



CAMFRESH DATA SHEET
PRODUCT CODE 1500/500

PRODUCT DESCRIPTION	Camclear Polyester Laminate 12/45 Anti-Fog. (see note 9)
PRODUCT CONSTRUCTION	Adhesive laminate of ; 12 Micron Polyester, Camclear coated on one side, 45 Micron BL5 Butene Linear Low/Low density polyethylene, with Anti-Fog lacquer.
TYPICAL END USE(S)	High Clarity Modified Atmosphere Packaging (MAP/CAP) for meat packs and other similar end uses. Laminate has anti-mist/ anti-fog properties to give good product visibility under refrigeration conditions.
NOMINAL YIELD NOMINAL GRAMMAGE NOMINAL GAUGE	16.4 (m ² /kg) See Note 4 61 (g/m ²) 60 microns.

PRODUCT PROPERTIES:

OXYGEN BARRIER (cc/m²/24 Hrs 23°C ±50%R.H.) TEST METHOD; MOCON OXTRAN 1000 MINIMUM QC. TEST FREQUENCY; PER JOB.	Typical value; 2.0 Specification Limits; < 5.0
CARBON DIOXIDE BARRIER (cc/m²/24 Hrs) MINIMUM QC. TEST FREQUENCY; NOT TESTED	Typical value; < 12.0
OPTICAL DENSITY (SEE NOTE 5) TEST METHOD; TOBIAS DENSITOMETER TYPICAL VISIBLE LIGHT TRANSMISSION. MINIMUM QC. TEST FREQUENCY; PER JOB.	Typically 0.05-0.06 Specification Limits; <0.07 >85%
INTERLAYER BOND STRENGTH PETC/BL5 (Grams/25mm) TEST CONDITIONS; INSTRON CAMVAC LIMITED TEST PROCEDURE (SEE NOTE 6) MINIMUM QC. TEST FREQUENCY; PER JOB.	Typical value; >300 Specification Limits; >200g/25mm
COEFFICIENT OF FRICTION (BL5/BL5) (SEE NOTE 7) COEFFICIENT OF FRICTION (PET/PET) (SEE NOTE 7) TEST CONDITIONS; DAVENPORT (BS5961) MINIMUM QC. TEST FREQUENCY; NOT TESTED.	Typically; 0.20-0.50 Typically; 0.25-0.45
RETAINED SOLVENTS (mg/m²) TEST METHOD; GAS LIQUID CHROMATOGRAPHY (PIRA METHOD) MINIMUM QC. TEST FREQUENCY; PER JOB.	Specification Limits; Total <10
ANTI-MIST PERFORMANCE TEST METHOD; CAMVAC LIMITED TEST METHOD	See Note 9 overleaf

See Notes Overleaf

Revised March 2009

GENERAL NOTES: PRODUCT DATA SHEET 1501/500

CAMCLEAR™ is the registered trademark of Camvac Limited. Freedom from patent rights on converted products should not be assumed.

- 1) The information contained in this data sheet is supplied in good faith but does not constitute part of any declared or implied product specification or guarantee, unless otherwise indicated. The information is believed to be accurate, but is given solely for your internal purposes. Camvac Limited shall not be liable for any inaccuracy of the information to any third parties to whom it may be passed, unless Camvac Limited has given its prior written consent to such information, and/or its incorporation with other information being given to a third party.
- 2) It is the responsibility of the end user to confirm suitability for their application. If in doubt about the feasibility of a particular end use, please seek technical assistance from Camvac Limited.
- 3) This 12/45 Antifog Camclear bilaminate will be produced using a high performance two-part polyurethane adhesive. The Camclear layer is encapsulated between the polyester and polyethylene substrates. The Camclear coated polyester used in the laminate will be produced using Melinex 800 or Hostaphan RNK. However, other equivalent films may be supplied to an identical specification, subject to customer approval.
- 4) Gauge tolerance on the polyester substrate in the construction is +/- 10%, and on the polyethylene substrate also +/-10%, corresponding with Industry standards for these films.
- 5) Visible light transmission may vary from point to point within the specification limit. Because of the nature of the coating process and the exaggeration of small differences in transmission through many layers of laminate, reels may appear to have bands in them, although variability will be much less noticeable on single sheets
- 6) Interlayer bond strength is measured using an Instron on transverse direction samples with a 90° tail at 200mm/minute crosshead speed. Test laboratory at 23°C 50% R.H. (BS5350). Bond strength pass or fail is based on an internal quality control test procedure.
- 7) Coefficient of friction cannot be guaranteed because of the antifog coating present on the BL5 surface. This is not normally a problem with machines used for MAP/CAP lidding applications. Coefficient of friction, on the polyester side of the laminate, cannot be guaranteed as anti-fog lacquer from the polyethylene may transfer over time onto the polyester surface thus changing the slip characteristics. The amount of transfer is dependent on winding density and reel age.
- 8) Camvac Limited does not measure carbon dioxide barrier. Results are

based on tests carried out by a recognised testing laboratory and are supplied in good faith, but for Customer information only.

- 9) Anti fog properties are tested using a Camvac Limited standard test on every job. Anti-fog laminates have a limited shelf life. Performance can deteriorate after 3 Months of manufacture.

STORAGE

Store in dry condition (30-70% Relative Humidity) at 10-30°C. Protect reel ends from water, which can cause blocking. Web flatness of Camclear coated plastic films and laminates can deteriorate on prolonged storage. It is recommended that reels be used within 6 Months of delivery, as the anti-fog performance of this laminate deteriorates over time. The Product will not be guaranteed against specification if reels are used after this period.

FOOD CONTACT

Raw materials used in Camvac Limited's Camclear coated Polyester films and laminates comply with the following regulations;

SUBSTRATE	FDA	EUROPE
POLYESTER FILM	21.CFR.177.1630	2004/19/EC
POLYETHYLENE FILM	21.CFR.177.1520	2004/19/EC
ADHESIVE	21.CFR.175.105	2004/19/EC

This product is compliant with Directive 2004/19/EC and relevant FDA Regulations. For further information please contact Camvac Limited.

However, if the final laminate is to be used at elevated temperatures, converters are advised to refer to Camvac Limited for further information. In such circumstances, converters are reminded that it is the responsibility of the packer to advise the simulants to be used as defined by 85/572/EEC, and the test conditions as defined by 82/711/EEC.