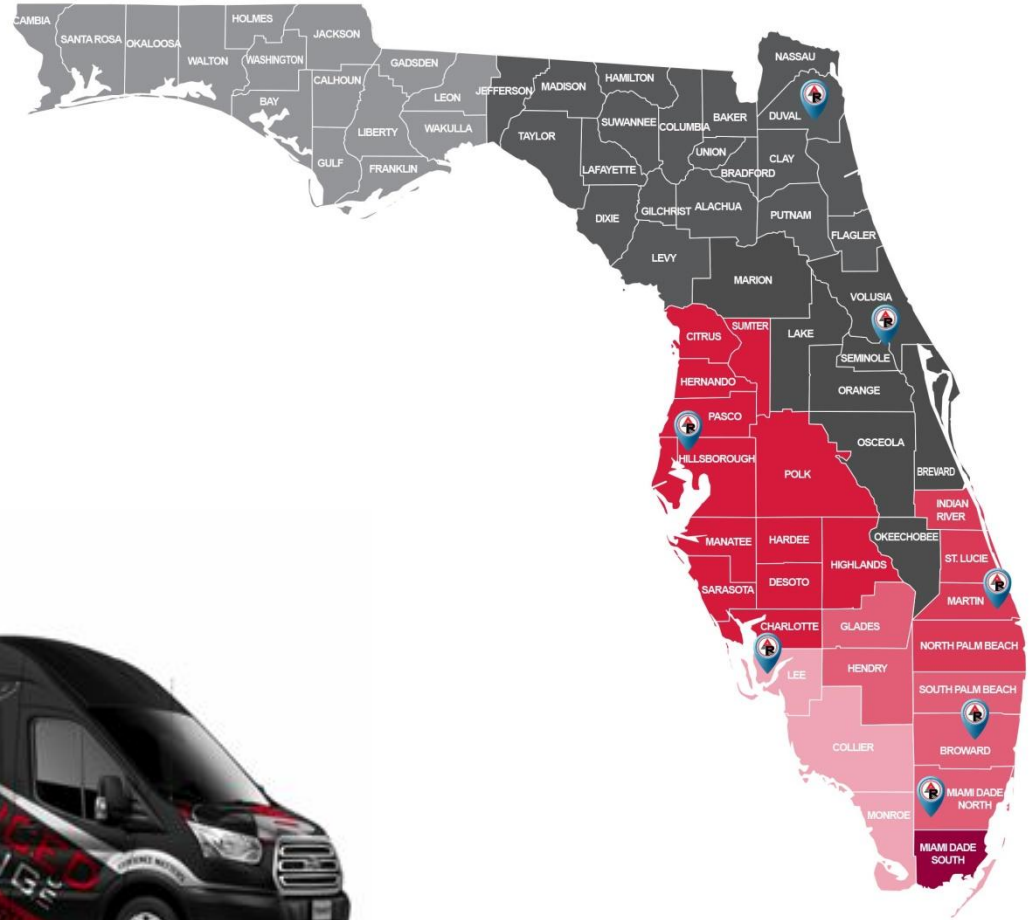
Advanced Roofing is a one-stop-shop for the safest and most reliable commercial roofing, HVAC, and solar energy solutions in Florida.

