

COMMERCIAL ROOFING SYSTEMS

FLEX FB (Fleece Backed) ELVALOY®, FLEX MF/R (Smooth Back) ELVALOY®, FLEX FB PVC, FLEX MF/R PVC, FLEX TPO AND FLEX TPO FB ADHERED, MECHANICALLY ATTACHED, AND BALLASTED APPROVED COMPONENTS LISTING

The below listed materials are approved for use in conjunction with Flex FB Elvaloy®, Flex MF/R Elvaloy®, Flex MF/R PVC, Flex TPO and Flex TPO FB Roofing Systems for compliance with the standard five (5) year guarantee and optional, ten (10) year, fifteen (15) year, twenty (20) year and twenty-five (25) year guarantee programs.

1. Flex Roofing Membranes: All widths are approved.

<u>Type & Thickness</u>	<u>Color</u>	<u>Usage</u>	<u>Guarantee Length</u>
Flex FB, FB Plus, FB 120 Elvaloy® .045", .050", .060", .080"	White, Gray, Tan	All	5, 10, 15, 20 & 25 years
Flex FB 100 Elvaloy® .100 " total thickness	White, Gray, Tan	All	5, 10, 15, 20 & 25 years
Flex MF/R, MF/R Plus MF/R 120 Elvaloy® .045", .050", .060", .080"	White, Gray, Tan	All	5, 10, 15, 20 & 25 years
Flex MF/R PVC .050", .060", .080"	White, Gray, Tan	All	5, 10, 15, 20 & 25 years
Flex Elvaloy® and PVC Flashing Membrane Reinforced .045", .050", .060", .080" Non reinforced .055"	White, Gray, Tan	Flashings only	Concurrent with Elvaloy® and PVC Field Membrane
Flex 8" Elvaloy® PVC Trim Strip .060"	White, Gray, Tan	Trim Work	Concurrent with Elvaloy® and PVC Field Membrane
Flexclad Elvaloy® PVC Metal	White, Gray, Tan	Where Required	Concurrent with Elvaloy® and PVC Field Membrane
Flex TPO .045", .060", .080"	White, Gray, Tan	All	5, 10, 15, 20 & 25 years

Flex TPO FB .045", .060", .080"	White, Gray, Tan	All	5, 10, 15, 20 & 25 years
Flex TPO Self Adhered .045", .060"	White, Tan	All	5, 10, 15, 20 years
Flex TPO Flashing Membrane Reinforced .045", .060", .080" Non reinforced .060"	White, Gray, Tan	Flashings only	Concurrent with TPO Field Membrane
Flex 6" TPO Trim Strip .045"	White, Gray, Tan	Trim Work	Concurrent with TPO Field Membrane
Flexclad TPO Metal	White, Gray, Tan	Where Required	Concurrent with TPO Field Membrane

2. **Insulation:**

- A. Polyisocyanurate faced roof boards: Per Federal spec. HH-I-1972/GEN and HH-1-1972/2, ASTM C 1289, Type II, Class 1, Grade 2 (20 psi) or Grade 3 (25 psi) minimum thickness 1" nominal.
Flex ISO II, Flex ISO III, Flex ISO II Tapered, and Flex ISO III Tapered
- B. Extruded polystyrene boards: ASTM C 578 Type X (18 psi) or Type IV (25 psi), CAN/ULC S701, Type 3, Nominal board thickness 2"
- C. Molded expanded polystyrene boards: ASTM C578-85, Type 1, minimum density 0.9 lbs. /cu.ft. Nominal board thickness 1"
- D. Perlite Insulation Board: ASTM C 728 Type I or Type II, nominal board thickness 1/2"
- E. Lightweight roof fills: Perlite, vermiculite, cellular concrete and gypsum. Used in conjunction with Flex approved separation layers.
- F. Wood fiber boards: ASTM C 208 Type II, Grade 1 or Type II Grade 2, nominal board thickness 1/2"
- G. Sprayed polyurethane foam: Minimum 2" thick and minimum 2.0 lbs. /CF density when used in conjunction with Flex approved separation layers and insulation boards.

