

Code Approvals

FM Global Invinsa™ Roof Board

JM PVC Adhered Membranes

| Membrane | Deck | FM Approval | Slope | Insulation/Bottom | Attachment | Insulation/Top | Attachment | Comments |
|-----------------------------|--------------------|-------------|-------|-----------------------------|---------------------------------------|----------------|---------------------------------------|--|
| JM PVC .050"/.060"/.080" | Metal, Concrete | 1A-90 | 1:12 | 1.5" ENRGY 3™ | Loose | 1/4" Invinsa | 1 per 2 sq. ft. | If recover – no ENRGY 3™, only 1/4" Invinsa; solvent adhesive. |
| JM PVC .050"/.060"/.080" | Metal, Concrete | 1A-90 | 1:12 | 1.5" ENRGY 3™ | Loose | 1/4" Invinsa | 1 per 2 sq. ft. | If recover – no ENRGY 3™, only 1/4" Invinsa; low solvent adhesive. |
| JM PVC .050"/.060"/.080" | Concrete | 1A-225 | 1:12 | 1.5" ENRGY 3™ (Optional) | JM Urethane Insulation Adhesive | 1/4" Invinsa | JM Urethane Insulation Adhesive | New construction or tear off; all adhesives. |
| JM PVC .050"/.060"/.080" | Concrete | 1A-225 | 1:12 | 1.5" ENRGY 3™ (Optional) | JM MBR® Bonding Adhesive | 1/4" Invinsa | JM MBR® Bonding Adhesive | New construction or tear off; all adhesives. |

JM TPO Adhered Membranes

| Membrane | Deck | FM Approval | Slope | Insulation/Bottom | Attachment | Insulation/Top | Attachment | Comments |
|-----------------------|--------------------|-------------|-------|-----------------------------|---------------------------------------|----------------|---------------------------------------|--|
| JM TPO .045"/.060" | Metal, Concrete | 1A-90 | 1:12 | 1.5" ENRGY 3™ | Loose | 1/4" Invinsa | 1 per 2 sq. ft. | If recover – no ENRGY 3™, only 1/4" Invinsa. |
| JM TPO .045"/.060" | Concrete | 1A-210 | 1:12 | 1.5" ENRGY 3™ (Optional) | JM Urethane Insulation Adhesive | 1/4" Invinsa | JM Urethane Insulation Adhesive | New construction or tear off. |
| JM TPO .045"/.060" | Concrete | 1A-210 | 1:12 | 1.5" ENRGY 3™ (Optional) | JM MBR® Bonding Adhesive | 1/4" Invinsa | JM MBR® Bonding Adhesive | New construction or tear off. |

JM EPDM Adhered Membranes

| Membrane | Deck | FM Approval | Slope | Insulation/Bottom | Attachment | Insulation/Top | Attachment | Comments |
|--|--------------------|-------------|-------|-----------------------------|---------------------------------------|----------------|---------------------------------------|--|
| JM EPDM .045"/.060" FR .060"/.090" FR XT .045"/.060"/.075" R XT | Metal, Concrete | 1A-75 | 1:12 | 1.5" ENRGY 3™ | 1 per 4 sq. ft. | 1/4" Invinsa | JM Urethane Insulation Adhesive | New only, no recover. Solvent adhesive only. |
| JM EPDM .045"/.060" FR .060"/.090" FR XT .045"/.060"/.075" R XT | Metal, Concrete | 1A-60 | 1:12 | 1.5 ENRGY 3™ | Loose | 1/4" Invinsa | 1 per 2.67 sq. ft. | If recover – no ENRGY 3™, only 1/4" Invinsa. Solvent adhesive only. |
| JM EPDM .045"/.060" FR .060"/.090" FR XT .045"/.060"/.075" R XT | Metal, Concrete | 1A-90 | 1:12 | 1.5" ENRGY 3™ | Loose | 1/4" Invinsa | 1 per 2 sq. ft. | Solvent adhesive only. |
| JM EPDM .045"/.060" FR .060"/.090" FR XT .045"/.060"/.075" R XT | Concrete | 1A-210 | 1:12 | 1.5" ENRGY 3™ (Optional) | JM Urethane Insulation Adhesive | 1/4" Invinsa | JM Urethane Insulation Adhesive | New construction or tear off. |
| JM EPDM .045"/.060" FR .060"/.090" FR XT .045"/.060"/.075" R XT | Concrete | 1A-210 | 1:12 | 1.5" ENRGY 3™ (Optional) | JM MBR® Bonding Adhesive | 1/4" Invinsa | JM MBR® Bonding Adhesive | New construction or tear off. |

JMCleanBond™ Self Adhered Membranes

| Membrane | Deck | FM Approval | Slope | Insulation/Bottom | Attachment | Insulation/Top | Attachment | Comments |
|--------------|--------------------|-------------|-------|-----------------------------|---------------------------------------|----------------|---------------------------------------|--|
| JMCleanBond™ | Metal, Concrete | 1A-75 | ¾:12 | 1.5" ENRGY 3™ | 1 per 4 sq. ft. | 1/4" Invinsa | JM Urethane Insulation Adhesive | 1 base, 1 cap, new only. |
| JMCleanBond™ | Metal, | 1A-75 | ¾:12 | 1.5" ENRGY 3™ | Loose | 1/4" Invinsa | 1 per 2 sq. ft. | Recover, no ENRGY 3™, only 1/4" Invinsa. |
| JMCleanBond™ | Concrete | 1A-210 | ¾:12 | 1.5" ENRGY 3™ (Optional) | JM Urethane Insulation Adhesive | 1/4" Invinsa | JM Urethane Insulation Adhesive | New construction or tear off. |
| JMCleanBond™ | Concrete | 1A-210 | ¾:12 | 1.5" ENRGY 3™ (Optional) | JM MBR® Bonding Adhesive | 1/4" Invinsa | JM MBR® Bonding Adhesive | New construction or tear off. |

