

Roofing System Solutions Brochure

(COMGN100)

Updated: 6/14



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

gaf.com



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

ROOFING SYSTEM SOLUTIONS

ASPHALTIC LIQUID-APPLIED SINGLE-PLY INSULATION

gaf.com



Quick Guide To GAF Roofing Systems

-  = Top Performance
-  = Excellent Performance
-  = Good Performance
-  = Not Recommended
-  = Not Available

(Ratings based on GAF estimates and contractor interviews)

Choosing the right roofing system for an application can be complicated. There are many roof membrane options, and each property may have its own set of unique requirements. So, how do you choose the right roofing system for your property?

ASPHALTIC

Desired Characteristic	Ruberoid®/Liberty™ SBS Modified Bitumen				Ruberoid® APP Modified Bitumen	GAFGLAS® Built-Up Roofing		CompositeRoof™ Asphalt Composite	
	Liberty™ Self-Adhered	Torch	Mop	Cold-Applied	Torch	Mineral-Surfaced	Gravel	Torch	Mop
Multi-Layered Membrane Protection									
Flexes To Conform To Roof Movement									
Low Maintenance									
Light Reflective For Energy Savings		³	³		³	³		³	³
Puncture/Leak Resistant									
Easy To Repair After Installation									
Heat-Welded, Self-Adhered, Torched, Cold-Applied, Or Mopped Seam Strength									
Grease/Oil/Chemical Resistant ¹									
Can Be Installed In Cold Weather									
High Heat and UV Resistance									
Maximum Guarantee Length In Years*	20	20	20	20	20	20	20	20	20

*Note: For complete details, restrictions, requirements, terms, and conditions, please refer to official guarantee document and applicable GAF specification manual.

¹See applicable GAF guarantee for specific exclusions
²Rating is for solvent-based products only

³Requires the use of EnergyCap™ Products
⁴May require that installation adhesive be pre-heated

Ruberoid® Modified Bitumen Roofing



Ruberoid® membranes offer greater flexibility, impact resistance, strength, and system compatibility

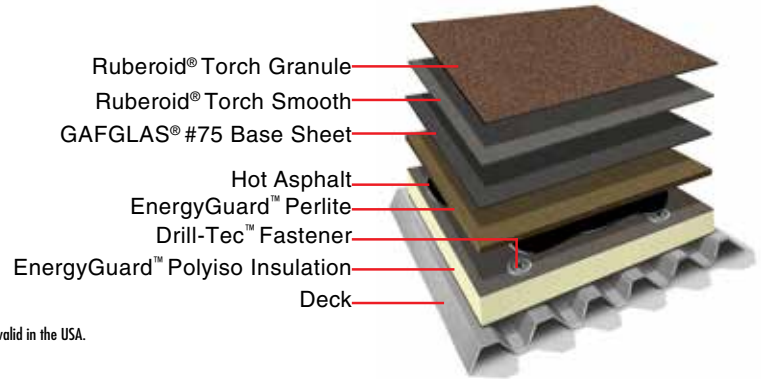
Applications...

For premium, fire-rated systems, specify Ruberoid® Torch FR, Ruberoid® Mop FR, or Ruberoid® SBS Heat-Weld™ Plus FR membrane.

Now available in an ENERGY STAR® qualified*, CRRC rated version, EnergyCap™ 30 FR and EnergyCap™ Torch Plus FR combine the proven performance of Ruberoid® membranes with EnergyCote™, a pre-applied premium reflective TOPCOAT® white elastomeric coating.

For standard applications, new or retrofit, as well as flashing and repairs to existing built-up roofs, GAF offers its proven Ruberoid® Torch membranes (smooth or granule-surfaced), Ruberoid® Mop membranes (hot- or cold-applied), or Ruberoid® SBS Heat-Weld™ membranes (heat-weldable).

For a two-ply modified bitumen system that is durable and economical, specify Ruberoid® 20/30 FR (fiberglass-reinforced membranes).



* ENERGY STAR® only valid in the USA.

TYPICAL 3-PLY TORCH-APPLIED SYSTEM USING BUR BASE SHEET AND PREMIUM APP MODIFIED BITUMEN MEMBRANES

Ruberoid® Modified Bitumen Membrane Selection Guide

APP

	Mop-Applied	Torch-Applied	Cold-Applied	Maximum Available Guarantee (Yrs.) ^{1,2}	Membrane Weight ¹ (lb/sq ft)	Membrane Thickness (mils) ¹	Mat (P/Polyester) F(Fiberglass)	UL Approval ³	FM Approval ³	FBC	TDI	Miami-Dade County Approval	ICC	ENERGY STAR® Qualified Title 24 Compliant	ASTM	
Ruberoid® Torch Smooth		◆		15	0.8	153	P	◆	◆	◆	◆	◆	◆			D6222 Type I Grade S
Ruberoid® Torch Granule		◆		15	1.0	177	P	◆	◆	◆	◆	◆	◆			D6222 Type I Grade G
Ruberoid® Torch FR		◆		20	1.2	170	PP	◆	◆	◆	◆	◆	◆			D6222 Type II Grade G
Ruberoid® EnergyCap™ Torch Plus FR		◆		20	1.5	170	PP	◆	◆	◆			◆			D6222 Type II Grade G C1549, E408
Ruberoid® EnergyCap™ Torch Granule FR		◆		15	1.0	160	P	◆	◆					◆		D6222 Type I Grade G C1549, E408

