



FIRESTONE RUBBERGARD™ EPDM: The roofing membrane for the 21<sup>ST</sup> CENTURY.

Even more important than the documented twenty plus years of service is the fact that Firestone RubberGard EPDM is backed by a company with a one hundred year history. Since its beginnings in 1900 up to the present day, Firestone has served its customers with rubber products designed to perform and endure. In fact, endurance is the fundamental characteristic of both RubberGard EPDM and the company that backs it. That's why, when it comes to roofing, only Firestone can say "Nobody Covers You Better."

Note: This brochure is meant only to highlight Firestone's products and specifications. Information is subject to change without notice. All products and specifications are listed in approximate weights and measurements. For complete product and detail information, please refer to the appropriate Technical Manual.

Firestone takes responsibility for furnishing quality materials which meet Firestone's published product specifications. As neither Firestone itself nor its representatives practice architecture, Firestone offers no opinion on, and expressly disclaims any responsibility for, the soundness of any structure on which its products may be applied. If questions arise as to the soundness of a structure or its ability to support a planned installation properly, the Owner should obtain opinions of competent structural engineers before proceeding. Firestone accepts no liability for any structural failure or for resultant damages, and no Firestone Representative is authorized to vary this disclaimer.



Firestone Building Products  
250 West 96th Street, Indianapolis, IN 46260  
Corporate Office: 1-800-428-4442 / 317-575-7000 / Fax: 317-575-7100  
[www.firestonebpco.com](http://www.firestonebpco.com)



**Firestone RubberGard™ EPDM: 20 years of fighting wear.**

While many single-ply roofing membranes have been on the market for ten years or less, Firestone's RubberGard brand of EPDM roofing membrane has been serving building owners across the country for over two decades. Since the first RubberGard EPDM roofs were installed in 1980, Firestone roofing systems have consistently delivered the two critical needs all building owners demand: outstanding durability and low life cycle cost.

## Easy to maintain.

In addition to low initial cost and long service life, the value of a Firestone RubberGard EPDM roof can be extended even further with simple maintenance procedures. Because the RubberGard membrane is so durable and resistant to weathering, many older RubberGard EPDM roofs can provide additional years of service simply by installing new flashings and re-covering the field seams. Utilizing Firestone's patented QuickSeam™ Tape technology, these new flashings deliver more strength and moisture resistance than even the original seams. (This method has proven so successful that it is frequently used to extend the service life of many non-Firestone rubber roofs!) If you have an older rubber roof coating, don't hesitate to call your local Firestone sales representative to arrange



The service life of many older EPDM roofs can be extended with new seams and flashings featuring Firestone QuickSeam products.

for an inspection and maintenance proposal.

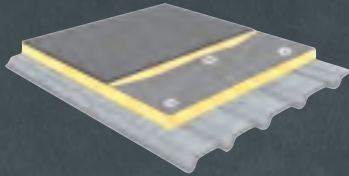
Even the service life of RubberGard EPDM itself can be extended. Long-term field studies of Firestone roofs indicate that aging of RubberGard EPDM can be significantly retarded by treating the membrane with Firestone's AcryliTop™ roof coating. As a result of this outstanding field performance, Firestone can now offer a five-year extension to its standard twenty-year membrane warranty if the membrane is coated with AcryliTop coating within the first two years of service. And if the roof is re-coated with AcryliTop coating every five years, Firestone can extend the membrane warranty an additional five years: a total of thirty years of membrane coverage!

When coated with AcryliTop acrylic coating, Firestone's RubberGard EPDM warranty can be extended up to thirty years.

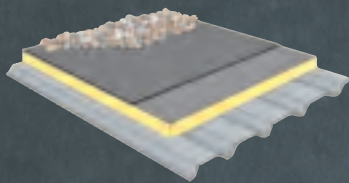


## UNMATCHED DESIGN FLEXIBILITY.

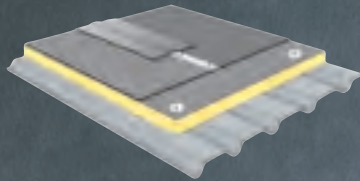
BECAUSE RUBBERGARD EPDM IS AVAILABLE IN MANY DIFFERENT SIZES AND CONFIGURATIONS, A WIDE VARIETY OF SYSTEM DESIGNS ARE AVAILABLE THAT ARE SUITABLE FOR ALMOST EVERY TYPE OF ROOF.



**Fully Adhered RubberGard EPDM** is the popular choice for both new construction and re-roofing wherever ease of inspection and maintenance are primary concerns. Fully Adhered RubberGard EPDM can be installed on high slope roofs, such as barrels and vaults, and can be coated with Firestone AcryliTop™ coating to provide heat reflectivity.



**Ballasted RubberGard EPDM** offers fast coverage and economical installation that has made it the overwhelming favorite for modern stores, offices and warehouses. Featuring large roofing panels (up to 50 feet wide by 200 feet long) covered with smooth washed stones or concrete pavers, Ballasted RubberGard EPDM provides economical and durable roof coverage with an aesthetically pleasing appearance.



