



ATLANTIS-PAK

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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-based products, chilled and frozen meat, chilled and frozen poultry, 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 or vertical 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.

See Specifications TU 22.21.30-052-27147091-2012 and the Product Specification for the technical data, assortment, forms of supply, additional processing options, storage conditions and shelf life of the **AMISTYLE FT** film.

2. CONSUMER 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 term;
- 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.

Thus, the combination of different polymer materials in the film structure makes the **AMISTYLE FT** film more environment-friendly, because the disposal of chlorine-free packaging is less harmful to the environment.

AMISTYLE FT-45 is a heat shrink film intended for packaging of various products free of sharp edges or inclusions (chilled meat, meat-based products, unclipped sausage chubs, matured cheese, poultry, fish, etc.).

AMISTYLE FT-60 and **AMISTYLE FT-75** are heat shrink films with enhanced puncture resistance recommended for packaging of products with sharp edges and inclusions (bone-in meat, clipped sausage chubs, products in edible coating, etc.).

3. FILM PROCESSING TECHNOLOGY

3.1. Preparation for processing

3.1.1. 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.

3.2. Calculation of the film width

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

$$2 \times (\text{product width} + \text{product height}) + (40-60)\text{mm}$$

3.3. 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, and includes the following stages:

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



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

3.4. Formation of the heat-shrink pouch

Load the film in the automatic sealing equipment in compliance with the manufacturer's requirements and the loading instructions. Observe the procedure for winding of the **AMISTYLE FT** into a roll (the sealable layer must be on the inner side of the film web). (See Fig. 1)

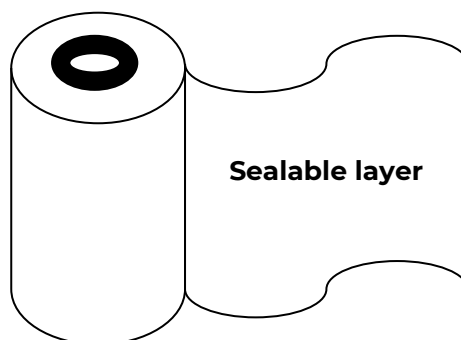


Fig. 1 **AMISTYLE FT** film roll

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 package.

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, the equipment operating rate, and the film thickness.

The recommended longitudinal sealing temperature is 130 – 170 °C.

The recommended transverse sealing temperatures is 130 – 155 °C.

3.5. Evacuation and sealing

Evacuation of air from the pouches formed from the **AMISTYLE FT** film is achieved 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 seal testers should be used to check tightness of the seals.

3.6. Heat shrinkage

The food-containing pouches are shrunk in heat-shrinking tanks or tunnels by immersion of the pouch in hot water or treatment with sprinkled 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.

The stage of heat-shrinking may be dispensed with, if not required.

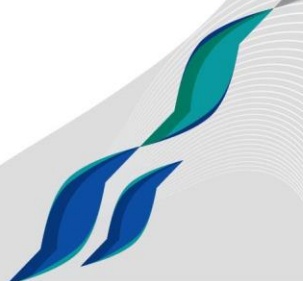
After that the packaged product can be weighed, labeled and stored.

3.7. Transportation and storage of products

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

4. APPENDICES

This document contains no appendices.





PCF ATLANTIS-PAK LLC
Address: 72 Onuchkina str., village of Lenin,
Aksay district, Rostov region,
346703 Russian Federation
Phones: +7 863 255-85-85 / +7 863 261-85-80
Fax: +7 863 261-85-79
www.atlantis-pak.top
info@atlantis-pak.top