SBS

Ruberoid® Mop Granule	◆		◆	15	1.0	140	P	◆	◆	◆	◆	◆	◆			D6164 Type I Grade G
Ruberoid® Mop Smooth 1.5	◆		◆	20	0.9	90	P	◆	◆	◆	◆	◆	◆			D6164 Type I Grade S
Ruberoid® Mop 170 FR		◆		15	1.0	155	P	◆	◆	◆	◆	◆	◆			D6164 Type I Grade G
Ruberoid® Mop FR	◆		◆	20	1.0	155	PP	◆	◆	◆	◆	◆	◆			D6164 Type II Grade G
Ruberoid® EnergyCap™ Mop FR				20	1.0	155	PP	◆	◆	◆	◆	◆	◆	◆		D6164 Type II Grade G C1549, C1371
Ruberoid® 20	◆		◆	15	0.6	85	F	◆	◆	◆	◆	◆	◆			D6163 Type I Grade S
Ruberoid® 30	◆		◆	15	0.9	140	F	◆	◆	◆	◆	◆	◆			D6163 Type I Grade G
Ruberoid® 30 FR	◆		◆	15	0.9	140	F	◆	◆	◆	◆	◆	◆			D6163 Type I Grade G
Ruberoid® EnergyCap™ 30 FR	◆		◆	15	1.0	140	F	◆	◆	◆	◆	◆	◆	◆		D6163 Type I Grade G C1549, C1371
Ruberoid® Dual Smooth	◆		◆	20	1.0	138	P/F	◆	◆	◆						D6162 Type I Grade S
Ruberoid® Dual FR	◆		◆	20	1.0	164	P/F	◆	◆	◆						D6162 Type I Grade G
Ruberoid® Ultraclad® SBS (Aluminum)	◆	◆		20	1.0	160	F(scrim)	◆	◆	◆	◆	◆	◆			D6298
Ruberoid® Mop Plus Smooth	◆		◆	20	0.7	120	PP	◆	◆	◆	◆	◆	◆			D6164 Type II Grade S
Ruberoid® SBS Heat-Weld™ Granule		◆		15	1.0	165	P	◆	◆	◆	◆	◆	◆			D6164 Type I Grade G
Ruberoid® SBS Heat-Weld™ Smooth		◆		20	1.0	165	P	◆	◆	◆	◆	◆	◆			D6164 Type I Grade S
Ruberoid® SBS Heat-Weld™ 25		◆		20	0.6	98	F	◆	◆	◆	◆	◆	◆			D6163 Type I Grade S
Ruberoid® SBS Heat-Weld™ 170 FR		◆		15	1.0	160	P	◆	◆	◆	◆	◆	◆			D6164 Type I Grade G
Ruberoid® SBS Heat-Weld™ Plus		◆		20	1.0	165	P	◆	◆	◆	◆	◆	◆			D6164 Type I & Type II Grade G
Ruberoid® SBS Heat-Weld™ Plus FR		◆		20	1.0	165	PP	◆	◆	◆	◆	◆	◆			D6164 Type II Grade G
Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR		◆		20	1.0	165	PP	◆	◆	◆	◆	◆	◆	◆		D6164 Type II Grade G E1549, C1371

See Low-Slope Product Data Guide and current Application & Specifications Manual for a complete list of products. Most Ruberoid® products meet the physical requirements of ICC AC75.

Liberty™ Self-Adhering

Liberty™ Base/Ply Sheet Specifications (nom.)

- Roll length is 66 ft. (20.1 m)
- Roll width is 39.375 in. (1.0 m)
- Roll size is 2 squares, 216 sq. ft. (20.1 m²)
- FM Approved, UL Classified
- State of Florida Approved
- Miami-Dade County Approved
- Texas Dept. of Insurance (TDI)

Liberty™ Cap Sheet Specifications (nom.)

- Roll length is 34 ft. (10.4 m)
- Roll width is 39.375 in. (1.0 m)
- Roll size is 1 square, 112 sq. ft. (10.4 m²)
- FM Approved, UL Classified
- State of Florida Approved
- Miami-Dade County Approved
- Texas Dept. of Insurance (TDI)

Liberty™ MA Nailed Base Sheet Specifications (nom.)

- Roll length is 66 ft. (20.1 m)
- Roll width is 39.375 in. (1.0 m)
- Roll size is 2 squares, 216 sq. ft. (20.1 m²)
- FM Approved, UL Classified
- State of Florida Approved
- Miami-Dade County Approved

GAFGLAS® BUR

GAFGLAS® BUR helps to reduce installation costs while tackling the most demanding roof applications



Metric-Sized Rolls For Lower Installed Cost...

All GAFGLAS® Plies are produced in metric-width rolls, allowing faster application and resulting in lower installed cost.

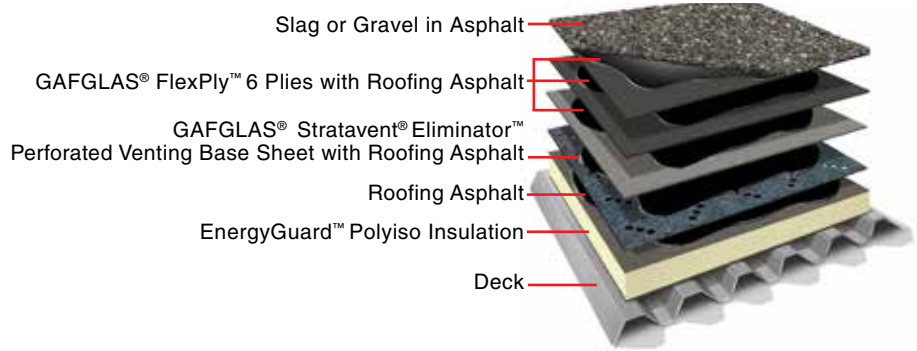
GAFGLAS® Roofing Plies... incorporate the latest in fiberglass ply technologies for high tensile strength, dimensional stability, optimum porosity for air escape while mopping, excellent wind-uplift resistance, UL Class A fire ratings, and a FM uplift rating up to Class 1-720 when solidly mopped to a primed, insulated structural concrete deck:

- GAFGLAS® FlexPly™ 6 Ply Sheet premium-performing
- GAFGLAS® Ply 4

GAFGLAS® Base Sheets...

offer solutions for every application:

- GAFGLAS® #75 Base Sheet for economical applications
- GAFGLAS® #80 Ultima™ Base Sheet features a heavyweight construction that is ideal for all premium roofing and flashing systems
- GAFGLAS® Stratavent® Eliminator™ Base Sheets suitable for new and reroof applications when a venting base sheet is needed



TYPICAL 4-PLY PREMIUM SYSTEM WITH GAFGLAS® STRATAVENT® ELIMINATOR™, FLEXPLY™ 6, FLOOD COAT, AND GRAVEL

GAFGLAS® Mineral-Surfaced Cap Sheet...

