



ATLANTIS-PAK

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Packaging Solutions

Films **AMISTYLE**

AMISTYLE BP/CP

Process Operating Manual



1. APPLICATION

This Process Operating Manual describes the procedure for packaging of food products by thermoforming with the use of AMISTYLE BP and AMISTYLE CP films.

AMISTYLE BP/CP are multilayer heat-shrink vapor- and gas-tight heat-sealable films made of polyamide, polyolefin, polyethylene terephthalate, EVOH and adhesive (modified polyethylene) permitted by the Russian Ministry of Health for use in the food industry. The quality of the raw materials used for production of the film is confirmed by Russian and international quality certificates.

The AMISTYLE BP/CP films are manufactured according to Specifications TU 22.21.30-052-27147091-2012 and are intended for secondary packaging of various food products (meat-based food, chilled meat, chilled poultry, sausages and delicatessen, chilled fish, cheeses and cheese-based products) by the method of vacuum or MAP thermoforming in order to prolong the shelf life.

The AMISTYLE BP/CP films are suitable for processing on various types of thermoformers.

The shelf life of the food products packaged in the AMISTYLE BP/CP films shall be set by the manufacturers and approved following the procedure stipulated by the laws.

See TU 22.21.30-052-27147091-2012 and Product Specifications for information on the technical characteristics, assortment, colors, forms of supply, processing options, storage conditions and shelf life of the AMISTYLE BP/CP films.

2. CONSUMER PROPERTIES AND ADVANTAGES

The combination of different polymer materials in the structure, and the biaxial orientation of the AMISTYLE BP/CP films provide for:

- excellent sealability of AMISTYLE BP and AMISTYLE CP between themselves and with other films within a wide range of temperatures;
- high strength and puncture resistance, which preserves the integrity of the package at the stages of transportation and storage;
- attractive appearance of the packaging material (transparency and gloss), which makes the film virtually invisible on the product;
- high barrier to water vapor and gases (oxygen, nitrogen, carbon dioxide);



The AMISTYLE BP films are produced by an innovative method (triple bubble biaxial orientation) that allows stretching during the thermoforming without critical thinning in certain areas.

Thus, the combined AMISTYLE BP and AMISTYLE CP films allow packaging of food with the use of high-rate automatic equipment, preservation of the packaged food products at all stages, and extension of their shelf life.

The thinness of the AMISTYLE BP/CP films contributes to their lower environmental impact due to the reduced amount of polymer wastes.

Absence of chlorine-containing substances makes the AMISTYLE BP/CP films more environment-friendly because of the safer disposal of the packaging.

AMISTYLE BP serves as the thermoformable bottom film used to make the tray that contains the food product. Film AMISTYLE BP may also be used as the lidding film. The AMISTYLE BP film withstands pasteurization during 2 hours at 95 °C.

AMISTYLE CP serves as the lidding film used to seal the tray containing the food product.

3. HOW TO USE THE CASING

3.1. Preparation of the film

3.1.1. If the film was stored at a subzero temperature, keep it at room temperature before processing for at least 24 hours without opening the manufacturer's packing.

3.2. Food product packaging

Packaging of food products in the AMISTYLE BP/CP films shall be made in production rooms meeting the requirements of the applicable food safety regulations and standards.

To ensure stability of the packaging process, observe the manufacturer-recommended operating modes for the packaging equipment.

Loading of the film in the automatic equipment must be made in accordance with the instructions of the equipment manufacturer and the loading procedure.

Take care to maintain the film well-tensioned during the operation.

The equipment settings (forming and sealing temperature, packages per minute rate, etc.) shall be selected on a case-by-case basis.



The AMISTYLE BP/CP films have a heat-sealable layer of polyethylene (PE) on the inner side of the film web (see. Fig. 1 below).