Available Statewide Occupying 6 Owned Buildings



OFFICE LOCATIONS

1. Fort Lauderdale (HQ)
2. Jupiter-Palm Beach
3. Sanford-Orlando
4. Tampa
5. Jacksonville
6. Ft. Myers
7. Miami-Dade



Learning Objectives



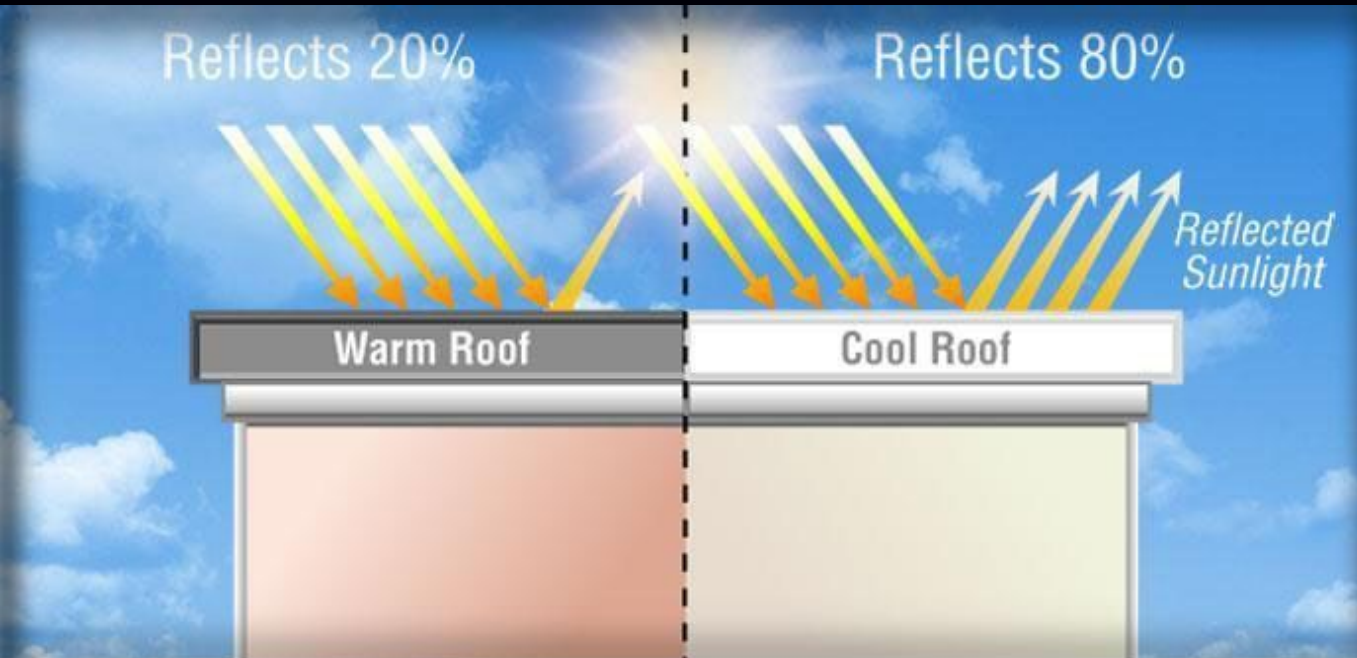
- 1. Budgeting Tools When Considering A Coating**
- 2. What Roofs Can Qualify For Roof Coatings**
- 3. Available Solutions For Commercial Roofs**
- 4. Application Technologies**
- 5. Tips And Tricks For A Perfect Roof Coating Project**

Did You Know?



Coatings Can Lead To Increased Energy Efficiency!

Solar Energy & Energy Savings



Increased Reflection = Reduced Absorption
Which Translates To Lower Energy Bills!



SILICONE ROOF COATINGS

Have You Applied Sunscreen to Your Roof?

Roof Coatings Background



Background

- Can extend roof life up to 20 years
- Tax deductible in the year of application
- Can lower energy costs
- Extended warranty available

Strengths:

- Less disruptive to operation of building
- Less expensive than a roof replacement
- Location of leaks & cost of repairs less expensive than re-roof
- Provides high solar reflective properties

