



ATLANTIS-PAK

Leader In Innovative
Packaging Solutions

Films **AMISTYLE**

AMISTYLE FT

Process Operating Manual



1. APPLICATION

This Process Operating Manual describes the procedure for packaging of food products with the use of the **AMISTYLE FT** film.

AMISTYLE FT is a multilayer heat-shrink vapor- and gas-tight heat-sealable film made of polyamide, polyolefin, polyethylene terephthalate, EVOH and an adhesive (modified polyethylene) permitted by the Russian Ministry of Public Health for use in the food industry. The quality of the raw materials used to produce the film is confirmed by Russian and international quality certificates.

The **AMISTYLE FT** film is manufactured according to Specifications TU 22.21.30-052-27147091-2012 and is intended for vacuum packaging of various food products (meat products, chilled and frozen meat, sausages and specialties, chilled and frozen fish, cheeses and cheese-based products) in order to prolong the shelf life.

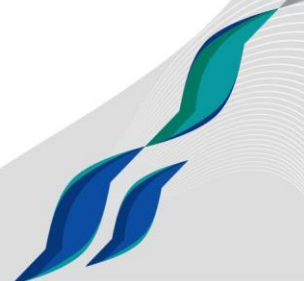
The **AMISTYLE FT** film is designed for use on horizontal automatic packaging machines.

The shelf life of the food products packaged in the **AMISTYLE FT** film shall be set by the manufacturer and approved by the procedure stipulated by the laws.

2. PROPERTIES AND ADVANTAGES

The combination of different polymer materials in the structure of the **AMISTYLE FT** film provides for:

- excellent sealability within a wide range of temperatures;
- optimal heat shrinkage permitting the creation of an attractive packaging, and reduction of the product juice separation during the storage;
- superb strength and puncture resistance to ensure good preservation of the packaged products at the stages of transportation and storage;
- attractive appearance of the packaged products thanks to the high transparency and gloss;
- high barrier to oxygen and water vapor, which ensures a prolonged shelf life;
- high heat resistance, which permits overlap sealing of the packaging on vacuum equipment.



The combination of different polymer materials in the film structure provides for good preservation of the products and their prolonged shelf life, and makes it possible to package food products of various sizes and shapes on high-capacity automatic equipment.

The absence of chlorine-containing substances contributes to the environment safety of the **AMISTYLE FT** film, because the disposal of chlorine-free packaging is more environment-friendly.

See the technical characteristics of the **AMISTYLE FT** film in the Product Specification.

3. ASSORTMENT

Amistyle FT-45 is a heat-shrink film with the thickness of $45\pm 5\mu\text{m}$, intended for packaging of various products, such as chilled meat, meat products, sausages, ripened cheese, poultry, fish, etc.

Amistyle FT-60 is a heat-shrink film with the thickness of $60\pm 8\mu\text{m}$, highly resistant to puncture; recommended for packaging of products with sharp edges;

Amistyle FT-75 is a heat-shrink film with the thickness of $75\pm 8\mu\text{m}$, highly resistant to puncture; recommended for packaging of products with sharp edges.

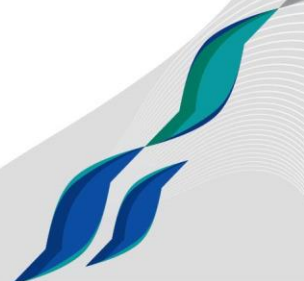
Color: clear.

Marking: Single-color, multi-color or CMYK printing with inks based on volatile solvents.

Forms of supply: reels on cardboard cores 76 mm in diameter.

Table 1 – Standard length of film in reel

Film type	Width, mm	Length, m
FT-45	200 - 700	1000
	701 - 1400	500
FT-60	200 - 705	1000
	701 - 1400	500
FT-75	200 - 1400	500



4. FILM PROCESSING TECHNOLOGY

4.1. Film storage and transportation

4.1.1. Keep the film in closed dry rooms at a distance of not less than 800mm from any heaters, in the absence of strong-smelling or corrosive substances, at the temperature from + 5 °C to + 35 °C and the relative humidity of not more than 80%.

4.1.2. Transport the film at temperatures not exceeding 40 °C, and protect against direct sunlight.

4.1.3. If the film was stored at a temperature below 0 °C, hold it at room temperature for at least 24 hours before processing, without opening the manufacturer's packing.

4.2. Calculation of the film width

The film width depends on the shape, width and height of the product, and can be roughly calculated by the following formula:

$$2 \times (\text{product width} + \text{product height}) + 40\text{mm}$$

4.3. Food product packaging

Packaging of food products in the **AMISTYLE FT** film shall be made in production rooms that comply with the requirements of the applicable food safety regulations and standards.

