



BIAXPLEN PRODUCT PORTFOLIO

Revised: June, 2020

Consumer segments

- Tobacco films
- Label films
- Confectionary films

- Other food packaging films
- **⊘** Non-food films





Tobacco films

BIAXPLEN produces all types of transparent films which are used for all kinds of overwrapping box packaging (tea and cigarettes).

| Name | Description | Thickness, µ | COF | Shrinkage at 120 °C, 5 min | | Corona | Production |
|------|--|--------------|------|----------------------------|------|-----------|------------|
| | | | | MD | TD | Treatment | |
| TSHL | Shrinkable for box overwrapping | 20 | 0.25 | 6,5* | 6,5* | NO | Regular |
| TSHD | Shrinkable for cigarette packs wrapping | 16, 18, 20 | 0.15 | 13 | 13 | NO | Regular |
| TSHT | Shrinkable, printable for cigarette packs | 20 | 0.15 | 12 | 12 | YES | Regular |
| TSHS | High-shrinkable for cigarette packs wrapping | 18, 20 | 0.15 | 10 | 17 | NO | Regular |

COF – coefficient of friction film/film, out/out, slip/slip side, UT/UT. Typical values are mentioned.

^{*}Typical values for 120C, 5 min measurements

TSHL | Transparent, shrinkable film for carton boxes overwrapping



Properties

- Balanced slip properties
- Balanced shrinkage
- High rigidity
- High Gloss level
- High Transparency

Parameters

| Thickness, mic | 20 |
|--------------------------|-------------------|
| COF, OUT / OUT | 0.25 |
| Treatment | NO |
| Shrinkage, | , % |
| MD / TD at 120°C, 5 min. | 6,5÷9,0 / 6,5÷9,0 |

- Is used as mono-web
- For box overwrapping
- For any box size



TSHD Transparent, shrinkable film for cigarette single packs overwrapping



Properties

- Advanced Hot slip properties
- Suitable for all kind of known machines
- Balanced shrinkage
- Scratch resistant
- High rigidity

Parameters

| Thickness, mic. | 16,18, 20 | |
|---------------------------|-----------|--|
| COF, OUT / OUT | 0.15 | |
| Shrinkage 130C, 15 min, % | | |
| MD / TD | 13 / 13 | |
| Treatment | NO | |

- Is used for cigarettes packs overwrapping
- For horizontal packaging lines



TSHT

Transparent, shrinkable film for overwrapping packs, treated for printing



Properties

- Printable
- Advanced Hot slip
- Balanced shrinkage
- Scratch resistant
- High rigidity

Parameters

| Thickness, mic. | 20 |
|-----------------------|---------|
| COF, OUT / OUT | 0.15 |
| Treatment (corona) | YES |
| Shrinkage, 130C, 15 m | in, % |
| MD / TD | 12 / 12 |
| Treatment | Corona |

- Printed film for small cigarette pack overwrapping
- For horizontal packaging lines



TSHS | High-shrinkable for cigarette packs wrapping



Properties

- Advanced Hot slip
- For all overwrapping machine types
- Scratch resistant
- High rigidity
- Better pack performance

Parameters

| | TSHD | TSHS | | | |
|-----------------|----------------------------|--------|--|--|--|
| Thickness, mic. | 16, 18, 20 | 18, 20 | | | |
| COF, UT / UT | 0.15 | 0.15 | | | |
| Shrinkage, 13 | Shrinkage, 130C, 15 min, % | | | | |
| MD | 13 | 10 | | | |
| TD | 13 | 17 | | | |
| Treatment | NO | NO | | | |

Application

• Printed film for small cigarette pack overwrapping

For horizontal machines overwrapping





⊘ Label Films

BIAXPLEN LTD produces 3 and 5-layers grades for wrap-around labelling of PET bottles, for pressure-sensitive labels production and for in-mould labelling.