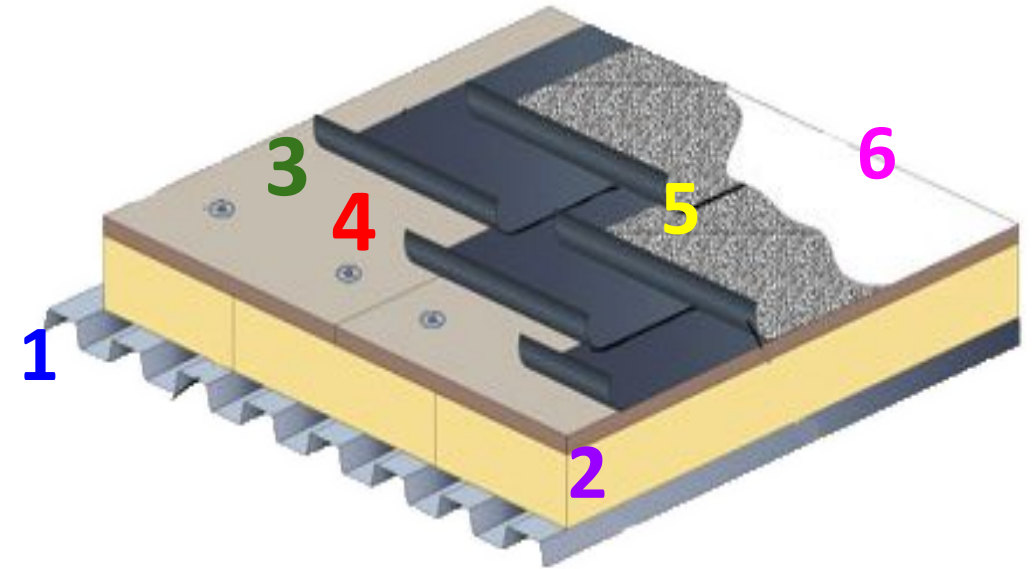
Challenges

- Not all roofs / roof types qualify for coatings
- Smell mitigation can be a concern

Building Types:

- Coatings can be applied to almost all types of commercial roofs. Examples include metal, single-ply, modified bitumen, Built-up roof (BUR) systems

**Contingent on passing a Moisture Survey*

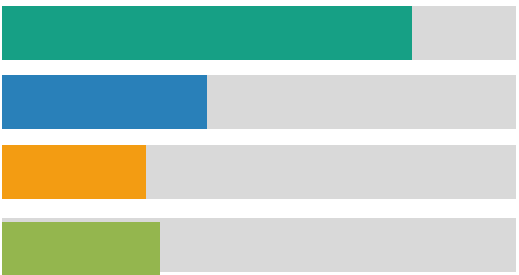


1. **Deck** (Base)
2. **Vapor Barrier** (If required)
3. **Thermal Roof Insulation** (energy efficiency/
R-Value)
4. **Attachments** (secure roof to building)
5. **Membrane** (keeps the building dry)
6. **Coating**

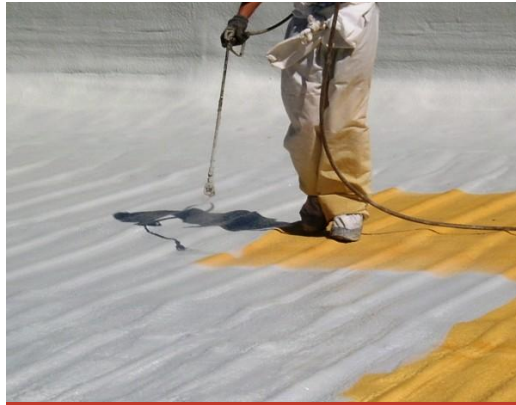
Coating Types



Acrylic



Silicone



Polyurethane



PMMA
(Poly-methyl methacrylate)



Reflectivity



Tensile Strength



Ponding Water



Investment

Acrylic



Background

Acrylic Is A Water-Based, Cost-Effective Solution For A Variety Of Roofs. They Are Good For Most Climates And Provide The Best Value

Strengths

- Low initial cost
- Highly reflective
- UV resistant
- Easy and fast application

Challenges

- Lose mil thickness with weathering
- Must cure fully before rainfall
- Do not perform well in ponding-water situations.

Applicable Building Types

- Roofs with very good positive drainage and no ponding

Roof Coating Benefits

- Investment Up To 300% Less Than Re-roofing
- Increase Roof Service Life 15+ Years
- Fast Installation With Minimal Waste
- 20 Year Ndl Warranty Available
- Can Reduce Energy Costs Up To 20%
- Adheres To Most Substrates
- Leed & Energy Star Rated
- Tax Deductible
- \$1,000 Rebate Available

Silicone



Background

Silicones Are Moisture Cured And Humidity Can Even Promote Their Cure. In Some Applications, The Use Of Silicone Can Eliminate The Need For A Primer.

Strengths

Weather better than other coatings with almost no erosion
Single Coat Application
Good in ponding water situations

Challenges

Material loses reflectivity over time
Can only be repaired or recoated with more silicone
Punctures easily
Tends to gather dirt

Applicable Building Types

Any roof system with a qualifying roof assembly

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Polyurethane



Background

Polyurethanes Are More Impact Resistant And Handle Traffic The Best Of All Coatings. There Are Two Main Types Of Polyurethane Roof Coatings: Aromatic And Aliphatic.

Strengths

Durable

Stays cleaner

More resistant to ponding water than acrylic coating

Work well as cool roofs because they can be white and stay clean.

Challenges

More expensive than acrylics

Very rigid, does not expand/contract well

Very susceptible to moisture in the substrate at the time of application

Stronger odor compared to most other coatings

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PMMA



Background

PMMA Is A Two Part Methyl Methacrylate Based Acrylic Resin, Which Cures Very Rapidly Once The Catalyst Is Added Shortly Before The Application.

