PlazaDeck

Waterproofing System Brochure

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Quality You Can Trust…From North America's Largest Roofing Manufacturer!™

www.gaf.com

GAF®

GAF MATERIALS CORPORATION

With GAF PlazaDeck Waterproofing Systems You Can...

"Expand Your Living Space... And Increase The Resale Value Of Your Property!"

Roof Patios

Roof Gardens

Roof Recreation

Roof Entertainment

Roof Play Areas

Understanding **PlazaDeck Systems...**

Choosing a GAF PlazaDeck (i.e., walkable) Waterproofing System for your roof or balcony can:

- *Add usable square footage to your property*
- *Increase resale value*
- *All for a surprisingly modest investment*

GAF PlazaDeck Waterproofing Systems can turn an ordinary roof or balcony into:

- *A sundeck or patio*
- *A play or recreation area*
- *Outdoor restaurant seating*
- *An employee break area*
- *Almost any kind of usable space*

"It's like adding a back yard... to your roof!"

Choosing and specifying a GAF PlazaDeck waterproofing system is easier than you think. Once you decide how you would like to use the space, just follow these four steps:

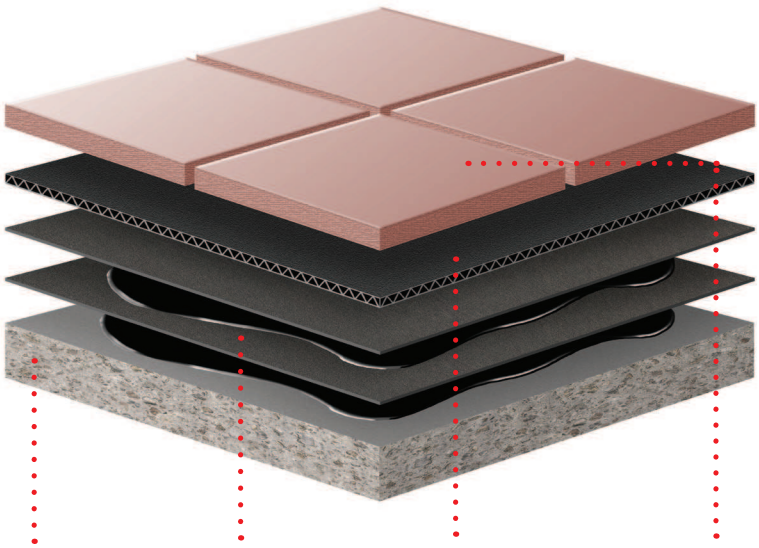
Step 1...
Have a design professional verify your roof substrate

Step 2...
Choose your waterproofing membrane

Step 3...
Choose your protection layer

Step 4...
Choose your surfacing layer

The choice of waterproofing membrane and surfacing layer are often made based on the final use for your PlazaDeck system. To determine the best options for your application, consult the chart titled "Putting All The Pieces Together".



Roof Substrate
Provides the foundation on which your PlazaDeck waterproofing system rests

Waterproofing Membrane(s)
Provides the critical waterproofing for your PlazaDeck system

Protection Layer
Protects the waterproofing membrane from damage, while (in most cases) also allowing for drainage

Surfacing Layer
Provides the final usable surface for your PlazaDeck waterproofing system

Step 1

Verify Your **Roof Substrate...**

PlazaDeck systems have special *substrate* requirements. The roof deck or underlying insulation must:

- *Be Stable...*without excessive deflection that would allow the walkable roof surface to move under normal usage
- *Provide Positive Slope To Drain...*so that water does not collect either on the walkable roof surface or within the PlazaDeck assembly
- *Provide High Compressive Strength...*so that the roofing membrane will be fully supported at points of concentrated weight and impact
- *Consist Of Structural Concrete...*with minimum 2500 psi compressive strength
- *Some Systems...*may require tapered isocyanurate insulation with a high density compression board, like Securock™ roof board or DensDeck® Prime, min. 500 psi compressive strength

  Waterproofing systems for *smaller areas* (up to 1000 sq. feet) like balconies can omit insulation, however the surfacing options for this application are limited to tile embedded in mortar.

Before proceeding, a design professional must:
- Verify the ability of your structure to accommodate a PlazaDeck system
- Assure that the materials are compatible with each other and are installed in accordance with manufacturers' specifications
- Confirm that the design will perform as intended and meet your expectations.