3. **Asphalt (Elvaloy Fleeceback Membranes Only):**

- A. Hot steep asphalt: ASTM D 312, Type III and Type IV
- B. Polymer Modified Asphalt: ASTM D 6152 , Flex SEBS200 Modified Rubberized Asphalt

4. **Fasteners:**

A. Metal /Wood Decks: Screw type fasteners treated with CR 10 corrosion resistant coating. Required pull out value of minimum 420 lbs. in 22 gauge steel deck to be applied in conjunction with a Factory Mutual approved pattern:

1. Flex Standard Steel/Wood Deck Fastener and Plate
2. Flex HD Steel/Wood Deck Fastener and Plate
3. Flex XHD Fastener and Plate
4. Flex SXHD Fastener and Plate
5. Flex Rhino Plate and Fastener
6. Flex ISOWeld Plate and Fastener

B. Structural Concrete Decks: Minimum compressive strength of 2500 psi, Density of 150 lbs./cu.ft. Required pull out value of minimum of 600 lbs.

1. Flex CD-10 Concrete Fastener and Plate
2. Flex Fluted Nail Concrete Fastener and Plate
3. Flex Rhino Plate and Fastener

C. Lightweight Insulating Concrete: Density of 20 to 40 lbs. /cu.ft. Minimum Compressive Strength of 200 psi. Required pull out value of minimum of 300 lbs.

1. On steel deck see 4A above.
2. Flex GypTec Fastener and Plate
3. Flex Lite Deck Fastener and Plate
4. Flex CR Base Sheet Fastener (pull out value 40 lb. min.)
5. Flex OlyLok Locking Impact Nail

D. Cementitious Wood Fiber, Gypsum:

1. Flex GypTec Fastener and Plate
2. Flex Lite Deck Fastener and Plate
3. Flex OlyLok Locking Impact Nail

5. Adhesives:

A. Caulking: Silicon, polysulfide or polyurethane caulking, exterior grade for caulking, surface reglets and vent pipe details.

1. Geocel 3300 Polyurethane roofing sealant
2. Sonneborn, NP1
3. BOSTIK, Chem Caulk
4. ChemLink M-1 Structural Sealant

B. For filling pitch pans: Flex Pourable Sealer or as approved by Flex Technical Services Department.

C. Flex Elvaloy®/PVC or TPO Flashing Adhesive: As supplied by Flex Membrane for laminating flashing to vertical surfaces.

D. Flex Elvaloy®/PVC or TPO Substrate Adhesive: As supplied by Flex Membrane for adhering FB Fleece Backed Membranes or Smooth Back membranes to approved substrates.

- E. Flex Modified Adhesive: As supplied by Flex Membrane for adhering modified bitumen membranes to insulation recover boards or to modified bitumen base sheets.
- F. Flex FB Low Rise Adhesive: A 2 part urethane foam adhesive for adhering Flex FB membranes to approved substrates
- G. Flex Elvaloy®/PVC or TPO Low VOC Bonding Adhesive: A Low VOC adhesive as supplied by Flex membrane for laminating flashing to vertical surfaces.
- H. Flex SA Vapor Barrier Primer: As supplied by Flex Membrane for use as a primer in conjunction with Flex SA Vapor Barrier
- I. Millennium PG-1 or One Step: A 2 part urethane foam adhesive for adhering insulation or cover boards to approved substrates, applied in a bead pattern
- J. ICP CR-20: A 2 part urethane foam adhesive for adhering fleecback membrane to approved substrates, applied in a spatter pattern
- K. ICP Board Max: A 2 part urethane foam adhesive for adhering insulation or cover boards to approved substrates, applied in a bead pattern
- L. Olybond 500, Spot Shot: A 2 part urethane foam adhesive for adhering insulation or cover boards to approved substrates, applied in a bead pattern
- M. Olybond Canister: A 2 part urethane foam adhesive for adhering fleecback membrane to approved substrates, applied in a spatter pattern
- N. Flex TPO VOC Primer: As supplied by Flex Membrane for use as a primer in conjunction with Flex TPO PS Cover Strip and Flex TPO RUSS
- O. Flex Clear TPO Cut-Edge Sealant: As supplied by Flex Membrane for use with Flex TPO
- P. Flex TPO Weathered Membrane Cleaner: As supplied by Flex Membrane for use with Flex TPO
- Q. Flex RS 276 Primer: As supplied by Flex Membrane for use with Flex RS 230 Liquid Flashing Membrane for use with Flex PVC Membrane

6. Nailers:

Provide lumber for support or attachment of flashings, edge metals, and accessories. Include roof top equipment bases curbs and support bases.