Strengths

- Extremely durable
- Can be combined with roofing membranes to create a flashing system inside a roof assembly
- Works as a waterproofing for planters, water features and plaza decks

Challenges

- Highly technical and requires a catalyst
- Odor
- High initial cost investment

Applicable Building Types

- Areas with difficult flashings
- Plaza decks
- Jobs where high mobilization costs can dictate high performance design considerations

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SEBS



Background

SEBS Or Styrene Ethylene Butylene Styrene Is A Thermoplastic Rubber Coating Product

Strengths

- High tensile strength and reflectivity
- Water resistant
- Low vapor permeance

Challenges

- Higher VOCs (gasses emitted during application)
- Limited color options
- Multiple layers needed to build up to MIL thickness

Applicable Building Types

- Most flat roof systems including PVC, metal, TPO, smooth surface BUR

Roof Coating Benefits

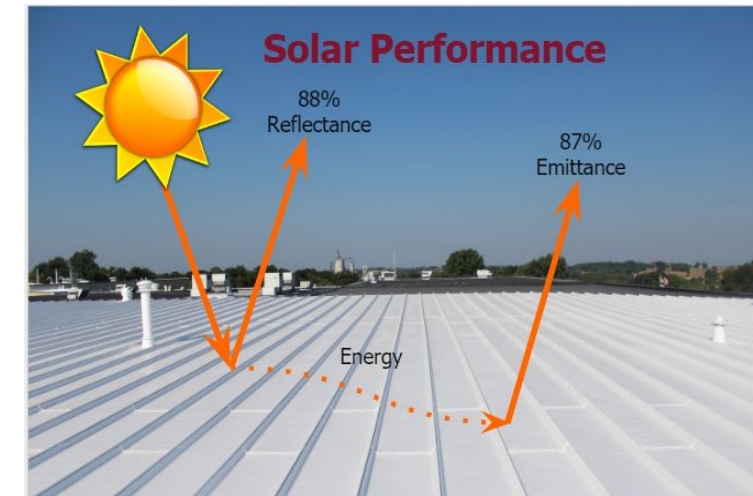
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Know The Product's Primary Performance Objective



Reflectivity / Solar Protection

- Typically used on roof systems as a protective activity that furthers the performance life cycle
 - Reduces heat absorption and solar exposure
 - Acts as a sun-screening agent as well as an added benefit of water-shedding
- Existing roof system must be in sound condition
 - Some customary wear and tear is expected
- Requires good slope / drainage
 - Ensures product applied is not compromised pre-maturely



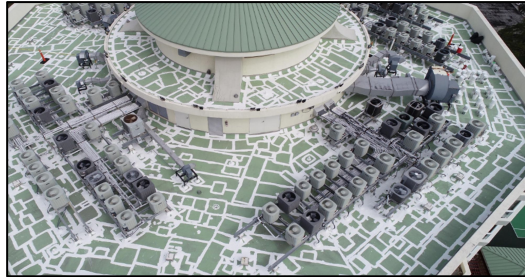
Moisture / Damp Proofing

- Typically used on roof systems as a restorative activity that addresses performance failures of the roof system
 - Acts as an additional seamless layer of waterproofing
- Existing roof system is usually significantly aged and worn
 - Likely showing beginning signs of failure
- Although good slope is a plus, products used in this situation should be able to cope with some standing water

Restorations



Metal



BUR/Mod Bit



Single Ply



Coatings Are Not For Every Roof



NOTE:

Coatings are NOT for every roof. Roof must be a GOOD candidate. If your roof is in poor condition or near the end of its useful life; it is best to re-cover or fully replace.



**Current
Condition of
Roof System**



Age of Roof



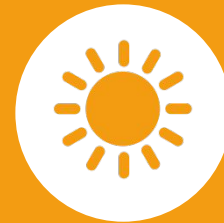
Slope of Roof



**Ponding
Water**



**Chemical
Exposure**



**Heat/ UV
Exposure**

Which Roofs Can Be Coated?



