

3M™ Flexible Transparent Barrier (FTB) Film

(3M™ FTB Film 3-50 for General Use)

Product Description

3M™ Flexible Transparent Barrier Film 3-50 for General Use films are designed to provide a barrier to water and oxygen transmission while maintaining the optical transmittance characteristics of the base films. 3M FTB film is a family of optically clear, multilayer films that are remarkably impermeable due to its construction of a polyester substrate and very thin barrier coating made of layers of polymer and oxide. 3M FTB film is lighter and more impact resistant and flexible than glass.

Applications

3M FTB film may be used in optical display films, as a barrier to water and oxygen.

Product Structure

3M FTB film 3-50 is a multi-layer coating on polyester (PET) film. The coatings have been designed to provide a barrier to water and oxygen while maintaining the optical transmittance characteristics of the base film.

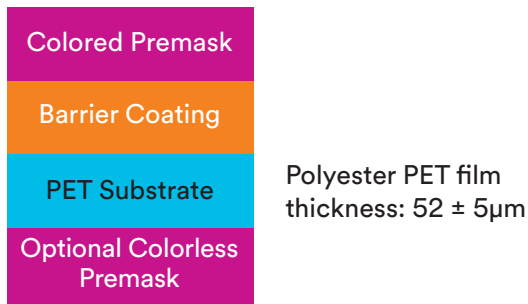
Substrate: Polyester PET film

Polymer: Non-halogenated cross-linked resin

Barrier: Metal oxide



Cross section of layers of 3M™ Flexible Transparent Barrier (FTB) Film 3-50. The drawing is not to scale.



Physical and Optical Characteristics

Film Property	3M FTB3-50 for General Use
Thickness	52 ± 5µm
WVTR	<0.008gm/m ² -day @ 50°C*
Transmission	>85%
Haze	<2.5%
Clarity	>95%
Shrinkage (85°C)	0.14% MD, 0.05% TD†
Shrinkage (135°C)	0.90% MD, 0.61% TD

* Correlates to <0.001gm/m²-day @ 20°C

† MD is machine direction, TD is transverse direction

Shelf Life and Storage (prior to application)

Product must be stored flat, in its original 3M packaging, out of sunlight, and in a clean, dry (relative humidity between 30% and 60%) area that is maintained at a temperature between 10°C and 30°C. Avoid applying pressure to, or resting objects on, the product to prevent marking, denting or deforming. Hold product by the edges to prevent soiling of the view area and wear gloves to prevent fingerprints or nail marks. Do not slide the product.

Availability

For availability, please contact our customer service group at 1-800-553-9215, or visit 3M.com/displayfilms.

Warranty Period and Storage Conditions

3M warrants that the products produced to this specification will meet this specification for twelve (12) months after the date of receipt at the purchaser locations provided that the product is stored flat in accordance with the requirements in the Shelf Life and Storage section above, and in the original package under the following conditions: temperature 20 ± 10°C and at a relative humidity of 45 ± 15%. If product is shown to be defective during this warranty period, 3M's sole liability and purchaser's exclusive remedy is, at 3M's option, for 3M to refund the purchase price of the product or provide replacement product in the quantity shown to be defective.

3M makes no additional warranties, express or implied, including but not limited to, any implied warranties of merchantability or fitness for a particular purpose.

In particular, but without limitation, 3M makes no representations or warranties concerning the effective life of the products or their ability to survive user's environmental testing. Purchaser is responsible for determining whether the 3M products are fit for the purchaser's particular purpose and suitable for the purchaser's method of production.

3M shall not be liable for any loss or damages, whether non-specified, special, incidental or consequential (including downtime, loss of profits or goodwill) regardless of the legal theory asserted.

AIS

View the Article Information Sheet (AIS), document #28-3098-2, for 3M FTB Film 3-50 for General Use at 3M.com/MSDS.



3M Display Materials & Systems Division

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Web 3M.com/displayfilms

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dZ

Requester: Kristin Wincek
Creator: deZinnia_19840
File Name: dz19840_TechDataSheet_FTB3.indd
Structure #: N/A
Date: 05/16/16

Printed Colors – Front:



Printed Colors – Back:



Match Colors:

Scale:  1 Inch

This artwork has been created as requested by 3M.
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