Surfacing options:

- GAFGLAS® Mineral-Surfaced Cap Sheet... Provides a UL Class A rating for use as a surface ply in hot-applied roof systems and as a top ply in base flashing construction without the need for additional surface coatings
- GAFGLAS® EnergyCap™ BUR Mineral-Surfaced Cap Sheet... Now a mineral-surfaced cap sheet with a pre-applied, highly reflective coating of TOPCOAT® EnergyCote™ Elastomeric Coating for the highly reflective membranes required by California's Title 24

GAFGLAS® Built-Up Roofing Materials Selection Guide

BASE SHEETS

	Maximum Available Guarantee (Yrs)	Weight ¹ (lbs/sq ft)	Sq/s/roll ²	Surface	UL Approval ³	FM Approval ³	Miami-Dade County Approval	FBC	TDI	ICC	ENERGY STAR® Qualified/ Title 24 Compliant	ASTM Spec(s)
GAFGLAS® #75 Base Sheet	20	.185	3	Smooth	◆	◆	◆	◆	◆	◆		D4601 Type II
GAFGLAS® #80 Ultima™ Base Sheet	20	.303	2	Smooth	◆	◆	◆	◆	◆	◆		D4601 Type II
GAFGLAS® Stratavent® Eliminator™ Nailable Venting Base Sheet	20	.55	1.25	Smooth	◆	◆	◆	◆	◆	◆		D4897 Type II, D3672
GAFGLAS® Stratavent® Eliminator™ Perforated Venting Base Sheet	20	.53	1.25	Smooth	◆	◆	◆	◆		◆		D4897 Type II, D3672

PLY SHEETS

GAFGLAS® Ply 4	12	.06	5	Smooth	◆	◆	◆	◆	◆	◆		D2178 Type IV
GAFGLAS® FlexPly™ 6	20	.063	5	Smooth	◆	◆	◆	◆	◆	◆		D2178 Type VI

SURFACE SHEETS

GAFGLAS® Mineral-Surfaced Cap Sheet	20	.63	1	Granule	◆	◆	◆	◆				D3909
GAFGLAS® EnergyCap™ BUR Mineral-Surfaced Cap Sheet	20	.73	1	Granule	◆	◆	◆	◆		◆		D3909, C1549, C1371

¹All weights and sizes are approximate. ² Refer to www.ul.com for specific approvals. ³ Refer to <http://roofnav.fmgglobal.com> for specific approvals.

For technical information, visit our website at gaf.com or call 1-800-ROOF-411 (1-800-766-3411). Most GAFGLAS® products meet the physical requirements of ICC AC75. Contact Technical Services for specific listings.

GAF CompositeRoof™ Systems



GAF CompositeRoof™ Systems exhibit exceptional strain energy for long-lasting, reliable roofing system performance

The strength of BUR, the flexibility of modified bitumen...

GAF continues its tradition of innovation with GAF CompositeRoof™ systems that can:

- Combine the strength of premium GAFGLAS® built-up roofs with the elongation and flexibility of Ruberoid® Modified Bitumen Membranes
- Exhibit tensile strengths up to 300 lbf/in and strain energies as high as 70 lbf-in/in² at 0°F!

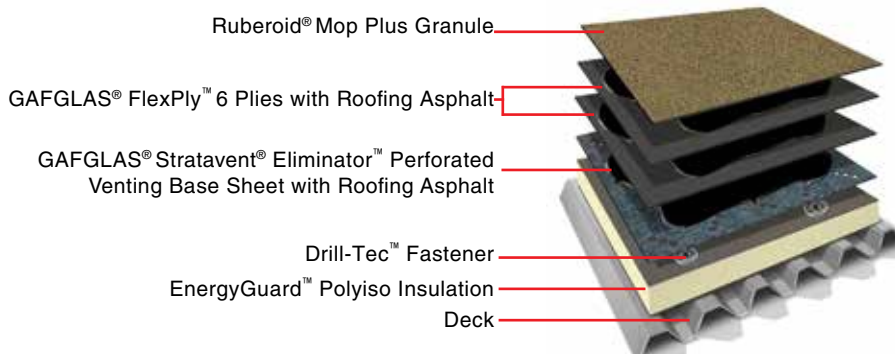
Every GAF CompositeRoof™ System includes at least:

- One ply of premium GAFGLAS® BUR for strength
- Three total layers of roofing plies/membranes for system redundancy and long-term reliability
- The use of at least one layer of polyester-reinforced Ruberoid® Modified Bitumen Membrane to ensure superior flexibility and elongation characteristics

For example, Specification I-2-1-MGP provides more than 10 times the elongation at 0°F of typical built-up roofing.

Exceptional strain energy...

GAF CompositeRoof™ Systems far exceed either BUR or modified bitumen systems in strain energy, one of the most advanced measures of mechanical performance. This combines the measurement of tensile strength and elongation in a single parameter to indicate whether a roof system has the tensile strength necessary to withstand normal roof stresses and the elastomeric properties to accommodate normal building movement.



TYPICAL 4-PLY MOP-APPLIED SYSTEM USING PREMIUM BUR AND SBS MODIFIED BITUMEN MEMBRANES

Typical Strain Energy Chart

SYSTEM	(lbf-inch/inch ² @0°F)
GAF CompositeRoof™ Systems	45
4 plies of Type VI fiberglass	9
2 plies fiberglass-reinforced mop-applied MB membranes	5
Base sheet and torch-applied MB membrane	12



TOPCOAT® Liquid-Applied Solutions

Protects and maintains new roofing systems
& restores deteriorating low-slope roofs



**Title 24
Compliant**

ENERGY STAR®
only valid
in the USA



Superior, SeamFree™

Protection... Originally designed specifically for the renovation and waterproofing of existing metal roofing, the TOPCOAT® System is one of today's most advanced—and most relied upon—roofing restoration systems. TOPCOAT® also offers a full line of membrane systems to restore most existing low-slope roof types, including BUR, modified bitumen, and EPDM. TOPCOAT® is a liquid-applied system, installed in several stages to form a flexible, SeamFree™ membrane over the entire roof. It protects, is fully adhered to the existing roof surface, is highly elastic, and bonds tightly to most substrates:

- Stays flexible to -30°F after curing
- Standard reflective white can reduce roof surface temperatures up to 60°F*
- Available in 9 standard and 7 preformulated colors, and unlimited custom colors
- Backed by a comprehensive system warranty up to 20 years on metal roofs**

It's the premier solution for the most complex and demanding installations:

- Innovative SeamFree™ construction means no laps to separate or cause leakage
- Exceptional flexibility and value
- A versatile solution for the protection of new roofs and the problem of aging roofs

The Industry Standard...

