

Leader In Innovative Packaging Solutions



# **AMISTYLE CPP/CPE**

**Process Operating Manual** 





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#### 1. APPLICATION

This Process Operating Manual describes the procedure for tray packaging of food products with the use of the **AMISTYLE CPE** and **AMISTYLE CPP** films.

**AMISTYLE CPE/CPP** are multilayer heat-shrink vapor- and gastight 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 CPE/CPP** films are intended for MAP tray sealing of chilled food (meat products, chilled meat, chilled poultry, sausages and delicatessen, chilled fish, cheeses and cheese-based products) in order to prolong the shelf life.

The **AMISTYLE CPE/CPP** films are suitable for processing with manual, automatic or semi-automatic tray sealers.

The shelf lives of the food products packaged in the **AMISTYLE CPE/CPP** films shall be set by the manufacturers 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 CPE/CPP** films provides for:

- high transparency and gloss of the film, which makes the package look attractive;
- high barrier to gases, which captures the modified atmosphere inside the package to achieve the maximum shelf life;
- high strength, which preserves the integrity of the package at the stages of transportation and storage;
- excellent sealability within a wide range of temperatures, which ensures tight seals.

The presence of an antifog component in the formula of the **AMISTYLE CPE/CPP** films provides for the high transparency of packages at fluctuating temperatures, prolongs the product's shelf life by preventing condensation at the bottom of the package, and preserves its esthetic appearance.

Heat-shrinkability of **AMISTYLE CPE/CPP** ensures a uniform tensioning of the lidding film (the drum effect).



Absence of chlorine-containing substances contributes to the environment safety of the **AMISTYLE CPE/CPP** films, because disposal of the chlorine-free packaging is more environment-friendly.

See the technical characteristics of the **AMISTYLE CPE/CPP** films in the Product Specification.

#### 3. ASSORTMENT

| Film            | Thickness,<br>microns | Width, mm * |
|-----------------|-----------------------|-------------|
| AMISTYLE CPE-25 | 25                    | 100 - 940   |
| AMISTYLE CPE-40 | 40                    | 100 - 865   |
| AMISTYLE CPP    | 40                    | 100 - 865   |

<sup>\*</sup> with 5mm increments

Color: clear

Marking: suitable for single-color, multi-color or CMYK printing with volatile solvent-based inks.

Form of supply: reels on 76mm diameter cardboard cores.

| Film       | Width from,<br>mm | Width to,<br>mm | Standard winding in a roll, m |
|------------|-------------------|-----------------|-------------------------------|
| CPP, CP-40 | 100               | 865             | 1000                          |
| CPE-25     | 100               | 950             | 2000                          |

## 4. FILM PROCESSING TECHNOLOGY

## 4.1. Film storage and transportation

- 4.1.1. Keep the film in enclosed dry rooms at a distance of not less than 800mm from heaters, in the absence of strong-smelling or corrosive substances, at a temperature from +5 °C to +35 °C and relative humidity not more than 80 %.
- 4.1.2. Transport the film at temperatures not exceeding 40 °C, and protect against direct sunlight.
- 4.1.3. When the film is stored at a temperature below 0 °C, keep it at room temperature before processing for at least 24 hours without opening the manufacturer's packing.

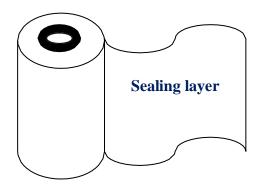


## 4.2. Food product packaging

Packaging of food products in the **AMISTYLE CPE/CPP** film shall be made in production rooms meeting the requirements of the applicable food safety regulations and standards.

The **AMISTYLE CPE** film has a heat-sealable polyethylene (PE) layer. The **AMISTYLE CPP** film has a heat-sealable polypropylene (PP) layer.

The sealing layer is on the inward side of the film web.



The film and the tray must be compatible (both must have the same sealing layer).

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

Polymer tray packaging of food products with the use of the **AMISTYLE CPE/CPP** 

films includes the following stages:

- placement of the product in trays. This can be done manually or automatically; take care to match the product volume with the tray size the top of the product inside the tray must be at a lower level than the tray top;
  - moving of the filled tray to the seat of the sealing unit;
- evacuation of air from the tray and pumping in of the required gas mixture. The recommended gas-to-product volume ratio is 2:1. To make flat sealed containers, the gas pressure must be approximately equal to the atmospheric pressure (1,000 mbar). To make convex trays, the gas pressure must be higher than the atmospheric pressure;
  - sealing of the tray lid and punching out the tray contour.



Take care to prevent the product getting into the film and tray sealing zone, because this may lead to a loss of vacuum. The product to be packaged must be free of sharp edges that may puncture the package, which will the product quality.

During the operation the film must be kept well-tensioned and fully covering the sealing zone.

The equipment settings (sealing temperature, sealing time, quantity of the gas mixture, etc.) shall be selected on a case-by-case basis.

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

The sealing temperature varies depending on the equipment operation rate.

The sealing temperature for the **AMISTYLE CPP** film varies within the range of 130-190 °C.

The sealing temperature for the **AMISTYLE CPE** film varies within the range of  $110-160\,^{\circ}\text{C}$ .

If the sealing quality is unsatisfactory, check the temperature settings. The sealing time varies in the range from 0.6 to 3 seconds.

## 4.3. Transportation and storage of products

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

#### **5. MANUFACTURER'S GUARANTEE**

The antifog component of the **AMISTYLE CPE/CPP** films preserves its properties during 6 months from the date of manufacture to the date of processing. The shelf life of the **AMISTYLE CPE/CPP** films is 1 year from manufacture to processing, subject to compliance with the transportation and storage requirements for the user's warehouse, and provided that the manufacturer's packing remains intact.





