

### Mineral-surfaced SBS cap sheet used to complete the Imperflex roof system

## OVERVIEW

Imperflex MSA is a mineral-surfaced, SBS polymer-modified bitumen cap sheet used to complete the Imperflex roof system. Imperflex MSA is intended for use on residential roofs where roof slopes prevent effective use of shingles, tile and/or metal.\*

Imperflex MSA is composed of select SBS polymers blended with distilled asphalt and reinforced with high-strength fiberglass mat. A split, silicon-coated release film must be removed before installation. This film prevents the roll from sticking during storage and aids installation.

The membrane is coated on top with factory installed, colored ceramic-coated roof granules. Silicon-coated release film protects the 3.5" selvedge edge. The film must be removed for proper installation. The membrane is durable, resists coating slide at normal roof temperatures and is self-sealing. It is used as an exposed membrane and is eligible for a 10-year material only warranty.\*\*

Do not install on any roof with slope less than 1/2" in 12" or in areas where water stands or forms ponds.

\*Refer to slope limitation guidelines

\*\*Except for specifications MSA-12-04LM and MSA-12-05LM

## IDEAL USES

**Bitec recommends these products be used only for residential and light commercial roofs.** Imperflex products used in light commercial roof applications shall be limited to certain flashing details as well as residential-like applications. All metal and wood surfaces receiving Imperflex must be primed with an approved water-based SA primer. Imperflex products may or may not be suitable for certain constructions.

## APPLICATION

**Bitec strongly recommends the roof system installation provide positive drainage.** Imperflex membranes used over wood decks or any other deck suspect of having excessive movement must be cut into half (1/2) lengths before installation. Imperflex membranes must be rolled in

using a heavy steel roller to remove air and improve contact with surfaces. Flashing sheets can be rolled in using a seam roller or suitable tool. Imperflex end laps should be sealed using SBS modified bitumen adhesive to improve seal.

All metal must be primed and sandwiched between layers of Imperflex USA and Imperflex MSA. Imperflex products are not designed to fully replace or act as a substitute for polymer modified bitumen heat welded; hot asphalt; or adhesive applied roof membranes and systems. Imperflex products are an adjunct to these products.

### Surface Preparation

All surfaces to be waterproofed with this product must be smooth, dry, free of projections, bulges and old roofing materials. Dust and moisture on any surface to be waterproofed and/or the membrane itself will prevent proper adhesion and could result in leaks. Never install this product over any old or existing roofing material or existing metal roofs.

Imperflex MSA is to be used as a cap sheet only, on slopes equal to or greater than 1/2" in 12". MSA comes with a factory installed adhesive. MSA cannot be used as a component in any Bitec commercial roofing specifications, except as noted. Prime all metal, wood, masonry and concrete surfaces using an approved water-based SA primer. Primer should be applied according to manufacturers instructions.

Bitec strongly recommends the use of water-based primers specifically manufactured for self-adhering membranes. However, as an option, an ASTM D41 asphalt primer may be used.

On wood or any other decks suspect of excessive movement, cut USA base ply and the MSA cap sheet into half (1/2) sheet lengths before installation. This will ease installation and help prevent wrinkling, ridging and fishmouthing. Be sure that all end laps are sealed with lap adhesive such as Bitec PMA-186 or PMA-2000.

Install one ply of Imperflex USA by mechanical attachment. Then install the MSA. The Imperflex USA may also be installed as an inverted base ply with adhesive side up, mechanically fastened, leaving the release film in place until ready to install the Imperflex MSA cap sheet membrane.

### Temperature

Apply Imperflex MSA in fair weather when the air, deck and membrane temperature is 50°F (10°C) and rising up to 110°F (43°C). All surfaces receiving membrane shall be completely dry before product installation.

### Cap Sheet Application

#### 1. Starter strip

Peel back half sheet of release film. Align membrane at lower edge of roof and adhere the exposed membrane area to the prepared surface in shingle fashion. Always ensure proper alignment. Continue to peel both halves of release film in a manner that will allow smooth and even application of the membrane. Roll in by using a heavy roller to remove any trapped air. Remove selvage release film.