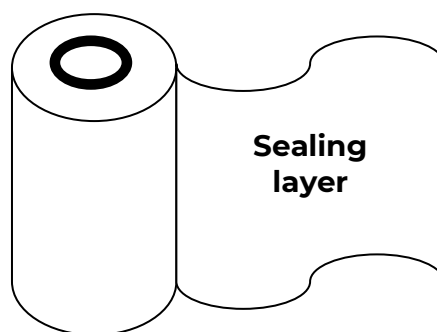


Fig. 1 - AMISTYLE film roll

Packaging of food products with the use of the AMISTYLE BP/CP films includes the following stages:

- forming of a tray from the AMISTYLE BP bottom film roll;
- filling of the formed tray with food;
- sealing of the packages;
- separation of the packages.

3.3. Forming of a tray from the AMISTYLE BP bottom film roll

Trays are made automatically by heating of the rolled AMISTYLE BP bottom film and forming of tray shapes by using of vacuum and/or compressed air flow (depending on the thermoformer design).

The maximum depth of a tray formed from the AMISTYLE BP film depends on the quantity of trays produced per work cycle of the equipment.

Table 2 – Maximum drawing depth of the AMISTYLE BP film

Film type	Format	Forming depth (mm)
BP-60	2×2	50
	2×3	50
BP-90	1×1	120
	2×1	100
	2×2	70
	2×3	70
	5×1	55
	5×2	55
BP-110	1×1	130



	2×1	100
	2×2	70
	2×3	70
	5×1	60
	5×2	60
BP-90-E	1×1	130
	2×1	105
	2×2	75
	2×3	75
	5×1	65
	5×2	65
BP-120-E	1×1	140
	2×1	110
	2×2	80
	2×3	80
	5×1	70
	5×2	70

The film thickness should be selected with regard to the characteristics of the packaged product and the required film drawing depth.

For example, when trays 10 - 30mm deep are used for packaging of hot dogs, it is recommended to use the Amistyle BP-60/AMISTYLE CP-40 films. Sausages measuring 40 - 50mm in diameter should be packaged in the AMISTYLE BP-90-E or AMISTYLE BP-120-E film, combined with the AMISTYLE CP-50 film.

The equipment settings (the forming and sealing temperature and time, the compressed air pressure, etc.) should be selected on a case by case basis, because the equipment type and technical condition affect the packaging quality.

Recommended thermoforming parameters for the AMISTYLE BP film:

Forming temperature: 90 - 110 °C;

Film heating time: 1 - 4 s.;

Film drawing time: 0,5 - 2,5 s.;

Drawing pressure: 1 - 3 bar.

3.4. Filling of the formed trays with food

The formed trays are fed by a belt conveyor to the product dosage zone, where the food is placed on the tray automatically or manually.

During the filling take care to match the product volume with the tray size and shape.



3.5. Sealing of packages

After filling the trays with food, the thermoformer uses the AMISTYLE CP lidding film to seal the trays with simultaneous evacuation of air from the packages or filling of the packages with modified atmosphere (if needed). Trays are made tight by means of heat-sealing.

The sealing temperature for the AMISTYLE BP/CP films varies depending on the equipment type and its operating rate, and lies within the range of 130 – 150 °C.

Take care to prevent the product getting into the film sealing zone, because this may lead to a loss of vacuum.

The depth of vacuum should be preset depending on the product moisture content. The depth of vacuum should be reduced for packaging of high-moisture products.

The seals must be even and continuous, bearing a clear imprint of the sealing bar, without any signs of burn-through.

If the sealing quality is unsatisfactory, check the temperature settings.

3.6. Separation of the packages

The sealed packages are conveyed for longitudinal and transverse cutting.

After that the packaged product may be dispatched for weighing, labeling and storage.

3.7. Transportation and storage of the products

The products packaged in the AMISTYLE BP/CP films shall be transported and stored in accordance with the standard documentation applicable to the product (GOST, TU).

4. APPENDICES

There are no appendices to the present document.





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