#### 6. APPENDICES

Appendix 6.1.

## Calculation table for Amistyle CPP/CPE films

| Film         | Qty in 1      | CPP,<br>CPE-40     | CPE-25 | CPP,<br>CPE-40    | CPE-25 | CPP,<br>CPE-40      | CPE-25 |
|--------------|---------------|--------------------|--------|-------------------|--------|---------------------|--------|
| width,<br>mm | km,<br>sq. m. | weight of 1 km, kg |        | length in 1 kg, m |        | qty in 1 kg, sq. m. |        |
| 100          | 100           | 4,00               | 2,53   | 250,3             | 395,1  | 25,0                | 39,5   |
| 150          | 150           | 5,99               | 3,80   | 166,9             | 263,4  | 25,0                | 39,5   |
| 200          | 200           | 7,99               | 5,06   | 125,2             | 197,5  | 25,0                | 39,5   |
| 210          | 210           | 8,39               | 5,32   | 119,2             | 188,1  | 25,0                | 39,5   |
| 220          | 220           | 8,79               | 5,57   | 113,8             | 179,6  | 25,0                | 39,5   |
| 230          | 230           | 9,19               | 5,82   | 108,8             | 171,8  | 25,0                | 39,5   |
| 240          | 240           | 9,59               | 6,08   | 104,3             | 164,6  | 25,0                | 39,5   |
| 250          | 250           | 9,99               | 6,33   | 100,1             | 158,0  | 25,0                | 39,5   |
| 260          | 260           | 10,39              | 6,58   | 96,3              | 151,9  | 25,0                | 39,5   |
| 270          | 270           | 10,79              | 6,83   | 92,7              | 146,3  | 25,0                | 39,5   |
| 280          | 280           | 11,19              | 7,09   | 89,4              | 141,1  | 25,0                | 39,5   |
| 290          | 290           | 11,59              | 7,34   | 86,3              | 136,2  | 25,0                | 39,5   |
| 300          | 300           | 11,99              | 7,59   | 83,4              | 131,7  | 25,0                | 39,5   |
| 310          | 310           | 12,38              | 7,85   | 80,7              | 127,4  | 25,0                | 39,5   |
| 320          | 320           | 12,78              | 8,10   | 78,2              | 123,5  | 25,0                | 39,5   |
| 330          | 330           | 13,18              | 8,35   | 75,9              | 119,7  | 25,0                | 39,5   |
| 340          | 340           | 13,58              | 8,61   | 73,6              | 116,2  | 25,0                | 39,5   |
| 350          | 350           | 13,98              | 8,86   | 71,5              | 112,9  | 25,0                | 39,5   |
| 360          | 360           | 14,38              | 9,11   | 69,5              | 109,7  | 25,0                | 39,5   |
| 370          | 370           | 14,78              | 9,37   | 67,7              | 106,8  | 25,0                | 39,5   |
| 380          | 380           | 15,18              | 9,62   | 65,9              | 104,0  | 25,0                | 39,5   |
| 390          | 390           | 15,58              | 9,87   | 64,2              | 101,3  | 25,0                | 39,5   |
| 400          | 400           | 15,98              | 10,13  | 62,6              | 98,8   | 25,0                | 39,5   |
| 410          | 410           | 16,38              | 10,38  | 61,1              | 96,4   | 25,0                | 39,5   |
| 420          | 420           | 16,78              | 10,63  | 59,6              | 94,1   | 25,0                | 39,5   |
| 430          | 430           | 17,18              | 10,88  | 58,2              | 91,9   | 25,0                | 39,5   |
| 440          | 440           | 17,58              | 11,14  | 56,9              | 89,8   | 25,0                | 39,5   |
| 450          | 450           | 17,98              | 11,39  | 55,6              | 87,8   | 25,0                | 39,5   |
| 460          | 460           | 18,38              | 11,64  | 54,4              | 85,9   | 25,0                | 39,5   |
| 470          | 470           | 18,78              | 11,90  | 53,3              | 84,1   | 25,0                | 39,5   |
| 480          | 480           | 19,18              | 12,15  | 52,1              | 82,3   | 25,0                | 39,5   |
| 490          | 490           | 19,58              | 12,40  | 51,1              | 80,6   | 25,0                | 39,5   |
| 500          | 500           | 19,98              | 12,66  | 50,1              | 79,0   | 25,0                | 39,5   |
| 550          | 550           | 21,97              | 13,92  | 45,5              | 71,8   | 25,0                | 39,5   |
| 600          | 600           | 23,97              | 15,19  | 41,7              | 65,8   | 25,0                | 39,5   |
| 650          | 650           | 25,97              | 16,45  | 38,5              | 60,8   | 25,0                | 39,5   |
| 700          | 700           | 27,97              | 17,72  | 35,8              | 56,4   | 25,0                | 39,5   |
| 750          | 750           | 29,96              | 18,98  | 33,4              | 52,7   | 25,0                | 39,5   |
| 800          | 800           | 31,96              | 20,25  | 31,3              | 49,4   | 25,0                | 39,5   |
| 840          | 840           | 33,56              | 21,26  | 29,8              | 47,0   | 25,0                | 39,5   |
| 865          | 865           | 34,56              | 21,90  | 28,9              | 45,7   | 25,0                | 39,5   |
| 900          | 900           |                    | 22,78  |                   | 43,9   |                     | 39,5   |
| 940          | 940           |                    | 24,05  |                   | 41,6   |                     | 39,5   |



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