

# BIO-WRAP™

## 999

WATERPROOF SEALING  
MEMBRANE FOR POSITIVE  
LEAK CONTROL.



Thin Film Technology, Inc.

## PRODUCT DATA SHEET

BIO-WRAP 999 is a custom engineered composite fabric tape designed to provide the ultimate in positive leak control in structures such as silos, containment areas, dams, canals, ponds and aquaria.

BIO-WRAP is composed of a 3-ply fabric that stretches across its width but remains almost rigid lengthwise. Each ply performs its specialized task to yield an impermeable, highly adhesive membrane which can even be installed underwater using TFT underwater adhesives such as BIO-FIX 911 and BIO-DUR 561.

Unlike conventional crack sealing systems that may fail under tension or compression after movement of the crack, the BIO-WRAP 999 method more closely resembles a “bellows” over the crack or joint since it stretches easily to maintain a seal as the joint moves.

## RECOMMENDED USES

**LEAK AND CRACK SEALING:** Positive sealing with the ability to expand and contract as the crack or joint moves. Also resistant to many industrial commodities and paintable.

## TECHNICAL INFORMATION

FABRIC TYPE .....	3-ply thermoplastic elastomer/non-wicking fibers
COLOR .....	Standard Medium Gray
FINISH .....	Embossed with surface adhesive treatment
BURST PRESSURE .....	47.86 psi
ELASTICITY LATERAL – 25%.....	64oz/inch
ELASTICITY LATERAL – 50%.....	98oz/inch
ELASTICITY LATERAL – BREAK.....	135%
PEELING RESISTANCE.....	Approx. 40' / 77°F
FLASH POINT .....	79oz/inch
OZONE RESISTANCE .....	Resistant
UV RESISTANCE .....	Resistant
TEMPERATURE RESISTANCE.....	-22°F - +190°F
CHEMICAL RESISTANCE.....	Wide range of aqueous alkalis, acids and oxidizers
STANDARD SIZE.....	4.7” total width, 2.8” gray seal X 164’ per roll
STORAGE CONDITIONS.....	24 months in normal protected conditions.
MATERIAL WEIGHT.....	Approx 1.21 oz/yd.

## APPLICATION NOTES

**SURFACE PREPARATION:** Follow the required surface preparation requirements for the adhesive used – typical requirements are shown below:

Surface must be free of oil, grease, dirt etc. For steel in atmospheric service an SSPC-SP-6 Commercial blast is the minimum acceptable standard of surface preparation.

For steel in immersion service an SSPC-SP-5 “white metal” blast standard is required. An angular surface profile of 2 – 3 mils, (50 – 75 microns), is recommended. Substrate temperature should be 40°F or above with RH below 85%.

Concrete is best prepared by brush blasting at a reduced pressure in order to yield a “medium sandpaper” texture free of gross surface deposits or contamination.

**APPLICATION PROCEDURE:** Clean the application surface by waterjetting or abrasive blasting about 6” (15cm), on either side of the joint or crack. Apply the selected adhesive material by brush or roller between the joint and about 5” distant from it.



Prepare the membrane by sticking 1” masking tape along its centerline as shown in the photograph. (This tape serves as a “bond breaker” which allows the it to stretch over a greater distance thus reducing its *percentage* elongation as the joint grows or shrinks).

Apply the membrane, fuzzy side down along the joint or crack and press firmly into position. The uncured adhesive will saturate the felt bottom and encapsulate the open edges creating a firm, permanent bond to the substrate. This process is easily accomplished underwater for pressure-side applications to irrigation works, dams, tanks and similar structures.

If BIO-FIX 911 is used as the adhesive the installation will be complete and ready for service about 10 minutes after the adhesive application. Standard BIO-DUR 560/561 type

materials will be well cured in about 4 hours under normal temperatures.

**FULL COATING:** After the seal treatment is complete the entire surface may be coated with suitable materials such as BIO-DUR 560. If movement of the joint is expected it is recommended that the BIO-WRAP 999 be left uncoated in order to be able to stretch freely as necessary.

WE URGE YOU TO READ THE MATERIAL SAFETY DATA SHEET (MSDS) BEFORE USING PRODUCT AND TO CALL THIN FILM TECHNOLOGY, INC. AS NECESSARY FOR ADVICE OR INFORMATION BEFORE ANY ACTUAL OR CONTEMPLATED APPLICATION.



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SAFETY: This is a hazardous material if misused. Read and understand the Material Safety Data Sheet (MSDS) before use.

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