When using an adhesive-to-adhesive side installation, remove only small areas of release film from the USA base ply to prevent contamination of the self-adhering surface before applying the MSA cap sheet. Extreme care must be exercised when using and installing two self-adhering surfaces together to prevent contamination, wrinkles or air pockets. Once a small area (each roll) is stuck together, it must be rolled with the heavy roller. Do not wait until an entire area (several rolls) is installed before “rolling in” membrane.

#### 2. Subsequent courses of membrane

Install subsequent courses in a similar fashion staggering finished end laps by at least 3 feet. Finished end laps should be 6” min., while finished side laps should be 3.5” min. All end laps should be sealed using modified bitumen adhesive and rolled in at the time of application.

#### 3. Construction details

Construction details are the same as for commercial grade SBS modified bitumen cap sheets. Refer to Bitec’s published specifications for proper execution of flashing and construction details.

#### 4. Residential roof valley and ridge

Remove release film. Center roll over area to be waterproofed. Start at low point and work upward. Press and work membrane outward from center.

### Slope Limitations

Good roofing practice requires all modified bitumen roof systems result in positive drainage. In all cases, a minimum roof slope of 1/2” in 12 will be required. Sufficient drainage, for this purpose, is defined as complete and immediate removal of water from the roof surface resulting in no areas of standing water or ponds. Bitec strongly recommends this minimum slope guideline be adhered to, especially as it

pertains to the installation of Imperflex products. The determination of slope and the design of any roof system, as well as the selection of the roof system components, which includes the deck and can include existing roof components, is the sole responsibility of the contractor(s), owner(s) and/or owners’ representative(s), and building code official(s).

Bitec will not determine the suitability of Imperflex for use on any construction or that the construction possesses an effective slope prior to product installation.

Imperflex products are manufactured to effectively provide a watertight roof membrane system if installed properly and in accordance to published Bitec standards and industry good roofing practice and on any construction that will accommodate its use.

## PRECAUTIONS

- Bitec assumes no responsibility for any loss arising from misuse and/or misapplication of these products
- Imperflex MSA shall never be applied directly to an existing roof system
- Do not install this product on mobile homes, prefabricated structures or where the roof deck, attic space, or areas under roof deck lack adequate ventilation
- Do not install this product directly to any type of roof insulation
- Improper use of and/or improper installation of Imperflex products will void your warranty
- Imperflex products should not be used in any interior space due to their asphaltic odor
- Imperflex products can be slippery when wet or covered with frost and/or ice
- Keep Imperflex products and all roofing components away from children and animals
- Other conditions may apply to the use and installation of Imperflex products

**NOTE:** Please refer to our publication “Roofing Material Specifications and Details” for information not covered in this document.

Please call 800-535-8597 for a copy or to inquire about conditions not covered.

## WARRANTY

Imperflex MSA membrane is covered by a limited 10-year material only warranty, except as noted otherwise. Warranty must be registered to be in effect. Please call 800-535-8597 to request a copy of the warranty.

Imperflex MSA rolls are 3.2' wide and 32.8' long.

Technical Schedule	
MODIFIER	SBS
APPROX. ROLL SIZE	32.8 ft. x 3.28 ft.
SEAM WIDTH	3.5"
APPROX. COVERAGE	100 ft. <sup>2</sup>
TOP SURFACE	colored granules*
BOTTOM SURFACE	release film
NOMINAL THICKNESS	3.5 mm (140 mils)
NOMINAL WEIGHT	100 lbs.
REINFORCEMENT	fiberglass mat
SOFTENING POINT (ASTM D-36)	250°F (120°C)
COLD FLEXIBILITY (UNI 8202)	13°F (-25°C)
TENSILE STRENGTH (ASTM D-412)	MD = 80 lbf/in    XMD = 75 lbf/in
ELONGATION (ASTM D-412)	MD = 30%    XMD = 30%

This product meets or exceeds ASTM D 1970.

\*Standard colors are white, green, jet black and buff. Blended colors are tan blend, black blend, gray blend. All values are approximate.

