



**PRODUCTS FOR DAIRIES**

# ECOLOGICAL FILM



**01** Multilayer film, paper-alike, designed for butter, cottage cheese, yeast, lard and sweets packaging.

**03** Made of raw materials compatible to European directives regarding materials having contact with food.

**02** Having a shape memory, which makes packaging easier on the production lines.

**04** Also available in variants with different content of additives (e.g. another pigments) specially designed for requirements of packaging line and customer's needs.

Properties	Unit	Test method	Result
Width	mm	PN-C-89258-2	480
Width tolerance	mm	PN-C-89258-2	±10
Thickness	µm	PN-92/C-89090	60
Thickness' tolerance	%	PN-ISO 4593	±10
Type of material	-	-	Polyolefins / mineral material
Density	g/cm <sup>3</sup>	-	1,4 ±0,01
Number of layers	-	-	5
Colour	-	-	white
Crone activation	dyn	-	>38
Tensile strenght		PN-EN ISO 527-2	
- longitudinal direction	MPa		18-21
- transversal direction	MPa		16-19
Elongation at break		PN-EN ISO 527-2	
- longitudinal direction	%		>400
- transversal direction	%		<100
Dynamic friction ratio		PN-ISO 8295	
- longitudinal direction	-		>0,20
- transversal direction	-		>0,20
Content of additives	-	-	Anti-blocking additive, White masterbatch

# THERMO-SHRINK BAGS WITH BARRIER CONTROLLING CO<sub>2</sub> PERMEABILITY



**01** Based on PA (polyamide) or EVOH barrier, consisting of nine, eleven or thirteen layers, easy-welding, with lower oxygen barrier, designed for packing cheese (allow cheese ripening after packing).

**04** Excellent product outlook due to extraordinary transparency and exact adherence (the effect of "second skin").

**02** Highest technical parameters including puncture resistance.

**05** Without chlorine (there is no PVDC in material used in production).

**03** Controlled permeability of O<sub>2</sub> and CO<sub>2</sub>.

**06** Printable.

Properties	Unit	Test method	Result
Thickness	µm	D 2103	50
Yield	gr/m <sup>2</sup>	-	49
O <sub>2</sub> transmission rate	cc/24hr/m <sup>2</sup> /atm (0%RH), 23°	D3985	100
CO <sub>2</sub> permeability	cc/24hr/m <sup>2</sup> /atm (0%RH), 23°	D3985	650
Water vapor permeability	gr/24hr/m <sup>2</sup> /atm	F1249	9
Retraction %	85°-90°C	D 2732	40
Haze	%	D1003	3,5
Gloss	GU	D2457	100

Please note! Bags can be produced with another (selective or bigger) barrier.

# SHRINK BAGS FOR CHEESE – V SHAPED



**01** „V” shaped eleven-layers shrink bags.

**05** Transparent or colourful depending on customer’s preferences, printable.

**02** Depending on the barrier, can be used for ripening cheese (non-, mid- or high gassing) and hard cheese.

**06** Great mechanic parameters – puncture resistance.

**03** Selectivity of the applied barrier ensures optimum storage conditions for cheese, eliminates smell and prevents weight loss.

**07** Sealable on any machinery.

**04** Good water vapor permeability and excellent absorption of UV radiation.

**08** Without chlorine (there is no PVDC in material used in production).

Properties	Unit	Test method	Result
Thickness	µm	DIN 53370	48
O <sub>2</sub> transmission rate	cc/24hr/m <sup>2</sup> /atm (85%RH), 23°	ISO 15105-2, 23°C, 85% RH	220
CO <sub>2</sub> permeability	cc/24hr/m <sup>2</sup> /atm (0%RH), 23°	DIN 53380 T2, 23°C, 0% RH	1000
Water vapor permeability	gr/24hr/m <sup>2</sup> /atm	ASTM E 96-00, 38°C, 90% RH	12
Retraction %	%	Internal Method, 90°C, 5 sec	MD: 50%, TD: 55%
Elongation at break	%	ASTM D 882	MD: 150%, TD: 140%
Puncture resistance	N	EN 14477	11

## SHRINK FILM LID



- 01** Films used as trays' coverage (top film) nine or eleven layers.
- 02** For packing ripening cheese (non-, mid- and high gassing).
- 03** With exceptional transparency and gloss.
- 04** Containing anti-fog and UV filters.
- 05** The ability of packing products in modified atmosphere and adapting a barrier for product requirements.
- 06** Transparent or colourful depending on customer's preferences, printable.
- 07** Without chlorine (there is no PVDC in material used in production).

## SHRINK FILM FLOW-PACK



- 01** Eleven and thirteen-layers film with standard thickness of 50 mu, designed for packaging products in flow-pack technology.
- 02** Selective barrier with optimised oxygen, CO<sub>2</sub> and water vapor permeability parameters suitable for packing ripening non-, mid- and high gassing) and hard cheese.
- 03** High shrinkage – up to 55%,
- 04** High puncture resistance.
- 05** Excellent product outlook due to extraordinary transparency and exact adherence (the effect of "second skin").
- 06** Without chlorine (there is no PVDC in material used in production).

# THERMOFORMING FILMS (MAP AND SKIN PACKAGING) AND MORE



**01** Barrier films, 11 layers with parameters dependent on raw materials used in production – according to customer's requirements.

**06** Any thicknesses up to 600 um.

**02** Also for packing in modified atmosphere and "skin" technology.

**07** Transparent or colourful, depending on customer's preferences.

**03** PET-EVOH-PE.

**08** High or low barrier, depending on characteristic of packed product.

**04** PET-EVOH-PP.

**09** Printable.

**05** PET+PE-EVOH-PE.

# TRAYS AND CUPS – READY FOR USE



**01** PET-EVOH-PE: for packing mainly in modified atmosphere.

**03** PS: Polystyrene pressed in seven-layers technology with using EVOH, recommended for packing in modified atmosphere for food with longer expiration date.

**02** PET-EVOH-PP: for packing mainly in modified atmosphere, fresh products.

**04** PET+PE-EVOH-PE: laminated, flexible material for vacuum packaging and packing in modified atmosphere, with good optic properties and high barrier.

# ADDITIONAL CHARACTERISTICS OF OUR PRODUCTS

**01** Approved for contact with food – most of our products have BRC Packaging and ISO 9001 certificates.

**05** Extraordinary transparency and gloss.

**02** High sealing resistance.

**06** High elongation at break and puncture resistance.

**03** Product's weight losing control.

**07** All the products have technical data sheet, showing their parameters according to laboratory tests.

**04** Great anti-fog properties.

**08** Ability to adjust particular product's parameters to customer's preferences.





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