- A. Number 3 or Standard Grade in accordance with ALSC NGR
- B. Preservative Treated in accordance with the requirements of AWPA C2

7. Separation Layers:

All separation layers are for use over insulation and below membranes with Mechanically Fastened and Ballasted systems. Note: Red rosin paper and sheet polyethylene are not approved.

- A. Flex Separator Sheet
- B. Flex FR-10 and FR-50 Fire Retardant Slip sheet
- C. Flex Foil Barrier Slip Sheet – for use over coal tar pitch roofs.
- D. Flex Rockwool Mat
- E. Flex Green Guard 3/8” PB6W Fan Fold Roofing Recovery Board
- F. Georgia Pacific Corporation DensDeck, DensDeck Prime
- G. USG Securock
- H. Flex HD Coverboard High Strength ½” thick polyisocyanurate cover board
- I. Geotextile Fabric: For use as a separation layer over the membrane in ballasted and green roof systems

8. Adhered System Components:

- A. Flex Re-Cover Board: Asphaltic fiberglass recover board for use over most insulations or BUR roofs
- B. Flex 80 mil S/S Base Sheet: For use as the base or first ply in Flex’s high performance Built Up Elvaloy® or Modified Flex Roof Systems.
- C. Premium Flex Ply Roofing Felt: Fiberglass Type VI roofing felt. For use in Flex’s high performance Built Up Elvaloy® or Modified Flex Roof Systems.
- D. Georgia Pacific Corporation: DensDeck, DensDeck Prime
- E. USG Securock
- F. Flex HD Coverboard High Strength ½” thick polyisocyanurate cover board
- G. Flex SA Vapor Barrier: SBS Modified Bitumen vapor barrier 31 mil (0.8mm) thick styrene-butadiene-styrene (SBS) polymer modified bitumen in combination with a high tack self-adhesive

9. Edge Termination Components:

- A. Flex Clad Metal: for custom fabrication of a hot air weldable edge metal
- B. FlexLock FLT Roof Edge
- C. FlexLock FLE Roof Edge
- D. FlexLock FLS Roof Edge

E. FlexCap FLC Coping

F. FlexLock Drip Edge

10. Specialty Components:

A. Flex Elvaloy®/PVC or TPO Preformed Inside and Outside corners

B. Flex Elvaloy®/PVC or TPO Preformed Pipe Boots

C. Flex Retrofit Drains with PVC Coated Flange

D. Flex Elvaloy®/PVC or TPO Walkway Pad

E. Flex Insulvent with PVC Coated Flange

F. Flex Snow Barricade Deck Mount System PVC Coated

G. Flex 2 3/8" XHD Barbed Membrane Plate, and 2 3/4" SXHD Barbed Membrane Plate

H. Flex 3" PVC or TPO Coated Rhinobond Plate

I. Flex CR Base Sheet Fastener

J. Flex Lip Termination Bar, Flex Flat Termination Bar

K. Flex Standard Screws, Flex XHD Screws, Flex SXHD Screws

L. Flex Split Pipe Boots

M. Flex Preformed Curb Flashing

N. Flex 3" PVC or TPO ISOWeld Plate

O. Flex Elvaloy®/PVC or TPO T Joint Covers

P. Flex TPO PS Cover Strip

Q. Flex TPO RUSS

R. Flex RS 230 Liquid Flashing Membrane: Approved for use with Flex PVC Membrane

S. Flex RS Catalyst Powder: For use with Flex RS 230 Liquid Flashing Membrane

T. Flex RS Fleece: For use with Flex RS 230 Liquid Flashing Membrane

11. Ancillary Components:

A. BAK Laron Automatic Welding Machine

- B. BAK Rion Hand Held Welding Tool
- C. Leister Varimat Automatic Welding Machine
- D. Leister Triac Hand Held Welding Tool
- E. Flex Hand Held Silicon Seam Roller
- F. Flex Seam Probe
- G. RhinoBond Induction Welding Tool
- H. IsoWeld Induction Welding Tool
- I. V2T Wind Vents