All Information is given in good faith, but normal tolerances of manufacture and testing will apply. Bitec reserves the right to improve and change its products at any time without prior notice or advice. The use of Bitec products is determined by local conditions and individual requirements of each contract. In consideration of the many factors involved, Bitec cannot be held responsible for the application of its products and for conditions beyond its control. All claims filed against Bitec warranties will be subject to the provisions set forth at the date of warranty issuance, and any addendum thereto. Under no circumstances will Bitec be held liable for any damage, whether personal injury or property damage, which occur during or after the application of the membrane.

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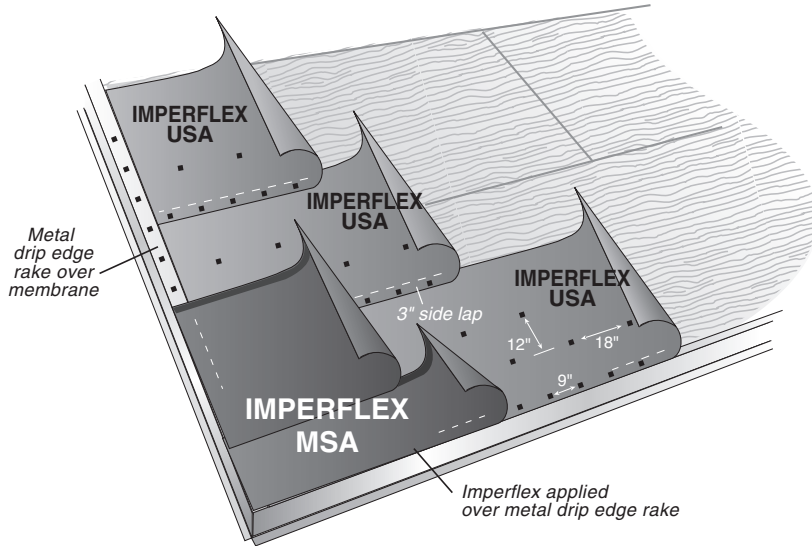
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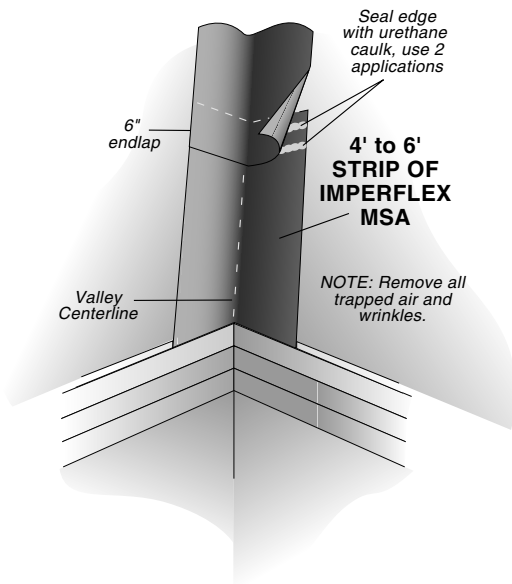


