



Building Products

October 2003

20 year Warranty Design Criteria for RubberGard EPDM Membrane Mechanically Attached Systems

General Requirements

Slope Requirements

Minimum 1/8" slope recommended to promote positive drainage. Firestone recommends a minimum of 1/4" slope.

Acceptable Decks

Refer to the Firestone Technical Manual for minimum pullout requirements.

1. 22 gauge Steel or heavier
2. 3,000 psi Structural Concrete
3. Minimum 1/2" Plywood
4. Wood Planks with min. 1" Thickness
5. Contact Firestone for decks not listed.

Building Height Limitations

20 year systems are restricted to building heights of 120 feet or less (Maximum building height of 80 feet for spacing greater than 7 feet.)

Membrane Requirements

Minimum .060" EPDM (Standard, LSFR, or FR) with the use of an air barrier or where existing roof remains in place and is sealed, or minimum .045" MAX.

Base Tie-Ins

Must be constructed using QuickSeam RPF strip.

Construction Type

New, Tear off or Retrofit provided all wet material is removed.

Use of Air Barrier

An air barrier is required for projects with large wall openings that are greater than 10% of the total wall area that can be left open in a storm. Criteria to be determined based upon Firestone's Review.

Sheet Metal

1. Firestone Metal Edge System.
2. Shop fabricated pre-finished G-90 Galvanized Steel, Stainless Steel, Anodized or extruded Aluminum.

Other Requirements

1. As-Built Projects not permitted. Firestone requires a Pre-Installation Notice 14 days prior to project installation.
2. System installation per Firestone Technical Manual.
3. The Firestone Warranty does not cover products not supplied by Firestone Building Products.

Mechanically Attached Systems	
Seam Attachment	Perimeter Requirements
7'6" RubberGard MAX panels attached 12" o.c. using HD Fasteners, Firestone Batten, and 6" QuickSeam Tape. 10' RubberGard MAX panels attached 12" o.c. using HD Fasteners, Firestone Batten, with 6" QuickSeam Tape.	55 mph warranty: Refer to Firestone Wind Design Guide for perimeter attachment (RPF and RMA strips are not acceptable for intermediate perimeter attachment) For warranty speeds in excess of 55 mph contact Firestone Technical Services

Insulation Attachment for Mechanically Attached Systems		
ISO 95+ Insulation Thickness (Top Layer)	New Construction with No Air Barrier or recover over BUR, Modified, or Adhered Single-Ply Systems	New Construction with Air Barrier or recover over existing loose laid or Mechanically Attached Systems
1.0"-1.4"	5 per 4'x 8' Board	16 per 4'x 8' Board
1.5"-1.9"	5 per 4'x 8' Board	12 per 4'x 8' Board
2.0"-4.0"	5 per 4'x 8' Board	8 per 4'x 8' Board

Detail Description for Mechanically Attached Systems	
Wall Terminations	Firestone Termination Bar with AP Sealant applied along the caulk ledge. Alternate, surface mounted or inserted counter flashings may also be used in accordance with current Firestone details.
Curbs	Curbs and expansion joints longer than eight (8) feet on any side must be anchored using QuickSeam RPF Strip. Curbs must be flashed using QuickSeam Curb Flashing or 9" QuickSeam FormFlash.
Corners	Flashed using QuickSeam Corner Flashing or 9" QuickSeam FormFlash.
Roof Edges	QuickSeam 5" Flashing with a cover strip of 9" FormFlash. As an alternate, Firestone EdgeGard may also be used.
Penetrations	Flashed using QuickSeam Pipe Flashing, QuickSeam Penetration Pocket
Walkways	Constructed using QuickSeam Walkway Pads.

This sheet is intended to be a summary guide for the installation of a roofing system that will qualify for a 20 year Firestone Red Shield Limited Warranty with a 55 mph wind speed coverage. Refer to the Firestone Technical Manual for specific requirements regarding installation of this roof system. Installation specifications are subject to change. Review Firestone website and Technical Bulletins for current updates.



Building Products

October 2003

20 year Warranty Design Criteria for RubberGard EPDM Membrane Ballasted Systems

General Requirements

Slope Requirements

Minimum 1/8" slope recommended to promote positive drainage. Firestone recommends a minimum of 1/4" slope.

Acceptable Decks

Refer to the Firestone technical manual for minimum pullout requirements.

1. 22 gauge Steel or heavier
2. 3,000 psi Structural Concrete
3. Minimum 1/2" Plywood
4. Wood Planks with min. 1" Thickness
5. Contact Firestone for decks not listed.

Building Height Limitations

20 year systems are restricted to building heights of 75 feet or less.

Membrane Requirements

Minimum .060" RubberGard EPDM membrane (Standard, LSFR, or FR). Consideration will be given for .060" and .075" RubberGard MAX EPDM. subject to Firestone technical review prior to job bidding.

Base Tie-Ins

Must be constructed using QuickSeam RPF strip.