Single Ply



Metal Roofs



Modified Bitumen

Coating Budget Cheat Sheet



Solution	Typical Investment <i>Per Sq. Ft</i>	Average Cost On A 20,000 Sq Ft Coating
Acrylic Coating	\$5.00 - \$8.00	\$100,000 - \$160,000
Silicone Coating		
Polyurethane		
PMMA		

Study Case: 20,000 Sq Ft Roof

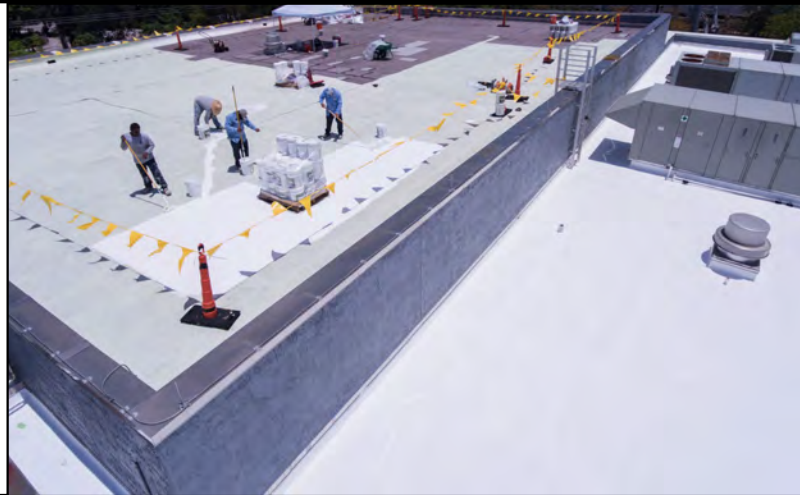
Cost To Re-Roof

Typical Investment (per sq ft): **\$12 - \$25+**

Typical Time Investment: 6 Months

*Once Materials Arrive

Total Investment:
\$240,000 - \$500,000



Cost To Coat

Typical Investment (per sq ft): **\$5.00 - \$8.00**

Typical Time Investment: 1 month

*Once Materials Arrive

Total Investment:
\$100,000 - \$160,000

Surface Preparation



The Most Important Part Of The Installation

Adhering The System:

- Without proper adhesion, the entire system will fail prematurely.
 - **Hire the right contractor!**

Surface Cleaning Matters:

- The type or degree of surface cleaning must be paid close attention to; not just based on the manufacturer recommendations but also based on field testing and experience

Primers and Sealers:

- The type and application rate of primers or sealers must be determined and applied properly - this must be confirmed during installation daily

Moisture Survey



Moisture Survey - Florida Building Code Update!

The 25% rule has been affected by Senate Bill 4 (**SB4**), signed by Governor DeSantis in May 2022.

Previously, if more than 25% of a roof was saturated or damaged, the roof was not eligible for coating or restorative repairs.

SB4 now allows for roof repair, recover or coating if the area being restored complies with the 2007 (or newer) Florida Building Code.

Note: The damaged or saturated areas must still be repaired prior to coating or recovering.

Coating Warranties



What Is Required To Maintain Your Warranty*

*(*varies based on manufacturer)*

- Bi-Annual Maintenance performed by a contractor certified to work with the coating material
- Adherence to manufacturer's care and maintenance guidelines
- Minimize roof traffic and maintain a log

Length Of Warranty Available*

*(*varies based on Manufacturer/ Contractor)*

- 2 Year
- 5 Year
- 10 Year
- 12 Year
- 20 Year

What's Covered

- Material
- Labor
- Workmanship

Annual Inspection Checklist



What Our Inspection Looks Like

•Remove Debris

•Apply Applicable Coating

- Vent stacks
- Curbs
- Parapet Walls
- Base Flashing Laps
- Skylights
- Panel Laps

•Apply Elastomeric Sealant to Sheet Metal Items

- Coping Cap Metal
- Gutter Joints
- Exposed Fasteners

•Visually Inspect The Coping Cap Metal And Counter-Flashings

- Tighten loose fasteners
- Replace missing fasteners

•Visually inspect stucco parapet walls

- Repair any cracks or defects
- Seal with a urethane sealant if necessary

When To Schedule An Immediate Inspection

•Extreme Weather Event

- Hurricane
- Tropical Storm
- Tornado

•Construction Project

- HVAC Replacement or Repairs
- Structural Repairs (Doorway, parapet walls, skylights etc.)
- Concrete Restoration



Thank You For Your Time!



ANTHONY FAZIO
TAMPA

AnthonyF@advancedroofing.com
813-499-8749