TOPCOAT® has become an industry leader through strict and consistent adherence to the highest quality standards. Our chemists work closely with research and testing facilities, such as FM Approvals and Underwriters Laboratories, to develop standards for the retrofit of metal and low-slope roofing. In addition, our sales and technical teams have been trained, not only in every detail of the TOPCOAT® system, but in the construction of roof restoration systems as well. Nationally, the TOPCOAT® System is installed by a network of trained professional roofing contractors.

TOPCOAT® Systems Reduce Your Roofing Life Cycle Costs...

An effective roof maintenance program combined with a TOPCOAT® system can greatly reduce life cycle costs for most roofing systems.

Energy Savings... Several independent testing facilities agree that a long-term reflective roof can decrease cooling costs by as much as 21% per year, or more! TOPCOAT® is an ENERGY STAR®-qualified product, is Title 24 compliant, and meets the stringent standards set by the Cool Roof Rating Council for solar reflectance and thermal emittance. TOPCOAT's ENERGY STAR®-qualified Roof Membrane is rated as providing an initial reflectivity of 85%, and 3-year studies

show that the TOPCOAT® Membrane exceeds the ENERGY STAR® program's minimum reflectivity by over 40%—thereby reducing the surface temperature of a roof by as much as 60°F when compared to a typical black low-slope roof. TOPCOAT's exceptional resistance to dirt pick-up, combined with regular standard roof maintenance, will ensure a highly reflective surface for the life of the roof system.

TOPCOAT® FireShield® System...

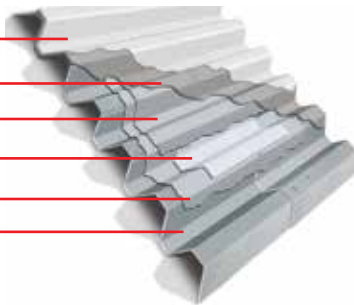
Provides maximum fire protection and energy savings instantly. The unique technology of FireShield® is formulated to provide maximum fire protection, increase a roof's reflectivity, and protect the roof substrate from harmful ultraviolet rays. Building fires cause property damage in excess of \$12 billion and claim the lives of almost 3,000 innocent victims annually.*** Regrettably, combustible roofing systems play a part in these tragedies. As North America's largest roofing manufacturer, we take fire safety seriously. That's why we've developed FireShield®, the first "self-extinguishing" roof restoration system. Special fire-resistant ingredients in the product react with heat and fire, causing a chemical reaction to occur. A non-combustible carbon char layer is formed that retards the flame propagation by reducing available oxygen.

*Depending on location of facility.

**See system warranty for complete coverage and restrictions.

***Source: National Fire Protection Association, 2012 data.

- TOPCOAT® Membrane (white or color)
- TOPCOAT® Membrane (gray)
- TOPCOAT® Flashing (Brush or Spray Grade)
- TOPCOAT® Flashing Fabric
- TOPCOAT® Flashing (Brush or Spray Grade)
- Metal Roof Panel



**LIQUID-APPLIED MEMBRANE SYSTEM
(TYPICAL METAL APPLICATION)**

**For More Information
About Cool Roof Products,
Visit Green Roof Central
at gaf.com/green**

To locate an authorized contractor, call your local regional office (see back cover).

visit TOPCOAT.com



EverGuard® Single-Ply Roofing Systems

EverGuard® Systems are your best and safest choice in single-ply roofing

If you are a facility manager, building owner, architect, or roofing contractor who has experienced the advantages of single-ply roofing systems, you owe it to yourself to consider **EverGuard® Single-Ply Roofing Systems** from GAF.

GAF thermoplastic membrane options include:

- **EverGuard® TPO...** combines the weatherability of EPDM with the reflectivity and seam strength of PVC—at a price you'll love. (To save time, EverGuard® Freedom™ TPO Self-adhering Membranes make installation easy and save you time and money.)
- **EverGuard Extreme® Advanced Protection® TPO...** offers exceptional performance in all applications, including high heat and solar.

- **Freedom™ Self-adhering TPO...** with RapidSeam™ technology combine the superiority of EverGuard® TPO Membrane with a factory-applied adhesive. RapidSeam™ technology has taken self-adhered membranes to the next level, offering a 6" self-adhering seam and providing factory-applied adhesive for superior strength.
- **Freedom™ HW TPO...** combines the convenience of self-adhered membranes with a traditional heat-welded seam, so where heat-welded seams are desired, both Freedom™ HW and EverGuard® TPO can now be considered.
- **EverGuard® PVC...** offers the advantages of heat-welded seams and high reflectivity, plus superior resistance to chemicals, oils, and greases.

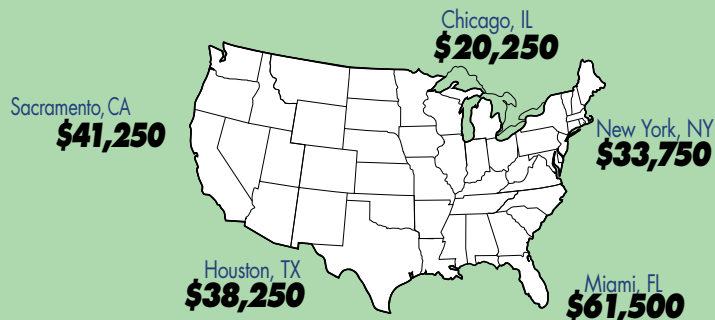
When You Figure In The Hidden Energy Savings, White EverGuard® TPO And PVC Systems Significantly Reduce Your Roofing Life Cycle Costs!

With a lifetime average solar reflectance of 65%, EverGuard® and Freedom™ TPO and PVC Membranes can reduce the surface temperature of your roof by as much as 60°F (versus a typical black roof).** This can translate into big savings on utility costs over the life of the roof—as much as \$30,000 or more, depending on where your facility is located. More and more facility owners are asking themselves, "Why get saddled with an energy-wasting black roof when I can install an energy-efficient EverGuard® or Freedom™ TPO or PVC roof instead?"

Depending on your location, an energy-saving EverGuard® TPO or PVC roof could offset as much as 30% or more of the cost to install that roof!