JM PVC Mechanically Attached Membranes

| Rating | Membrane | Sheet Width | In-seam Fastener Spacing | Fastener | Plate | Deck Type |
|--------|--------------------------|-------------|--------------------------|-----------|-----------|--------------|
| 1-150 | JM PVC .060"/.080" | 78" | 6" | High Load | High Load | 80 ksi Steel |
| 1-120 | JM PVC .050"/.060"/.080" | 78" | 6" | High Load | High Load | 80 ksi Steel |
| 1-90 | JM PVC .050"/.060"/.080" | 78" | 12" | High Load | High Load | 80 ksi Steel |
| 1-60 | JM PVC .050"/.060"/.080" | 78" | 18" | High Load | High Load | 80 ksi Steel |
| 1-90 | JM PVC .050"/.060"/.080" | 78" | 6" | High Load | High Load | 30 ksi Steel |

Notes

Invinsa used as a cover board over any JM approved insulation.

Base layer of insulation loose laid, Invinsa Roof Board fastened with five (5) UltraFast™ Fasteners and Plates per board.

Fasteners must be approved for deck type.

Mechanically attached single ply system approvals are the same as current single ply membrane approvals over ENRGY 3™.

JM TPO Mechanically Attached Membranes

| Rating | Membrane | Sheet Width | In-seam Fastener Spacing | Fastener | Plate | Deck Type |
|--------|--------------------|-------------|--------------------------|-----------------|--------------------|--------------|
| 1-75 | JM TPO .045"/.060" | 6' | 12" | High Load | High Load | 30 ksi Steel |
| 1-90 | JM TPO .045"/.060" | 8' | 12" | High Load | High Load | 30 ksi Steel |
| 1-90 | JM TPO .045"/.060" | 10' | 6" | High Load | High Load | 30 ksi Steel |
| 1-60 | JM TPO .045"/.060" | 12' | 12" | High Load | High Load | 30 ksi Steel |
| 1-90 | JM TPO .045"/.060" | 12' | 6" | High Load | High Load | 30 ksi Steel |
| 1-60 | JM TPO .045"/.060" | 6' | 12" | High Load | High Load | 80 ksi Steel |
| 1-60 | JM TPO .045"/.060" | 8' | 18" | High Load | High Load | 80 ksi Steel |
| 1-90 | JM TPO .045"/.060" | 8' | 12" | High Load | High Load | 80 ksi Steel |
| 1-60 | JM TPO .045"/.060" | 10' | 12" | High Load | High Load | 80 ksi Steel |
| 1-60 | JM TPO .045"/.060" | 10' | 18" | Extra High Load | 3" Super High Load | 80 ksi Steel |
| 1-90 | JM TPO .045"/.060" | 10' | 12" | Extra High Load | 3" Super High Load | 80 ksi Steel |
| 1-60 | JM TPO .045"/.060" | 12' | 12" | Extra High Load | 3" Super High Load | 80 ksi Steel |
| 1-90 | JM TPO .045"/.060" | 12' | 6" | High Load | High Load | 80 ksi Steel |

Notes

Invinsa used as a cover board over any JM approved insulation.

Base layer of insulation loose laid, Invinsa Roof Board fastened with five (5) UltraFast™ Fasteners and Plates per board.

Fasteners must be approved for deck type.

Mechanically attached single ply system approvals are the same as current single ply membrane approvals over ENRGY 3™.

Deck

30 ksi minimum, also known as Grade C steel.

80 ksi minimum, also known as Grade E steel.

JM EPDM Mechanically Attached Membranes

| Rating | Membrane | Sheet Width | In-seam Fastener Spacing | Fastener | Plate | Notes |
|--------|---|-------------|--------------------------|-----------|----------------|--------------|
| 1-90 | JM EPDM .045"/.060" FR .060"/.090" FR XT .045"/.060"/.075" R XT | 114" | 6" | High Load | High Load | |
| 1-105 | JM EPDM .045"/.060" FR .060"/.090" FR XT .045"/.060"/.075" R XT | 114" | 6" | High Load | Polymer Batten | 80 ksi Steel |
| 1-60 | JM EPDM .045"/.060" FR .060"/.090" FR XT .045"/.060"/.075" R XT | 84" | 12" | High Load | High Load | |

Notes

Invinsa used as a cover board over any JM approved insulation.

Fasteners must be approved for deck type.

Mechanically attached single ply system approvals are the same as current single ply membrane approvals over ENRGY 3™.

JM Recover Systems

| Membrane | Deck | FM Approval | Slope | Insulation/Bottom | Attachment | Insulation/Top | Attachment | Comments |
|---|---|-------------|-----------------------------------|--------------------------|---------------------------------|----------------|---------------------------------|--|
| JM PVC, JM TPO, JM EPDM, JM CleanBond™ | Concrete (with existing smooth asphaltic roof) | 1A-135 | Per individual membrane approval. | 1.5" ENRGY 3™ (Optional) | JM Urethane Insulation Adhesive | 1/4" Invinsa | JM Urethane Insulation Adhesive | Fire rating per individual membrane. Contact technical services for preparation of old roof. |

Notes

Fasteners must be approved for deck type.

Mechanically attached single ply system approvals are the same as current single ply membrane approvals over ENRGY 3™.