Step 2

Choose Your **Waterproofing Membrane...**

PlazaDeck systems also have special *waterproofing membrane* requirements. The installation of a superior waterproofing membrane is the safest choice. The membrane must be:

- *Exceptionally strong and durable...* and have excellent waterproofing characteristics. (Unlike at-grade or below-grade waterproofing applications, for which some minor leakage can often be tolerated, walkable roof applications are usually located over finished building areas where even a minor leak is to be avoided.)
- *Resistant to damage...*for example, in the event that the surfacing materials need to be removed to allow changes or amendments to the roofing membrane, the membrane must be resistant to damage during that process.

Quick Tip

For Balconies...

For 1000 sq feet. or under, liquid applied elastomeric membranes with or without fabric reinforcement may be the best option. GAF Topcoat® Surface Seal or CRT liquid membranes are especially suited to working in these confined spaces.

For Roofing Applications...

Two or three ply RUBEROID® polyester-reinforced modified bitumen membrane systems, hot or cold applied for redundancy and resiliency.

or

A 60 or 80 mil fully adhered TPO membrane with heat welded seams, especially suited for PlazaDecks that may incorporate garden areas like GAF GardenScapes™ systems.

Step 3

Choose Your **Protection Layer...**

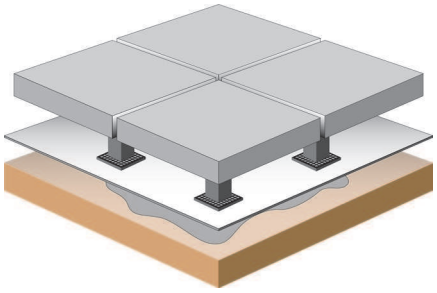
The protection layer must physically protect the roof membrane from the surfacing materials installed over it, but must not interfere with positive drainage at the membrane level. It must:

- have **exceptional resistance** to crushing failure
- **prevent direct transfer** of concentrated point loads and impact loads to the roof membrane,
- provide **long-term** physical and chemical compatibility with the roof membrane

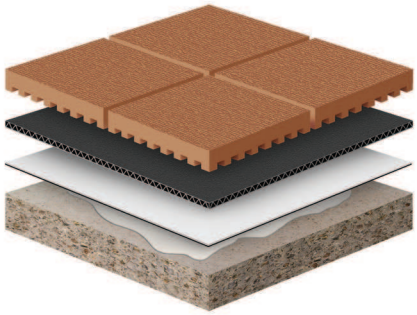
Most GAF PlazaDeck assemblies utilize one of two roof membrane protection materials:

Rubber Pads (used with concrete paver surfacing)
Reprocessed rubber pads, min. 3/16" thick (installed under concrete paver pedestals and wood support blocking with concentrated point-loading).

PVC/Polypropylene (used where surfacing load is evenly distributed)
Heavy-duty drainage layer with knit geotextile filter fabric, min. 1/2" thick.



Concrete paver surfacing layer on pedestals over rubber protection pads and TPO membrane.



Rubber play tiles layer over PVC/ Polypropylene protection layer and TPO membrane.

Step 4

Choose Your **Surfacing Layer...**

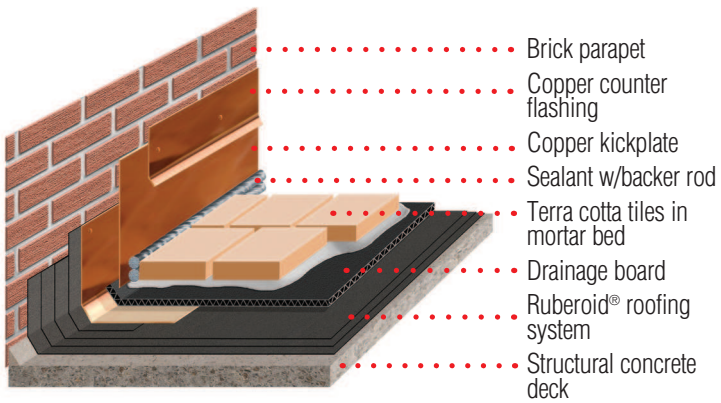
Surfacing materials selected for walkable roof applications must resist normal usage conditions, including frequency of use, impact loads and concentrated loads, and the weathering effects of the sun, rain, ice, and snow.