Total Estimated Energy Savings Of A 500 Square EverGuard® Or Freedom™ TPO Or PVC Roof Over 15 Years*

(Based on data from Oak Ridge National Laboratory, U.S. Dept. of Energy; assumes R-value of 12.5)



To calculate the savings in other cities, visit the Oak Ridge National Laboratory website at: <http://www.ornl.gov/sci/roofs+walls/facts/CoolCalcEnergy.htm>

For technical information, visit our website at gaf.com or call 1-800-ROOF-411 (1-800-766-3411)

*Energy savings estimates are based on energy and fuel cost data provided by ORNL website at the time of print and does not take into consideration energy cost fluctuations over time. Assumptions used in the savings calculations include: R-value of 19; infrared emittance of 90; COP of 2; solar reflectance of 76%; average heating system efficiency. The results are examples—type of building, geographical locations, and your exact energy/fuel costs as well as other factors must be considered for your specific situation.

**Depending on location of facility.

To locate an authorized contractor, call your local regional office (see back cover).



Product Spotlight:

EverGuard Extreme® TPO Delivers Advanced Protection For Your Property

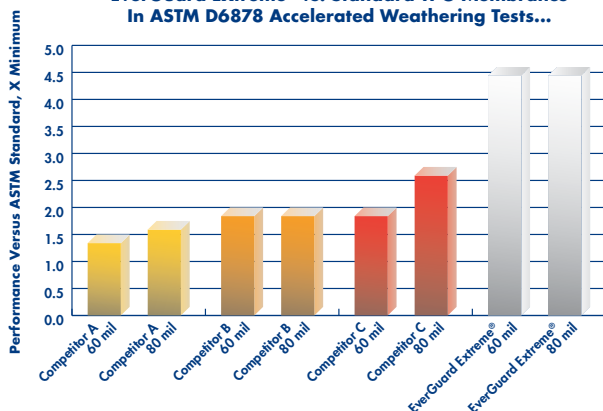
EverGuard Extreme® is a breakthrough (patent-pending) in TPO roofing membrane technology. It not only results in next-generation performance against heat aging and UV degradation (the two key performance characteristics directly related to roof system longevity), but also exceeds all key ASTM standards for TPO membranes. Why settle for standard TPO when you can get the advanced protection of EverGuard Extreme® TPO for your property?

EverGuard Extreme® Far Exceeds The Performance Of "Standard" TPO Membranes

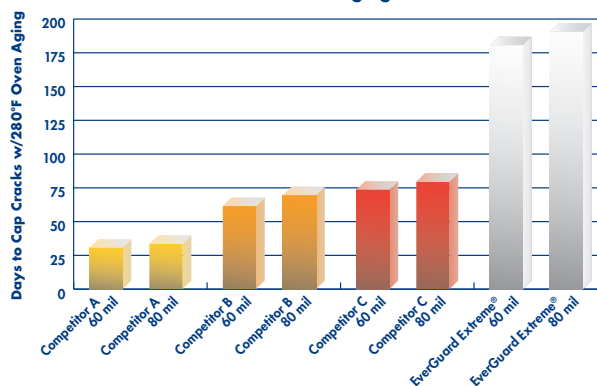
Standard TPO roofing sold today simply cannot match the performance of EverGuard Extreme®. It uses a proprietary formulation of stabilizers and UV absorbers to achieve performance levels far beyond current roofing standards. To prove it, we tested EverGuard Extreme® against other standard TPO membranes for the two key performance attributes most-highly sought after in TPO membranes: **heat aging** and **UV weathering**. The results were astounding—which is why we back EverGuard Extreme® with the industry's best guarantees: up to 35 years!*

*See applicable guarantees for complete coverage and restrictions.

EverGuard Extreme® vs. Standard TPO Membranes
In ASTM D6878 Accelerated Weathering Tests...

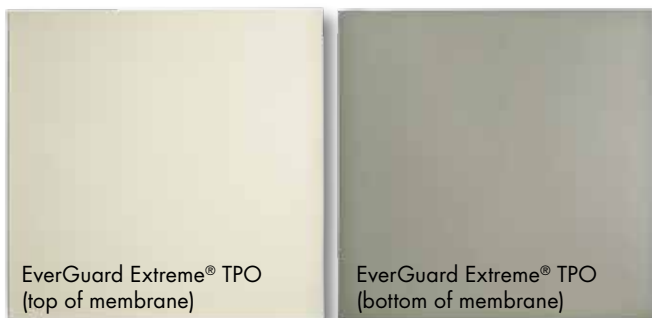


EverGuard Extreme® vs. Standard TPO Membranes
In 280°F Heat-Aging Tests...



See The Proof...

Even after the most severe accelerated heat aging at 280°F, **EverGuard Extreme® TPO** still looks brand new!



But, **a leading competitor's standard TPO** shows severe deterioration on both the top and bottom of the membrane.



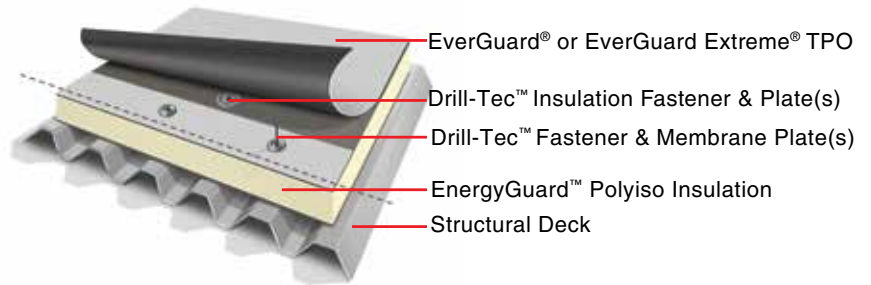
EverGuard® & Freedom™ TPO Systems

Solutions for superior performance and value



EverGuard® TPO & EverGuard Extreme® TPO with Drill-Tec™ Fasteners...