Construction Type

New, Tear off or Retrofit provided all wet material is removed.

Use of Air Barrier

An air barrier is required for projects with large wall openings that are greater than 10% of the total wall area that can be left open in a storm. Criteria to be determined based upon Firestone's Review.

Sheet Metal

1. Firestone Metal Edge System.
2. Shop fabricated pre-finished G-90 Galvanized Steel, Stainless Steel, Anodized or extruded Aluminum.

Other Requirements

1. As-Built Projects not permitted. Firestone requires a Pre-Installation Notice 14 days prior to project installation.
2. System installation per Firestone Technical Manual.
3. The Firestone Warranty does not cover products not supplied by Firestone Building Products.

Seam Construction

Side Laps and End Laps: Minimum 3" QuickSeam Splice Tape with QuickSeam Joint Covers at all "T" joints and wall intersections.

Detail Description

Detail Description	
Wall Terminations	Firestone Termination Bar with AP Sealant applied along the caulk ledge. Alternate, surface mounted or inserted counter flashings may also be used in accordance with current Firestone details.
Curbs	Curbs and expansion joints longer than eight (8) feet on any side must be anchored using QuickSeam RPF Strip. Curbs must be flashed using QuickSeam Curb Flashing or 9" QuickSeam FormFlash.
Corners	Flashed using QuickSeam Corner Flashing or 9" QuickSeam FormFlash.
Roof Edges	QuickSeam 5" Flashing with a cover strip of 9" FormFlash. As an alternate, Firestone EdgeGard may also be used.
Penetrations	Flashed using QuickSeam Pipe Flashing, QuickSeam Penetration Pocket
Walkways	Constructed using QuickSeam Walkway Pads, or Pavers with sacrificial membrane layer.

This sheet is intended to be a summary guide for the installation of a roofing system that will qualify for a 20 year Firestone Red Shield Limited Warranty with a 55 mph wind speed coverage. Refer to the Firestone Technical Manual for specific requirements regarding installation of this roof system. Installation specifications are subject to change. Review Firestone website and Technical Bulletins for current updates.



Building Products

October 2003

20 year Warranty Design Criteria for RubberGard EPDM Membrane Fully Adhered Systems

General Requirements

Slope Requirements

Minimum 1/8" slope recommended to promote positive drainage. Firestone recommends a minimum of 1/4" slope.

Acceptable Decks

Refer to the Firestone Technical Manual for minimum pullout requirements.

1. 22 gauge Steel or heavier
2. 3,000 psi Structural Concrete
3. Minimum 1/2" Plywood
4. Wood Planks with min. 1" Thickness
5. Fibrous Cement and Gypsum (Adhered only)
6. Contact Firestone for decks not listed.

Building Height Limitations

20 year systems are restricted to building heights of 250 feet or less.

Membrane Requirements

Minimum .060" RubberGard EPDM membrane (Standard, LSFR, or FR) or any thickness RubberGard MAX membrane.

Base Tie-Ins

Must be constructed using QuickSeam RPF strip.

Construction Type

New, Tear off or Retrofit provided all wet material is removed.

Use of Air Barrier

An air barrier is required for projects with large wall openings that are greater than 10% of the total wall area that can be left open in a storm. Criteria to be determined based upon Firestone's Review.

Sheet Metal

1. Firestone Metal Edge System.
2. Shop fabricated pre-finished G-90 Galvanized Steel, Stainless Steel, Anodized or extruded Aluminum.

Other Requirements

1. As-Built Projects not permitted. Firestone requires a Pre-Installation Notice 14 days prior to project installation.
2. System installation per Firestone Technical Manual.
3. The Firestone Warranty does not cover products not supplied by Firestone Building Products.

Seam Construction

Side Laps and End Laps: Minimum 3" QuickSeam Splice Tape with QuickSeam Joint Covers at all "T" joints and wall intersections.

Insulation Attachment for Fully Adhered Systems (Heavy Duty Fasteners With Insulation Plates Required)

ISO 95+ Insulation Thickness (Top Layer)	New Construction with No Air Barrier or recover over BUR, Modified, or Adhered Single-Ply Systems	New Construction with Air Barrier or recover over existing Ballasted or Mechanically Attached Systems
1.0"-1.4"	16 per 4'x 8' Board	16 per 4'x 8' Board
1.5"-1.9"	12 per 4'x 8' Board	12 per 4'x 8' Board
2.0"-4.0"	8 per 4'x 8' Board	8 per 4'x 8' Board

Detail Description for Fully Adhered Systems

Wall Terminations	Firestone Termination Bar with AP Sealant applied along the caulk ledge. Alternate, surface mounted or inserted counter flashings may also be used in accordance with current Firestone details.
Curbs	Curbs and expansion joints longer than eight (8) feet on any side must be anchored using QuickSeam RPF Strip. Curbs must be flashed using QuickSeam Curb Flashing or 9" QuickSeam FormFlash.
Corners	Flashed using QuickSeam Corner Flashing or 9" QuickSeam FormFlash.
Roof Edges	QuickSeam 5" Flashing with a cover strip of 9" FormFlash. As an alternate, Firestone EdgeGard may also be used.
Penetrations	Flashed using QuickSeam Pipe Flashing, QuickSeam Penetration Pocket
Walkways	Constructed using QuickSeam Walkway Pads, or Pavers with sacrificial membrane layer.