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### ICE & WATER PROTECTION



### AT ROOF EAVE



### IN THE VALLEY

# Imperflex® MSA

## SPECIFICATIONS



### SPECIFICATION

#### MSA-12-01

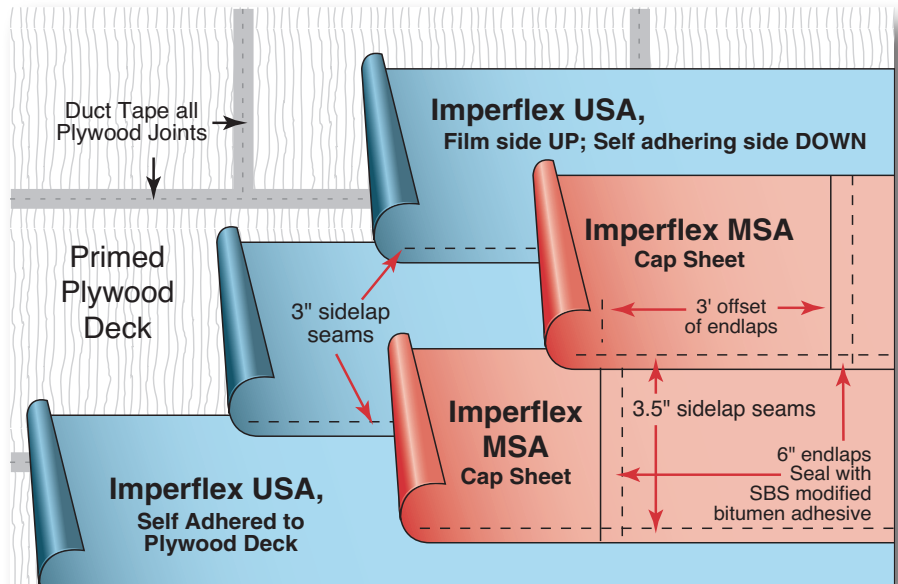
12-Yr. Material Only Warranty

**DECK:** Plywood with all joints taped using duct tape. Plywood surface must be primed using a water-based SA primer.

**BASE SHEET:** Imperflex USA (film)

**CAP SHEET:** Imperflex MSA

**NOTE:** End laps must be offset 3' and sealed with SBS modified bitumen adhesive



### SPECIFICATION

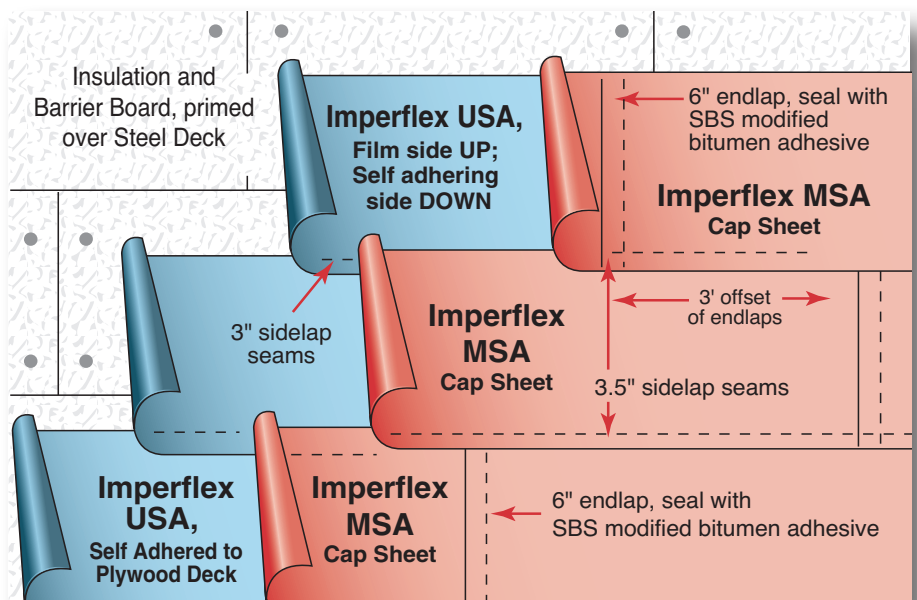
#### MSA-12-02

12-Yr. Material Only Warranty

**DECK:** Steel with insulation and barrier board, primed using a water-based SA primer.

**CAP SHEET:** Imperflex MSA

**NOTE:** End laps must be offset 3' and sealed with SBS modified bitumen adhesive



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# Imperflex® MSA

## SPECIFICATION



### SPECIFICATION

#### MSA-12-03

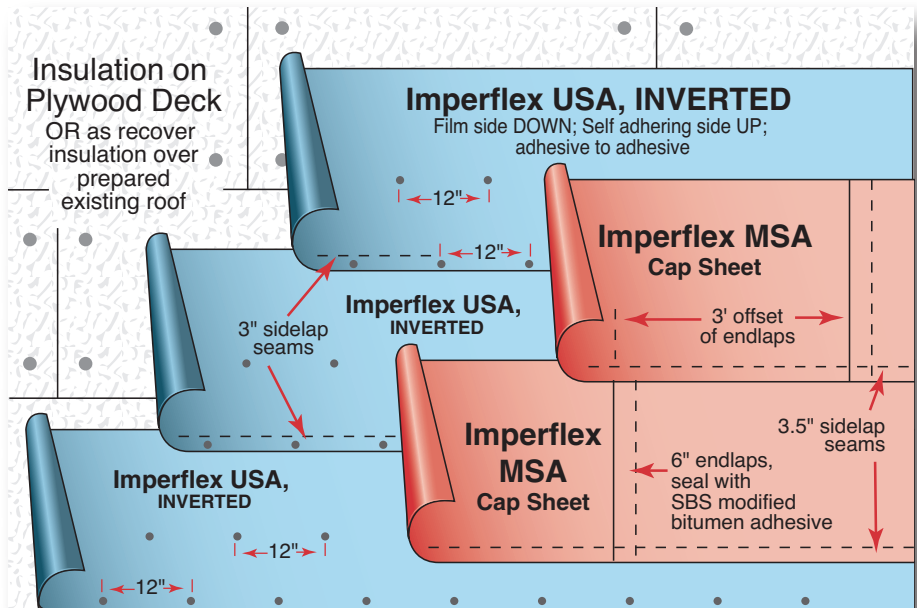
12-Yr. Material Only Warranty

**DECK:** Plywood with insulation or re-cover insulation

**BASE SHEET:** Imperflex USA (film) inverted; mechanically attached

**CAP SHEET:** Imperflex MSA

**NOTE:** End laps must be offset 3' and sealed with SBS modified bitumen adhesive



### SPECIFICATION

#### MSA-12-04.LM

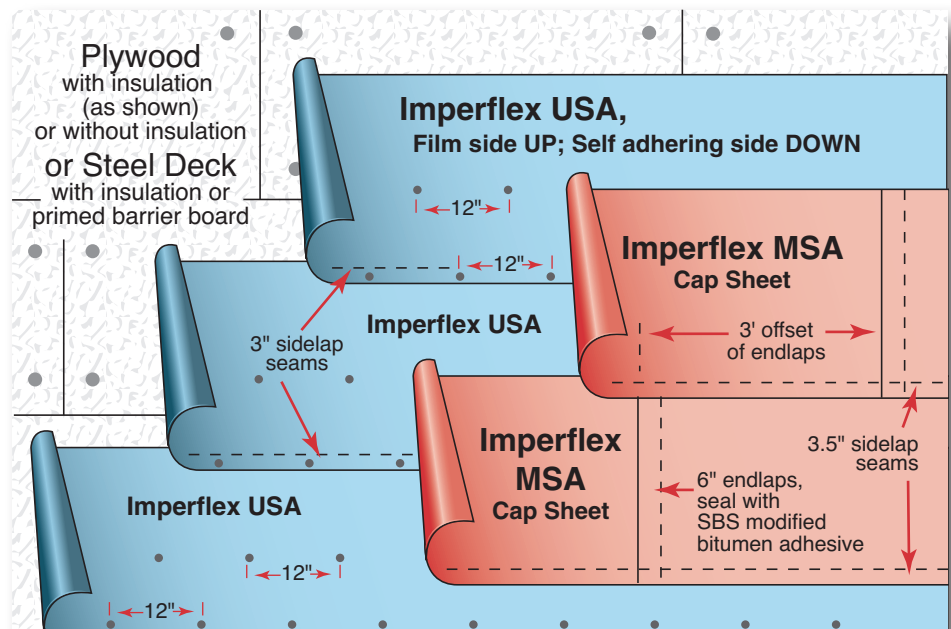
\*12-Yr. Material Only Warranty

**DECK:** Plywood with or without insulation, or steel deck with insulation or barrier board, primed

**BASE SHEET:** Imperflex USA, mechanically attached

**CAP SHEET:** Imperflex MSA

**NOTE:** End laps must be offset 3' and sealed with SBS modified bitumen adhesive



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# Imperflex® MSA