- Reliable low-cost installation
- ASAP Plate/Fastener combinations speed-up install
- No fumes or solvents
- RhinoBond® Non-Penetrating Fastening System option available



MECHANICALLY ATTACHED (IN-LAP ATTACHMENT)†

Advantages

- Lightweight
- Low Cost
- Flexible Application

Maximum Guarantee†

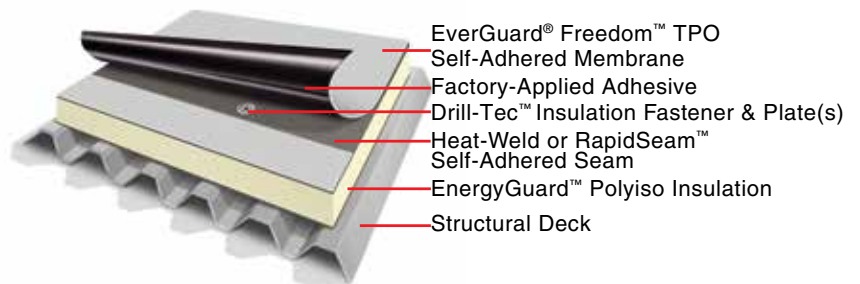
- EverGuard® TPO - 25 years
- EverGuard Extreme® TPO - 30 years

Membrane Type

- EverGuard® TPO: 45, 60, 80; Polyester scrim-reinforced smooth-faced membrane
- EverGuard® TPO: FB-45, FB-60, FB-80; Polyester scrim-reinforced fleece-backed membrane
- EverGuard Extreme® TPO: 50, 60, 70, 80

Freedom™ TPO With Heat-Weld Technology...

- Saves time, saves money, easy to install
- Installs much faster* than a taped EPDM seam application
- Eliminates adhesive solvent flash time required in traditional adhered systems
- No volatile organic compounds (VOCs)



SELF-ADHERED FACTORY-APPLIED BUTYL ADHESIVE OR HEAT-WELD†

Advantages

- Lightweight
- Flexible Application
- Excellent Wind Resistance

Maximum Guarantee†

- 20 years

Membrane Type

- Freedom™ TPO with RapidSeam™ 45, 60
- Freedom™ TPO HW 45, 60, 80

Freedom™ TPO With RapidSeam™ Technology...

- Easy to install, saves time, saves money
- Installs much faster than taped EPDM seam application, no adhesive flash, up to 5 times faster than water-based adhesives, and up to 3 times faster than solvent-based adhesives (depending on outside temperature)
- Twice the peel strength* of conventional EPDM Butyl taped systems

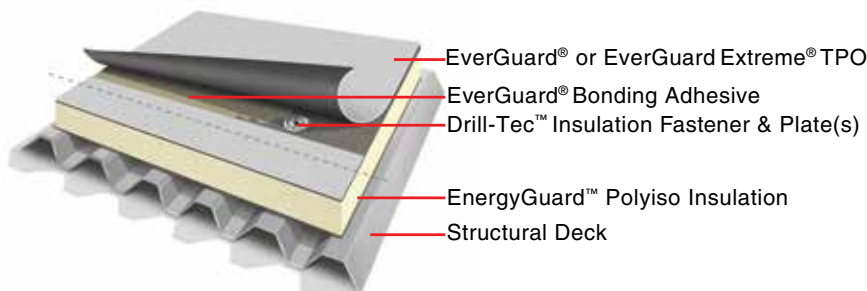
*See EverGuard® Specification Manual and 2012 Technical Points & Observations for system requirements.

† See the published GAF application instructions for complete installation details and guarantee coverage.



**EverGuard® TPO,
EverGuard Extreme® TPO,
& EverGuard® Bonding
Adhesives...**

- Provide enhanced wind uplift
- Low polluting (low VOC) and water-based adhesive provide environmentally friendly roofing options
- Fleece-back membrane and low-rise foam adhesive provide rapid install and near zero VOC—perfect for schools & healthcare facilities



**FULLY ADHERED SYSTEMS
(BONDING ADHESIVE)†**

Advantages

- Lightweight
- Low To Moderate Cost
- Enhanced Wind Resistance

Maximum Guarantee†

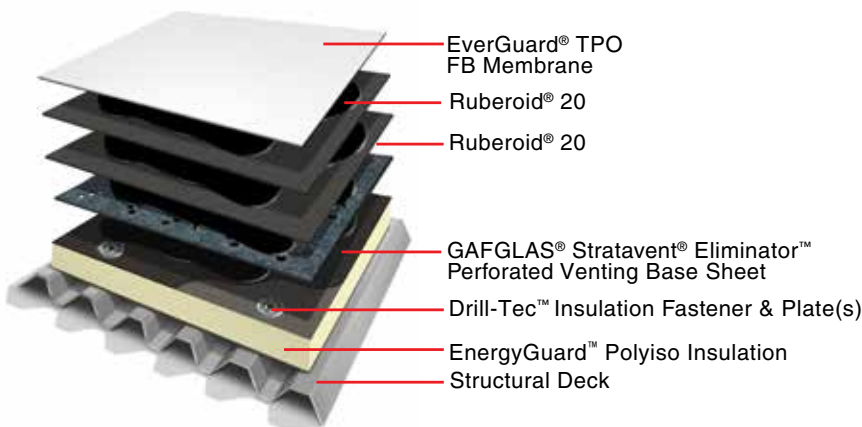
- EverGuard® TPO - 30 years
- EverGuard Extreme® TPO - 35 years

Membrane Type

- EverGuard® TPO: 45, 60, 80; Smooth-faced membrane
- EverGuard® TPO: FB-45, FB-60, FB-80; Fleece-backed membrane
- EverGuard Extreme® TPO: 50, 60, 70, 80
- EverGuard Extreme® TPO: FB-50, FB-60, FB-70, FB-80; Fleece-backed membrane

TriPosite XL™...

- Combines the reflectivity of TPO with redundancy of an asphaltic system
- Durable long-term guarantee system



**TriPosite XL™ (ADHERED SYSTEM
WITH BITUMINOUS ASSEMBLY)†**

Advantages

- High Strength
- Durable, Redundant Assembly
- Long-Term Value
- Re-cover Systems Available

Maximum Guarantee†

- EverGuard® TPO - 30 years
- EverGuard Extreme® TPO - 35 years

Membrane Type

- EverGuard® TPO: FB-45, FB-60, FB-80; Fleece-backed membrane
- EverGuard Extreme® TPO: FB-50, FB-60, FB-70, FB-80

† See the published GAF application instructions for complete installation details and guarantee coverage.