This sheet is intended to be a summary guide for the installation of a roofing system that will qualify for a 20 year Firestone Red Shield Limited Warranty with a 55 mph wind speed coverage. Refer to the Firestone Technical Manual for specific requirements regarding installation of this roof system. Installation specifications are subject to change. Review Firestone website and Technical Bulletins for current updates.

Firestone

BUILDING PRODUCTS

September 14, 2007

General Requirements - Basic System Quick Spec

Slope Requirements

Minimum 1/8" slope recommended to promote positive drainage. Firestone recommends a minimum of 1/4" slope. Maximum slope 4:12.

Acceptable Decks

Refer to the Firestone Technical Database for minimum pullout requirements.

1. Min. 22 gauge(0.76mm) Steel
 2. Min. 3,000psi (20684kPa) Structural Concrete
 3. Minimum 1/2" (12.7mm) Plywood
 4. Wood Planks with min. 3/4" (19mm) Thickness
- Contact Firestone for decks not listed.

Building Height Limitations

Mechanically Attached systems maximum building heights is: 120' (36.6m).

Membrane Requirements

Minimum .060" RubberGard EPDM(Standard, LSFR, or FR).

20 year Warranty Design Criteria RubberGard R.M.A. Systems

Construction Type

New construction, recovers, or complete tear-off to deck with any damaged support materials removed and replaced in kind.

Use of Air Barrier

An air barrier is required for projects with large wall openings that are greater than 10% of a total wall area that can be left open in a storm. Criteria to be determined based upon Firestone's Review.

Edge Metal Systems

1. Firestone Metal Edge Systems.
2. Shop fabricated pre-finished G-90 Galvanized steel, stainless steel, anodized or extruded aluminum.

Other Requirements

1. As-Built Projects not permitted. Firestone Pre-Installation Notice 14 days prior to project start, be submitted, reviewed and approved.
2. System installation per Firestone Technical Database Manual.
3. The Firestone Warranty does not cover products not supplied by Firestone Building Products.

Mechanically Attached Systems

Membrane Attachment	Perimeter Requirements
Attach Firestone QuickSeam R.M.A. strips max. 10' o.c. using Firestone HD fasteners 12" o.c. Install .060" Non-reinforced EPDM over the R.M.A. strips per Firestone Specifications.	55 mph warranty: Refer to the Firestone Wind Design Guide for Perimeter attachment. For warranties in excess of 55 mph contact Firestone Roof Solutions.

Insulation Attachment for Mechanically Attached Systems

ISO 95+ (Top Layer)	New Construction, Tear-Off, or Recover with No Air Barrier	New Construction, Tear-Off, or Recover with Air Barrier
	Firestone HD fasteners and Insulation Plates	
1.0"-1.4"	5 per 4'x 8' Board	16 per 4'x 8' Board
1.5"-1.9"	5 per 4'x 8' Board	12 per 4'x 8' Board
2.0"-4.0"	5 per 4'x 8' Board	8 per 4'x8' Board

Detail Description for Mechanically Attached Systems

Seam Construction	Side and End Laps: Minimum 3" QuickSeam Splice Tape with QuickSeam Joint Covers at all "T" joints and wall intersections.
Wall Terminations	Firestone Termination Bar with AP Sealant applied along the caulk ledge. Alternate, surface mounted or Inserted counter flashings may also be used in accordance with current Firestone details.
Curbs/Parapets	Curbs and expansion joints longer than eight (8) feet on any side must be anchored using QuickSeam RPF Strip. Curbs must be flashed using 18" QuickSeam SA Flashing or QuickSeam Curb Flashing
Corners	Flashed using QuickSeam Corner Flashing or 9" QuickSeam FormFlash
Roof Edges/Parapets	QuickSeam 5" flashing with cover strip of 9" FormFlash. As an alternative, Firestone EdgeGard may also be used.
Penetrations	Flashed using QuickSeam Pipe Flashing or QuickSeam Penetration Pocket.
Walkways	Constructed using QuickSeam Walkway Pads.

This sheet is intended to be a summary guide for the installation of a roofing system that will qualify for a 20 year Firestone Red Shield Limited Warranty with a 55 mph wind speed coverage. Refer to the Firestone Technical Database for specific requirements regarding the installation of this roof system. Contact your local Firestone Sales Representative for current requirements. Installation specifications are subject to change. Review Firestone Technical Database website: www.firestonebpc.com and Technical Bulletins for current updates.