




2017 Annual NRLRC Luncheon Program
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Manufacturers' installation instructions

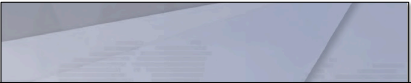
Presented by



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International Building Code, 2015 Edition




**SECTION 1506
MATERIALS**

1506.1 Scope. The requirements set forth in this section shall apply to the application of roof-covering materials specified herein. **Roof coverings shall be applied in accordance with this chapter and the manufacturer's installation instructions.** Installation of roof coverings shall comply with the applicable provisions of Section 1507.








Seam-fastened, mechanically-attached TPO membrane systems

Manufacturer	Version	Pages	Scope	Format
Carlisle	Nov. 2011, Rev. 11/16	119	Adhered & mech. Application at P. 38-52 Details at P. 55	CSI format
Firestone	March 2013	20	Ballast, adhered & mech.	Outline (2.0 only)
Flex	11/09	80	Adhered & mech. Details at P. 40	Handbook/photos
GAF	65	65	Mech. only Details at P. 46	List & CSI format
JM	RS-8648	23	Adhered and mech. Detail figures	List
Mulehide	Rev. Oct. 2013	12	Adhered & mech.	List
Versico	July 2015, Rev. 8/16	115	Adhered & mech. Application at P. 38-52 Details at P. 55	CSI format



Field sheet side lap and end lap dimensions

Manufacturer	Side lap	End lap
Carlisle	Warranty tables (12 tables)	
Firestone	6"	3"
Flex	5½" to 6"	5½" to 6"
GAF	6"	3"
JM	2" beyond fasteners	6"
Mulehide	5½"	5½"
Versico	Warranty tables (12 tables)	




Seam fastener to edge dimension

Manufacturer	Dimension
Carlisle	Plate edge approx. ½"
Firestone	2" from membrane edge
Flex	--
GAF	¼" to ¾" off back edge
JM	Fasteners ½" from edge
Mulehide	Plate ½" from edge
Versico	Plate edge approx. ½"




Hot air welder instructions

Manufacturer	Instruction
Carlisle	Supplement Doc. T-01-11 (1104 F at 10'-15'/min.)
Firestone	1148 F, Air flow 80%, 8.5 ft./min Graph specific to 80 mil sheet
Flex	1000 F at 12 ft./min.
GAF	Too many variables, but less than 16 ft./min.
JM	Based upon field conditions and air temperature
Mulehide	--
Versico	Spec Supplement T-01-11



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- a. On all air-porous decks – with openings in the walls or area directly below the roof deck that exceeds 10% of the total wall area.
- b. When the internal pressurization of the building is in excess of 5 lbs. per sq. ft. (24 kg/sq. cm).
- c. When the building height exceeds 50 ft. (15.2 m).
- d. Buildings with large openings and overhangs must be evaluated for air retarders or the installation of half sheets of roof membrane.
- e. Refer to Factory Mutual Loss Prevention Data Sheets 1-28 and 1-29 for specific installation procedures for all roofs with large openings.
- f. Conditions where positive internal pressure is applied suddenly, as in the case of aircraft hangers or distribution centers, may cause failure of the roofing system due to pressure impact.



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DESIGN & APPLICATION GUIDELINES:

3.04 Wood Nailer Installation

A. Acceptable Material

1. Solid Blocking: Pressure or non-pressure treated wood, #2 Grade or better, nominal 1 1/4" (30 mm) x 4" (102 mm), 3 1/2" (88 mm) minimum.
2. Shim Material: Plywood, 1/2" (13 mm) x width to match solid blocking.

B. Existing Nailers

Verify the condition of existing roof nailers and anchor to resist 250 lb. per ft. (550 kg) load applied in any direction.

1. Drill-Tec™ HD screws 18" (460 mm) o.c. attachment to structural wood, steel decks. Min. 1" (25 mm) thread embedment.
2. Drill-Tec™ spikes or HD screws 18" (460 mm) o.c. attachment to concrete decks. Min. 1" (25 mm) shank or thread penetration.
3. Wood nailers attached to gypsum concrete, cellular concrete, and cementitious wood fiber must be fastened 12" (305 mm) o.c., through the nailer into the substrate with substrate-approved Drill-Tec™ fasteners.
4. Three anchors per length of wood nailer minimum.



Some conclusions

- I am confused... are you? Are we also confusing our field personnel (that is who these instructions are intended for)?
- Manufacturers need to do a much better job and focus on the field personnel user
- System consistency is needed



NRCA's interim recommendations

Manufacturers installation instructions

- Access and file manufacturers' application instructions
- Review instructions
- Exclude not applicable information
- Should be the basis for QA/QC
- Contact the manufacturer and NRCA with any questions or concerns



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