**Mechanically Attached RubberGard EPDM** offers a wide variety of solutions to numerous roof configurations and is very popular in re-roofing. Mechanically Attached RubberGard EPDM also can be designed to accommodate special wind requirements by adjusting the number and spacing of roof fasteners to increase wind uplift resistance.

In addition to this variety of general roof system types, Firestone offers specific design solutions for specialized re-roofing applications. Pre-engineered metal buildings can be re-covered with custom-cut insulation fillers and rigid overlay boards that improve energy efficiency and reduce interior wind noise. Roofs with ponding water can be re-engineered using Firestone tapered insulation to increase drainage. And roofs requiring code-mandated fire and wind ratings can be re-covered with a wide variety of RubberGard EPDM roofing systems that have been tested and approved by Underwriters Laboratories, Factory Mutual and other major building code authorities.



Roofs with ponding water can be re-engineered using Firestone tapered insulation to increase drainage.

During these past twenty years, many single-ply roofing membranes have come and gone; and many of those that remain have been re-formulated extensively. But Firestone's RubberGard EPDM remains essentially unchanged since its introduction in 1980. The same combination of resilient EPDM polymers and selected grades of engineered Carbon Black that was introduced over twenty years ago is still available today. And the benefit of this formulation has been demonstrated on rooftops across the world. Simply put, RubberGard EPDM roofs have delivered an unmatched level of service and performance. According to recent independent research, RubberGard EPDM roofing systems have provided longer service life than other popular roofing alternatives. When compared to other roof systems, EPDM provides 30% more service life than traditional built-up roofing (BUR), while equaling or exceeding the service life of modern modified bitumen roofing.

This RubberGard EPDM roofing system was installed in 1980 and remains in service today.



In addition to increased service life, RubberGard EPDM membranes also provide substantial savings in the annualized cost of roof ownership. Based on current installed cost estimates, EPDM offers a significantly lower annualized roofing cost to the building owner. As an example, the annualized cost of a ballasted EPDM roof is 30% less than the annual cost of an asphalt built-up roof.

### EPDM PROVIDES SUPERIOR SERVICE LIFE AS WELL AS LOWER ANNUALIZED ROOF COST

Roof System:	Average Service Life:	Initial Cost* (Indexed)	Annualized Cost (Indexed Constant Dollars)
EPDM (Ballasted)	18.3 Years	1.0	0.055
EPDM (Adhered)	17.9 Years	1.2	0.067
Modified Bitumen	17.3 Years	1.2	0.069
Asphalt BUR	13.6 Years	1.0	0.074
PVC	9.5 Years	n/a**	n/a**

Source: K.D. Schneider and A.S. Keenan, "A Documented Historical Performance of Roofing Assemblies in the United States 1975-1996." Proceedings of the Fourth International Roofing Symposium on Roofing Technology, September, 1997.

\* Initial cost based on current relative installed cost, including material, labor, overhead and profit.

\*\* PVC systems studied by Schneider & Keenan were constructed predominantly from unreinforced PVC membrane, which is now infrequently installed commercially in North America. As such, annualized cost comparisons to current reinforced PVC systems cannot be made.

### RUBBERGARD MAX EPDM PROVIDES SUPERIOR PHYSICAL STRENGTH

Physical Property	Industry Standard	RubberGard MAX EPDM Typical Value
Initial Breaking Strength	90 lbf	240 lbf
Aged Breaking Strength	80 lbf	275 lbf
Initial Elongation:	250%	475%
Aged Elongation:	200%	300%
Tear Strength	10 lbf	60 lbf

Note: Industry standard values per ASTM D4637.

The strength of RubberGard MAX membrane also offers superior resistance to wind forces. For buildings in high wind zones, Firestone offers system configurations of RubberGard MAX membrane that can be warranted against wind speeds up to 100 miles per hour.

## Firestone RubberGard EPDM: Tough enough to stand up to the challenge.

A roofing membrane has to face many challenges. In addition to resisting the natural forces of weathering, roof membranes must accommodate service traffic for the periodic maintenance of rooftop equipment such as exhaust vents and air conditioning units. For roofs with frequent service demands, Firestone has developed *RubberGard MAX*, a reinforced EPDM membrane with superior strength and durability.

The superiority of RubberGard MAX EPDM is easy to determine by comparing the physical properties of this membrane against the current industry standard for reinforced EPDM roofing membranes. In several important criteria, most notably aged breaking strength and tear strength, RubberGard MAX EPDM exceeds industry standards by a factor of almost 3.



RubberGard MAX, a reinforced EPDM membrane, offers superior strength and durability along with unmatched design flexibility.

With RubberGard MAX EPDM, Firestone is the first roofing manufacturer to offer a warranty covering cuts and punctures due to rooftop service and maintenance traffic.



Because of the outstanding strength and tear resistance of RubberGard MAX EPDM, Firestone can extend its roofing warranty to cover cuts and punctures caused by rooftop service and maintenance activities. By selecting RubberGard MAX EPDM, a building owner can have the assurance

that the roofing system has been designed to accommodate periodic service requirements without compromising the roofing membrane or jeopardizing the roofing warranty. And in the rare event that the RubberGard MAX EPDM membrane is cut inadvertently during rooftop service activities, Firestone stands ready to repair the membrane promptly at no cost during the warranty term.