The surfacing materials should require minimal maintenance and repair to avoid physically disturbing the roof membrane or contaminating the roof membrane with penetrating sealants and similar treatments. The surfacing materials must be within the allowable weight capacity of the structure, and provide the desired aesthetic appearance.

GAF PlazaDeck Roofing assemblies are available for use with all traditional walkable roof surfacing materials and systems, including:

- Precast concrete pavers, with or without pedestals
- Paving stones, brick or tile, set in sand or mortar bed
- Wood decking panels
- Wood decking with wood support blocking
- Granulated rubber playsurface pavers
- Cast-in-place concrete

As an additional option, extruded polystyrene insulation board, min. 40 psi compressive strength, can be incorporated into many GAF PlazaDeck Roofing assemblies between the roof membrane and surfacing materials.



A typical PlazaDeck installation/edge detail

Putting **All** The Pieces Together...

This chart can help you to select/match PlazaDeck components based on your specific application...

Waterproofing Membrane	Acceptable Surfacing Layer	Typical Rooftop Use	Membrane Application Method
TPO	Pavers, wood support blocking for wood deck overlay, wood deck panels (can be combined with GAF GardenScapes garden roof system)	Lighter traffic areas that see occasional use	Fully adhered
	Rubber play tiles	Playground and recreational areas	Fully adhered
SBS, SBS HW, or APP smooth	Paving stones, brick, or tile (set in mortar or sand) or cast in place concrete	Heavy traffic (e.g., restaurants, outdoor living areas, entertainment)	Hot asphalt, cold adhesive*, or heat welded
SBS, SBS HW, or APP smooth	Rubber play tiles	Playground and recreational areas	Hot asphalt, cold adhesive*, or heat welded
	Pedestal pavers, wood support blocking for wood deck, overlay, wood deck panels	Lighter traffic areas that see occasional use; single family residential patios	Hot asphalt, cold adhesive*, or heat welded
Coatings	Ceramic tiles in mortar bed only	Balconies (up to 1,000 ft²)	Brush, roller, or spray

*Ruberoid® Mop products only.

GAF PlazaDeck **Specifications...**

With more than a dozen different available configurations, you're sure to find a PlazaDeck system that's right for your property!

GAF Specification	System Description	Precast Concrete Pavers Without Paver Stands	Precast Concrete Pavers With Paver Stands	Cast In Place Concrete	Paving Stones, Brick Tile Set In Sand	Paving Stones, Brick Tile Set In Mortar	Wood Deck Overlay With Blocking	Wood Deck Panels	Ceramic Tile Set In Mortar	Pavers Set In Approved Adhesives	Protection Layer[3]	Guarantee (yrs.)[4]
NN-0-2-MS(PD) or NN-0-3-MS(PD)	2 (or 3) layers of Ruberoid® Mop Smooth	●	●	●	●	●	●	●	●		PVC/PP[1]	15 Years or 20 Years
I-1-2-MS(PD) or I-1-3-MS(PD)	2 (or 3) layers of Ruberoid® Mop Smooth over Securock™ & EnergyGuard™ Iso[2]	●[3]	●[3]	●[3]	●	●	●	●[3]	●[3]		RP or PVC/PP	15 Years or 20 Years
NN-0-2-TS(PD) or NN-0-3-TS(PD)	2 (or 3) layers of Ruberoid® Torch Smooth	●[3]	●[3]	●[3]	●	●	●	●[3]	●[3]	●	PVC/PP	15 Years or 20 Years
I-0-2-TS(PD) or I-0-3-TS(PD)	2 (or 3) layers of Ruberoid® Torch Smooth over Securock™ Prime & EnergyGuard™ Iso	●[3]	●[3]	●[3]	●	●	●	●[3]	●[3]	●	PVC/PP	15 Years or 20 Years
NN-0-2-HWS(PD) or NN-0-3-HWS(PD)	2 (or 3) layers of Ruberoid® Heat-Weld Smooth	●[3]	●[3]	●[3]	●	●	●	●[3]	●[3]		PVC/PP	15 Years or 20 Years
I-0-2-HWS(PD) or I-0-3-HWS(PD)	2 (or 3) layers of Ruberoid® Heat-Weld Smooth over Securock™ & EnergyGuard™ Iso	●[3]	●[3]	●[3]	●	●	●	●[3]	●[3]		PVC/PP	15 Years or 20 Years
T-FA-N-I-N-I-60(PD)	60 mil TPO fully adhered over Securock™ & EnergyGuard™ Iso (insulation optional)		●				●[3]	●[3]			RP or PVC/PP	15 Years
T-FA-N-I-N-I-80(PD)	80 mil TPO fully adhered over Securock™ & EnergyGuard™ Iso (insulation optional)		●				●[3]	●[3]			RP or PVC/PP	20 Years
Wallcote Primer & Surface Seal	1 coat Wallcote Primer, 2 coats Surface Seal								●		N/A	10 Years
Wallcote Primer & Surface Seal with fabric	1 coat Wallcote Primer, 2 coats Surface Seal with Topester fabric								●		N/A	12 Years
CRT	3 coats of CRT								●		N/A	10 Years
CRT with fabric	3 coats of CRT with Topester fabric								●		N/A	12 Years
Surface Seal	2 coats of Surface Seal								●		N/A	10 Years
Surface Seal with fabric	2 coats of Surface Seal with Topester fabric								●		N/A	12 Years