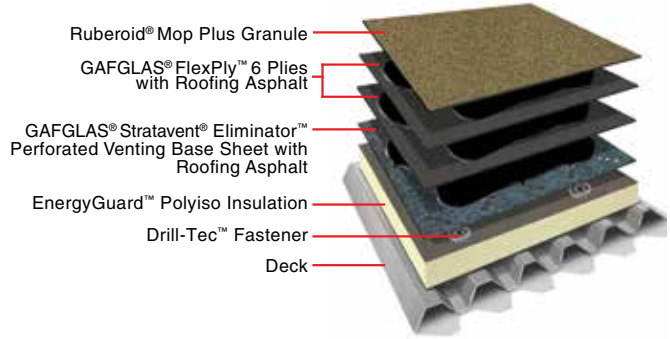
GAF EnergyGuard™ Roof Insulation Products



Economy and exceptional thermal performance for all types of roofing systems

EnergyGuard™ Polyiso Insulation and Tapered Polyiso Insulation

- Designed for use in practically any low-slope roofing application, including BUR, mod bit, and single-ply systems
- High insulation value — Superior “LTTR” value compared to any other FM Class I rated product of equivalent thickness at design value of 5.7 per inch
- EnergyGuard™ roof insulation board is made of glass fiber-reinforced cellulosic felt facers bonded to a core of polyiso foam
- Manufactured with EPA-compliant blowing agents containing no CFCs or HCFCs; has zero ozone depletion potential (ODP) and virtually no global warming potential (GWP)
- Available in a variety of thicknesses from .5” to 4.0” to best suit your needs
- Available in 4’x4’ and 4’x8’ boards
- Tapered panels are also available in slopes of 1/16”, 3/16”, 1/8”, 3/8”, 1/4”, and 1/2”



TYPICAL 4-PLY MOP-APPLIED SYSTEM USING ENERGYGUARD™ POLYISO INSULATION

EnergyGuard™ Perlite Insulation and Tapered Perlite

- Composed of expanded perlite particles, selected binders, and cellulose fibers, which provide its insulating efficiency
- Treated surface helps ensure proper adhesion to roof membranes
- Designed for use in BUR, mod bit & some single-ply systems
- Available in 3/4”, 1”, 1.5”, and 2” thicknesses
- Tapered boards available to improve drainage
- Available in 1/2” re-cover boards for use over existing roofs
- Cant strips also available to provide a smooth transition from horizontal to vertical surfaces

EnergyGuard™ HD & EnergyGuard™ HD Plus Polyiso Cover Board

- A 1/2” thick high-density polyiso cover board that has an R-value of 2.5, the highest of any cover board
- Available in two compressive strengths: HD ≥80 psi and HD+ ≥110 psi
- Durable construction combined with a durable coated glass facer
- Easy to handle... lightweight (11 lbs for HD and 13 lbs for HD+ per 4’x8’ board); easy to cut and install
- Versatile... compatible with mechanically attached TPO, fully adhered TPO, cold-applied MB, cold-applied BUR applications, and more

GAF Roof System Insulation Compatibility Guide

Product	Composition	Built-Up Roofing	Modified Bitumen	Fully Adhered Single-Ply	Mechanically Attached Single-Ply	Ballasted Single-Ply
EnergyGuard™ Polyiso						
Flat	Polyiso foam with organic/glass facer	♦ ¹	♦ ¹	♦	♦	♦
Tapered	Polyiso foam with organic/glass facer	♦ ¹		♦	♦	♦
Re-cover	Polyiso foam with organic/glass facer	♦ ¹	♦ ¹	♦	♦	♦
EnergyGuard™ HD/HD Plus Polyiso Cover Board						
Flat HD >80 psi	Coated glass facer	♦ ¹	♦ ¹	♦	♦	♦
Flat HD Plus >110 psi	Coated glass facer	♦ ¹	♦ ¹	♦	♦	♦
EnergyGuard™ Polyiso Composite						
Flat	Polyiso foam, perlite, and organic/glass facer	♦	♦	♦	♦	♦
Tapered	Polyiso foam, perlite, and organic/glass facer	♦	♦	♦	♦	♦
EnergyGuard™ Perlite Insulation						
Flat	Perlite	♦	♦	♦	♦	♦
Tapered	Perlite	♦	♦	♦	♦	♦
Re-cover	Perlite	♦	♦	♦	♦	♦
Cant/Edge	Perlite	♦	♦			

¹ Some membrane systems may require a cover board or the use of GAFGLAS® Stratavent® Eliminator™ Perforated Venting Base Sheet. Check with membrane supplier for code and warranty requirements.

GAF Roofing Accessories

A single supplier for all your roofing components means a single source for accountability



Metalastic® Expansion Joint Covers

“Reduce field splices—and risk of leaks”

Field splices are one of the most notorious leak sites on the roof. GAF has designed the most flexible group of expansion joint covers in the industry. Available in 50' rolls, or customized up to 250' rolls in black or white, Metalastic® Expansion Joint Covers eliminate splice joints every 10' and promote trouble-free roofing system performance. Substantially reduces the contractor's installation labor, thereby reducing overall installed cost.



Splice failure on competitor's product



Metalastic® Cover in continuous length run



CMF Style
Curb-to-Curb style expansion joint profiles



LP Style
Low Cant-to-Cant or Cant-to-Wall expansion joint profiles



CTW Style
Curb-to-Wall style expansion joint profiles



SMF Style
Cant-to-Cant or Cant-to-Wall expansion joint profiles

M-Weld™ Preflashed Drainage & Moisture-Control Accessories

“Provides a uniform finished look for the roof while improving the reliability of penetration flashings”

M-Weld™ Preflashed Accessories... are one-piece roofing detail assemblies that can be used with modified bitumen and built-up roofing systems. These accessories are flashed with either an APP modified bitumen (for use with torch-applied membranes) or an SBS modified bitumen (for use on built-up roofs and mop- or cold-applied SBS applications). Available for use in a variety of different roofing applications, Preflashed Accessories include:

- Vents... preflashed standard vents and preflashed one-way vents
- Drains... preflashed drains (regular roof drains) and preflashed scuppers (through-wall drains)
- Penetrations... preflashed adjustable vents, preflashed plumbing vents, and M-Curbs, which are structural urethane outer shells bonded to the roof surface and filled with 2"-thick urethane rubber sealant



Standard M-Vent™



Adjustable M-Vent™



Drain Insert



One Way M-Vent™



M-Curb™ System



TPO-Coated Metal Drain



Matrix™ Adhesives & Cements

Asbestos-free formulations are your safest choice

GAF offers a complete line of premium, asbestos-free modified adhesives and cements. Specially formulated for use with Ruberoid® SBS Modified Bitumen Membranes and other GAF systems.