Packaging consists in heat-sealing of the product inside a tight pouch formed from heat-shrink film in automatic mode.

The process of food packaging in the **AMISTYLE FT** film includes the following stages:

- formation of a heat-shrink pouch around the product,
- evacuation of air and sealing of the packaging unit,
- heat-shrinking.

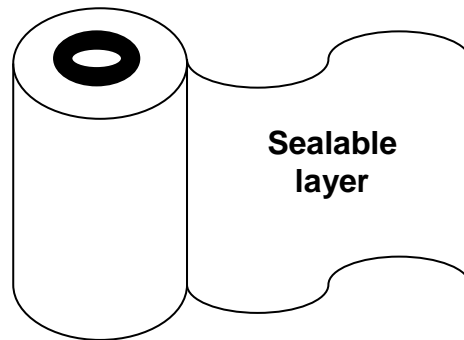
To ensure stability of the packaging process, observe the packaging equipment operating modes recommended by the manufacturer.

4.4. Formation of the heat-shrink pouch

Load the film in the automatic sealing equipment in compliance with the manufacturer's requirements and following the loading instructions.



The **AMISTYLE FT** film has a heat-sealable polyethylene (PE) layer on the inner side of the film web.



Food can be laid on the **AMISTYLE FT** film manually or automatically, taking care to match the product size with the film width. The product must not get inside the film sealing zone, as this may lead to loss of vacuum in the packaging

During the operation, the film must be kept well-stretched.

The equipment settings (sealing temperature, packages per minute rate, etc.) shall be selected as necessary.

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

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

The sealing temperature for the **AMISTYLE FT** film varies as a function of the size and shape of the product, and the equipment operating rate, lying within the range of 130 – 170 °C.

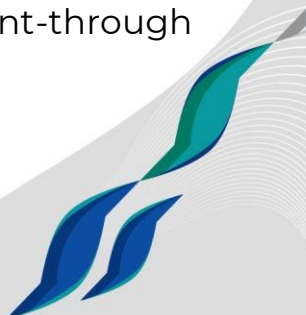
The recommended temperature for sealing of the longitudinal seal is 130 – 170 °C.

The recommended temperature for sealing of the lateral seal is 130 – 155 °C.

4.5. Evacuation and sealing

Evacuation of air from the pouches formed from the **AMISTYLE FT** film is made on special equipment (vacuum packaging machines). The manufacturer-specified operating modes of the packaging equipment must be complied with to ensure a stable packaging process.

Throughout the operation, keep the sealing zone clean and free of any foreign inclusions, and do not use heating elements with burnt-through protective coatings.



To improve the package appearance, bring the food-containing pouch in the evacuation zone as close as possible to the heat-sealing bar, and avoid pouch folds on the bar to prevent the eventual loss of vacuum.

The recommended vacuum depth is 95-99%. The vacuum depth value is set depending on the moisture content of the product. When packaging food with a high moisture content, reduce the vacuum depth value.

Special tools should be used to check tightness of the seals.

4.6. Heat shrinkage

The food-containing pouches are shrunk in heat-shrinking tanks or tunnels by immersion of the pouch in hot water or sprinkling with hot water (steam) at a temperature from 80°C to 95°C during 2-3 seconds (depending on the type of the packaged product). The equipment must allow adjustment and control of the conditions and parameters of the heat-shrinking process.

To achieve the best results of heat-shrinking of the food packages, it is recommended to use the temperature from 92 °C to 95 °C during 2-3 seconds.

To achieve the best results of packaging of chilled meat, it is recommended to heat-shrink the package at the temperature of 82-85 °C during 2-3 seconds.

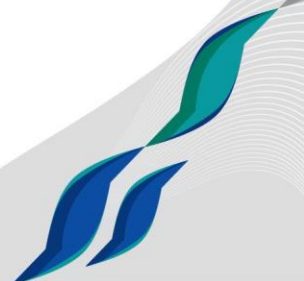
After that the packaged product can be weighed, labeled and stored.

4.7. Transportation and storage of products

The products packaged in the **AMISTYLE FT** film shall be transported and stored in accordance with the standard documentation applicable to the particular product (GOST, TU).

5. MANUFACTURER'S GUARANTEE

The **AMISTYLE FT** film is usable within 2 years from the date of manufacture to the date of processing, subject to compliance with the transportation and storage requirements for the user's warehouse and integrity of the manufacturer's packing.



6. RECORDS

This document contains no records.

7. APPENDICES

This document contains no appendices.





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