

Roof-Lok / Roof-Lok Plus

Panel Specifications

PRODUCT NAME

Roof-Lok panel for roof applications.

MANUFACTURER

Kirby Building Systems
www.kirbybuildingsystems.com

PRODUCT DESCRIPTION

These standing seam roof panels offer a flat profile with minor striations for an attractive appearance on higher pitched roofs. Roof-Lok panels are seamed mechanically by an electric seaming machine. Roof-Lok Plus panels have full 360 degree rolled seams.

Basic Use: A roof covering system for new or retrofit construction.

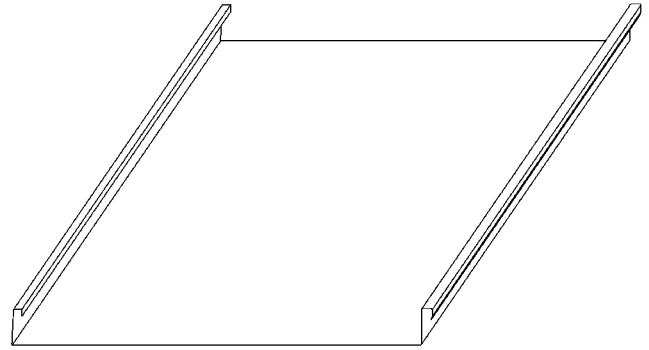
Materials: Roof-Lok panels are 24 and 22 gauge 50,000 psi either G90/G60 zinc coated (galvanized) or AZ55 aluminum zinc alloy coated steel. Pre-painted panels have PVDF Cool Paint Finish.

Panel clips for the Roof-Lok panels are two part assemblies. The tab portions are a nominal 2-3/8" or 3-1/8" (for thermal blocks) in height and 3" in width, die formed 24 gauge aluminum coated steel. The bases are die formed 18 gauge zinc coated (galvanized) steel. Expansion capability is 1-1/4". Roof-Lok panel side laps have factory applied Hot Melt mastic. End-laps, roof flashing laps, ridges and eave closures are sealed with tape mastic. The material is non-staining, non-corrosive, non-toxic and non-volatile.

Caulk: All gutter endlaps, endcaps, outside closure-to-panel ribs, outside closure tabs to outside closure tabs and roof accessories are sealed with polyurethane caulk.

All fasteners for panel to secondary framing and panel to panel will be No. 12 x 1-1/4" self-drilling carbon steel screws with a molded zinc alloy or capped stainless steel cupped hex washer head. Roof fasteners shall be assembled with an EPDM washer.

All panel clips are attached to the purlins with self drilling carbon steel screws No. 12 x 1-1/4" hex head, cadmium or zinc plated.



TECHNICAL DATA

The Roof-Lok Plus panel has received a Class 90 Wind Uplift rating by Underwriters Laboratories when tested in accordance with test procedure UL 580. The Roof-Lok Plus roof panel has been Factory Mutual approved and tested in accordance with Wind Uplift ASTM E1592 and CEGS 07416. This panel has also been tested in accordance with Air Infiltration ASTM E1680 and Water Penetration ASTM E1646. This panel has been approved for SREF (SSTD-97) Impact Testing. This panel has received a Class A fire rating when tested in accordance with test procedure ASTM E108.

The Roof-Lok panel has received a Class 90 Wind Uplift rating by Underwriters Laboratories when tested in accordance with test procedure UL 580. The Roof-Lok roof panel has been tested in accordance with CEGS 07416. This panel has also been tested in accordance with Air Infiltration ASTM E1680 and ASTM E283 and Water Penetration ASTM E1646 and ASTM E331. This panel has received a Class A fire rating when tested in accordance with test procedure ASTM E108.

INSTALLATION

Installation should be performed in accordance with Kirby Building Systems' manuals and building erection drawings, and should be done by a qualified installer using proper tools and equipment.

WARRANTY

35 & 25 year paint finish warranties are available. 20 year weathertightness and 25 year aluminum zinc alloy warranties are also available.

MAINTENANCE

Only normal routine maintenance is required over the life of the panels.

PRODUCT NOTES

A certain amount of waviness called "oil canning" may exist in this panel. Minor waviness of the panel is not sufficient cause for rejection, because oil canning does not affect the structural integrity of the panel. Descriptions and specifications contained herein were in effect at the time this publication was approved for printing. In a continuing effort to refine and improve products, Kirby Building Systems reserves the right to discontinue products at any time or change specifications and/or designs without incurring obligation.

Roof-Lok Panels in general are known for their tendency to rumble in high winds if insulation is not used. An insulation spacer strip (FS-1) should be used along the roof purlins whenever insulation is not required in the roof system.

Kirby Building Systems reserves the right to revise all standard specifications and information.

| Engineering Properties of Kirby Building Systems' Roof-Lok & Roof-Lok Plus Panel | | | | | | | | | | | |
|--|-------------------|------------------------|-----------------------------------|-------------------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|-------------|----------|
| Designated Gauge of Steel | Steel Yield (KSI) | Base Metal Thick. (In) | Total Thick. (In) | Panel Weight (Lbs/Ft ²) | Top In Compression | | | Bottom In Compression | | | Fb (KSI) |
| | | | | | Ix (In ⁴ /Ft) | Sx (In ³ /Ft) | Ma (Kip-in) | Ix (In ⁴ /Ft) | Sx (In ³ /Ft) | Ma (Kip-in) | |
| 24 Gauge | 50 | 0.0225 | 0.0241 | 1.38 | 0.1324 | 0.0779 | 2.3301 | 0.0574 | 0.0538 | 1.6096 | 30 |
| 22 Gauge | 50 | 0.0300 | 0.0316 | 1.72 | 0.1787 | 0.1061 | 3.1772 | 0.0801 | 0.0779 | 2.3324 | 30 |
| Gauge of Panel | Load Type | Number of Spans | Maximum Total Uniform Load in PSF | | | | | | | | |
| | | | L= 2'-6" | L= 3'-0" | L= 3'-6" | L= 4'-0" | L= 4'-6" | L= 5'-0" | | | |
| 24 Ga. | LIVE | 1 | 162 | 135 | 115 | 97 | 76 | 62 | | | |
| | LIVE | 2 | 162 | 119 | 87 | 67 | 53 | 42 | | | |
| | LIVE | 3 | 162 | 135 | 109 | 83 | 66 | 53 | | | |
| | LIVE | 4 | 162 | 135 | 102 | 78 | 61 | 50 | | | |
| 22 Ga. | LIVE | 1 | 233 | 194 | 166 | 132 | 104 | 84 | | | |
| | LIVE | 2 | 233 | 172 | 126 | 97 | 76 | 62 | | | |
| | LIVE | 3 | 233 | 194 | 158 | 121 | 96 | 77 | | | |
| | LIVE | 4 | 233 | 194 | 148 | 113 | 89 | 72 | | | |

1. The panels were checked for bending, shear, combined bending and shear and deflection. Deflection was limited to span/180.
2. Section properties have been calculated in accordance with the 2001 North American Specification for the Design of Cold-Formed Steel Structural Members.
3. Steel panels are either aluminum zinc alloy or G90/G60 coated. The base metal thickness was used in determining section properties.
4. The weight of the panel has not been deducted from the allowable loads.
5. Allowable loads are based on uniform span lengths.
6. THE ABOVE LOADS ARE NOT FOR USE WHEN DESIGNING PANELS TO RESIST WIND UPLIFT.



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