RP = Reprocessed rubber pad, min. 3/16" thick PVC/PP = PVC/Polypropylene heavy-duty protection layer

[1]Where precast concrete pavers are used, a RP protection layer may be substituted for a PVC/PP.

[2]Where Dens-Deck is used in hot mopped systems, a ply of GAFGLAS® Ply 4 must be mopped to the Dens-Deck® prior to the installation of Ruberoid® Mop Smooth.

[3]Extruded polystyrene board (XPS) insulation, min. 40 psi compressive strength, can be installed in lieu of drainage board on hot mopped, torched and TPO installations, provided that: the XPS board compressive strength is sufficient to support the applied live and dead loads; and, the XPS board includes integral drainage channels on its underside. XPS board insulation without drainage channels must be installed over an approved drainage board.

[4]Guarantee covers roofing membrane only; protection layer and surfacing material covered by separate manufacturers' guarantees.

Note: Consult the PlazaDeck design requirements section at www.gaf.com for additional requirements and complete construction details. Some local codes may restrict the use of PlazaDeck surfacings; consult local code authorities prior to PlazaDeck construction.

Maximize Your Roof Investment

With These Unique Resources!

Diamond Pledge™ Guarantee – The industry's premier roof guarantee with true "edge-to-edge" coverage. Includes coverage for the entire Weather Stopper® Integrated Low Slope Roofing System™. And unlike conventional guarantees, some systems are even covered for ponding water, blistering, field-fabricated metal, and much more (see guarantee for details).

Well Roof™ Advantage – The single best way to extend the life of your roof is to perform regular inspection and maintenance. GAF believes so strongly in this practice that it offers its unique Well Roof Advantage™ program: a 25% extension of the length of your Diamond Pledge® Guarantee—FREE—when you invest in a regular maintenance and inspection plan!

Factory-Certified Contractors – GAF selects only the top 4% of roofing contractors for membership in its factory-certified contractor program. GAF's workmanship guarantees are available only through this exclusive group.

Cool Roof Central – Learn about the leading energy-saving roofing options that can reduce your operating expenses and extend roof life. *Available free at www.gaf.com.*

Spec Central – For architects and specifiers (or property owners with in-house design departments), Spec Central provides a wealth of information for writing roofing specs. *Available free at www.gaf.com.*

Architectural Information Services – Architects and specifiers (or property owners with in-house design departments) can access an entire team devoted to the specification process. *Available free by calling 1-800-522-9224.*

Roof Advisor – Helps you identify the best roofing options for your specific property. Asks detailed questions about location, use, your investment objectives, and other key decision parameters. Sorts through thousands of roofing options (including some we don't even make) to provide best solutions for you to choose from. *Available free on-line at www.gaf.com.*

Roof Protection Services – Some roofing manufacturers allow their sales representatives to do the final technical inspection of your finished roof system. GAF, through Roof Protection Services, uses only experienced technical representatives for these inspections—for your protection!

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