- Cold-applied roofing systems offer a great opportunity on many roofs where use of torches and kettles is not safe or practical.
- Repairs of hot- or cold-applied SBS modified bitumen roofs are easier with Matrix™ SBS Flashing Cements and SBS Adhesives.

Cements:

Matrix™ 201 Premium SBS Flashing Cement
 Matrix™ 202 SBS Flashing Cement
 Matrix™ 203 Plastic Roof Cement
 Matrix™ 204 Wet/Dry Roof Cement

Adhesives:

Matrix™ 101 Premium SBS Membrane Adhesive
 Matrix™ 102 SBS Membrane Adhesive
 Matrix™ 103 Cold Process Adhesive

Primer:

Matrix™ 307 Premium Asphalt Primer



Lexsuco® Flashing, Vapor Retarders & Water Barriers

"Takes the guesswork out of flashing repair"

- Metal Edge (ME) Flashing
- Black/White (B/W) Flashing
- Reinforced (RF) Flashing
- Lexsuco® Vapor Retarder, a 4-mil black vinyl sheet with a perm rating of 0.5
- Permte Vapor Retarder, an asphalt-impregnated kraft paper with fiberglass-reinforced edges and a perm rating of 0.23
- Lexsuco® Water Barrier, a high-quality flexible PVC plastic sheet for moisture-barrier applications in unexposed locations, such as below grade or behind and beneath other building components

Metal Edge Flashing



Black/White Flashing



Reinforced (RF) Flashing





EverGuard® Prefabricated Accessories

Boost productivity up to 200%, reduce total installed cost by up to 25%, and eliminate common problems often associated with field-fabricated details

EverGuard® TPO Prefabricated Accessories



Expansion Joint



Fluted Corner



Split Pipe Boot



Corner Curb Wrap



Universal Corner



Vent Boot



Cover Tape



RTA Strip



Standing Seam Profile

EverGuard® PVC Prefabricated Accessories



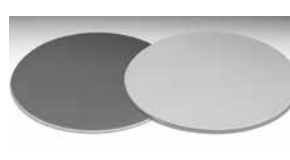
Pipe Boot



Pourable Sealer Pocket



Inside Corner



T-Joint Patch



Fluted Outside Corner

Not Pictured: 6" x 150' Detail Strip, Coated Metal, Cut Edge Sealant

Drill-Tec™ Fasteners

"Broad range of fastening options for all systems"

For mechanically fastened roof system components, Drill-Tec™ Fasteners are engineered to exacting specifications to provide easy installation, corrosion resistance, and system compatibility with virtually any membrane or substrate.

- Tested for compliance with FMRC standards 4450 & 4470
- Available with factory-applied Drill-Tec™ CR-10 coating to ensure resistance to corrosion in even the most severe conditions



Superior Guarantees For Quality Systems

Years of proven quality allow GAF to offer roofing system guarantees on Modified Bitumen, Built-Up Roofing, GAF CompositeRoof™, EverGuard®, EverGuard Extreme®, and TOPCOAT® Roofing Systems. GAF Diamond Pledge™ No-Dollar-Limit (NDL) and System Pledge™ Roof Guarantees are available from 10 years up to 35 years* (material-only warranties are also available on GAF products). Guarantee extensions of up to 25% are available with GAF's WellRoof® Guarantee Extension.** Contact Guarantee Services for details.



Master Roofing Contractor Programs



Choosing the right roofing system, one supplied by the right materials manufacturer, supported with the right guarantee, and—most important—installed by the right contractor, is essential for the protection of the owner's facility. Through its Master Roofing Contractor Programs, GAF has aligned with key professional roofing contractors throughout the United States to ensure the quality installation and long-term performance of all Diamond Pledge™ and System Pledge™ guaranteed systems. Selection of a Master or Master Select™ Roofing Contractor to install a GAF system will result in the cost-effective, on-time roofing solution that you demand, while maintaining superior quality and performance.

Certified Maintenance Professional (CMP) Program

Having a maintenance program in place for your roofing asset is critical not only for optimizing its overall longevity and performance but also helping ensure you have uninterrupted guarantee coverage if issues arise. GAF Certified Maintenance Professionals (CMPs) are contractors who have not only the expertise to maintain and service your roof but also the exclusive ability to extend your Diamond Pledge™ NDL Roof Guarantee by 25%—via the WellRoof® Guarantee Extension,** at no cost to you. Contact GAF Guarantee Services for details.



gaf.com – Your Resource For Complete Product Data

GAF's website contains technical data and information on both low- and steep-slope products. Information can be viewed or, in many cases, faxed or e-mailed to you, at your request directly from our website!

Full-Service Technical Support

To assist the architect and specifier from design through installation, the GAF Roofing System Solutions CD-ROM contains information on all the GAF commercial products and systems. GAF's Technical Services Group is available to provide additional data and information on geographic details, specific GAF projects, and code-related questions. For more information about our quality roofing products, systems, or support, visit our website at gaf.com or call our toll-free **Technical Hotline, 1-800-ROOF-411**.

Architectural Information Services... An Entire Group Dedicated To You

Architects and specifiers can access an entire team devoted to assisting you with the specification process. They can answer questions and provide assistance with master specification preparation and other valuable activities. Call them toll free: **1-800-522-9224** or e-mail AIS@gaf.com.

*See applicable GAF roof guarantee for complete coverage and restrictions.
**Guarantees of 30 and 35 years do not qualify for WellRoof® Guarantee Extension.

Regional Sales Offices

For the location of the closest GAF distributor or factory-certified contractor, call the nearest GAF regional office.

Central

900 S. Frontage Road, Suite 350
Woodridge, IL 60517
630-296-1980

Northeast

700 Second Street, Suites C & D
Swedesboro, NJ 08085
856-241-0241

Southeast

13361 N. 56th Street
Tampa, FL 33617
813-829-8880
866-714-5350

Southwest

14911 Quorum Dr, Suite 600
Dallas, TX 75254
972-851-0500

West

11800 Industry Avenue
Fontana, CA 92337
951-360-4200
800-445-9330

Canada Sales Office

855-492-8085

Service Contacts

TECHNICAL SERVICES AND GUARANTEE STATUS

1-800-ROOF-411
(1-800-766-3411)

INTERNATIONAL SALES

1-800-555-1852

ARCHITECTS AND SPECIFIERS

1-800-522-9224



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

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