## SPECIFICATION



### SPECIFICATION

#### MSA-12-05.LM

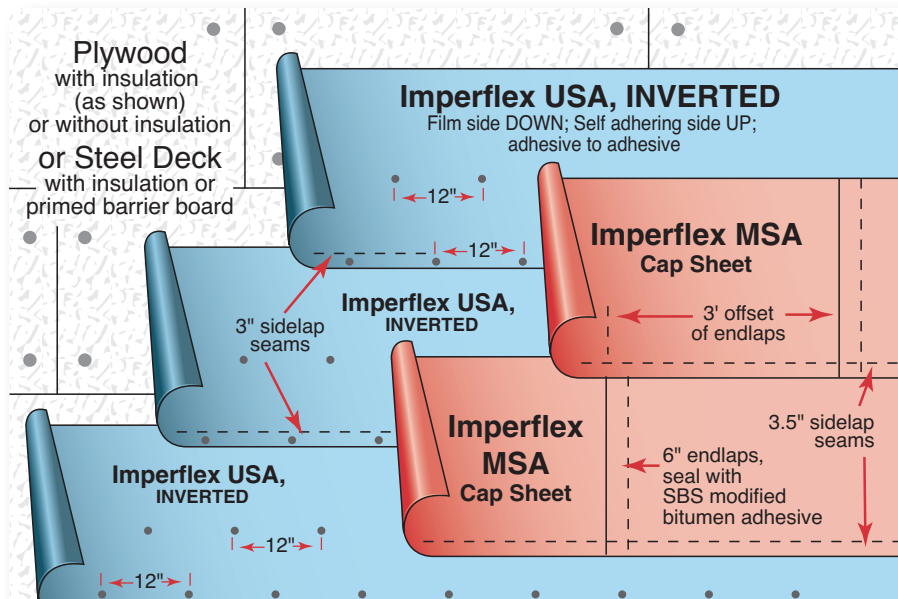
\*12-Yr. Material Only Warranty

**DECK:** Plywood with or without insulation, or steel deck with insulation or barrier board, primed

**BASE SHEET:** Imperflex USA (film) inverted; mechanically attached

**CAP SHEET:** Imperflex MSA

**NOTE:** End laps must be offset 3' and sealed with SBS modified bitumen adhesive



Imperflex roof systems should not be installed directly over a wood plank deck without a layer of roof insulation and/or Dens-Deck or other approved barrier board. All wood decks should provide adequate structural support so as to not allow excessive joint movement between panels that may cause wrinkles and movement in the membrane installation, which may also eventually cause splitting of the membrane. Joint clips are required in the joints of all plywood, OSB and similar decking materials.

Bitec strongly recommends the installation of a barrier board over all types of wood decks. On wood or any other decks suspect of excessive movement, cut USA base ply and the MSA cap sheet into half (1/2) sheet lengths before installation. This will ease installation and help prevent wrinkling, ridging and fishmouthing. Be sure that all end laps are sealed with lap adhesive such as Bitec PMA-186 or PMA-2000.

Bitec requires the use of an approved water-based primer specifically manufactured for use with self adhering membranes when Imperflex roof systems are to be installed directly over wood decks. Roof decks of all types must have a minimum of 1/2" per foot slope to provide adequate drainage.

Imperflex roof systems should only be installed when weather conditions are suitable and the weather forecast does not include rain or other precipitation and only when temperatures are 50°F and rising. In cool or cold weather, Imperflex materials should be kept inside and in a heated space. Rolls must be unrolled and allowed to relax before installation.

Self-adhering surfaces must be protected from contamination caused by wind blown dust, debris, moisture and even high humidity to allow proper adhesion. Therefore, careful consideration must be given to selecting the installation of any self-adhering roof system.

Imperflex self-adhering roof systems will require several days of sunny weather and warm temperatures for the interfacing adhesive surfaces to properly bond to each other. It is absolutely imperative that each individual roll of Imperflex be rolled into place before another roll is installed to remove any wrinkles and air pockets. Experience will be required to develop good installation methods that will save time and make for an acceptable installation. Good roofing practices are required and only experienced professional contractors should attempt these applications.

\*Installations for Labor & Material Warranties must be installed by BITEC, INC. authorized applicators only.



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