| Name | Descriprton | Application | Thickness, µ | Density, g/cm³ | Transparency, % | Production |
|--------|--------------------------------|-------------|----------------|----------------|-----------------|------------|
| LGBA | Transparent | WAL | 30, 35, 40 | 0,91 | - | Regular |
| LOBA | White-pearl | WAL | 35, 38, 47 | 0,68 | 20÷30* | Regular |
| LOBB | White-pearl high yield | WAL | 38 | 0,62 | 25 | Test |
| LOBC | White-pearl ultra high yield | WAL | 38 | 0,55 | 25 | On request |
| LOHM.M | Metallized cavitated | WAL | 38 | 0,71 | - | Regular |
| НОНМ | Pearlized UV transparent | SAL | 40 | 0,65 | 25 | On request |
| LGBM.M | Metallized | SAL | 50 | 0,91 | - | Regular |
| LGBL | Transparent | SAL | 50, 60 | 0,91 | - | Regular |
| LWBL | Solid white film | SAL | 50, 60 | 0,96 | 25 | Regular |
| SOIL | White pearl, matt | IML | 50, 60, 70 | 0,55 | 25 | Test |
| STL | Transparent, matt | IML | 57, 60 | 0,91 | - | Test |
| SWL | Solid white | IML | 55, 57 | 0,96 | 25 | Test |
| STG | Transparent, gloss | IML | 57 | 0,91 | = | Test |
| LGHM.M | Metallized for WAL | WAL | 30, 35 ,40 | 0,91 | - | Test |
| PGS | Base film for silicone coating | SAL | 15, 20, 25, 30 | 0,91 | - | Test |



LGBA | Label, transparent film for full wrap-around labelling



Properties

- High ink adhesion
- Good antistatic & slip properties
- Excellent optics
- High speed labelling
- Corona treated

Parameters

| Thickness, mic. | 30, 35, 40 |
|---|---------------|
| COF, UT / UT | 0.3 |
| Treatment | Corona |
| Haze / Gloss, % | 2 / 90 |
| Flexo and Rotogravure printing, solvent based | YES |
| UV flexo, UV offset | YES / Primer* |

- PET bottles labelling
- For reverse and front printing
- For hot melt & cold glue application



LOBA LOBB

Label, white-pearlized films for full wrap-around labelling of PET bottles with standard, high and ultra high yield



Properties

- High ink adhesion
- Good antistatic & slip properties
- High opacity and gloss
- LOBA holds its shape better
- LOBC has ultra high yield

Parameters

| | LOBA | LOBB | LOBC |
|---------------------------------|------------|------|------|
| Thickness, mic. | 35, 38, 47 | 38 | 38 |
| Density, g/cm ³ | 0.68 | 0.62 | 0.55 |
| COF, UT / UT | 0.3 | 0.3 | 0.3 |
| Transparency, % | 20÷30 | 25 | 25 |
| Gloss T, % | 85 | 85 | 80 |
| Rigidity | +++ | ++ | + |
| Yield, 38 μ, m ² /kg | 38.7 | 42.4 | 47.9 |
| Yield label pcs./kg | | +9% | +20% |

- PET bottles wrap around labeling
- For front printing
- For hot-melt & cold glue application
- Solvent based printing
- UV printing (primer required)



LOHM.M

Label, metallized-pearlized film for full wrap-around labelling of PET bottles



Properties

- High gloss metallized surface
- Good antistatic and slip properties
- High yield
- More economic solution than transparent metallized

Parameters

| Thickness, mic | 38 |
|--------------------------|--------------------------|
| COF, UT / UT | 0.3 |
| Weight, g/m ² | 27.98 |
| Optical density | 1.8 |
| All solvent based inks | Yes, Primer |
| UV flexo / UV offset | Yes, Primer for UV flexo |

- PET bottles wrap around labelling
- Gives metallic appearance for labels
- For hot-melt & cold glue label application



LGHM.M Label, metallized film for full wrap-around labelling of PET bottles



Properties

- High gloss metallized surface
- Good antistatic and slip properties

Parameters

| Thickness, mic | 30, 35,40 |
|------------------------|--------------------------|
| COF, UT/ UT | 0,3 |
| Optical density | 1,8 |
| All solvent based inks | Yes, Primer |
| UV flexo / UV offset | Yes, Primer for UV flexo |

- PET bottles wrap around labelling
- Provide metallic appearance for labels
- For hot-melt & cold glue label application



MHOH

Pearl basis for production of self-adhesive labels and for the metallization, UVtransparent



Properties

- High yield
- Superior gloss
- Advanced slip and anti-static properties
- UV transparent for UV curing process

Parameters

| Thickness, mic. | 40 |
|--------------------------------------|-----------|
| Density, g/cm ³ | 0.65 |
| Weight, g/m ² | 26.0 |
| Transmission, % | 25 |
| Treatment | Corona |
| For metallization / Heat sealability | Yes / Yes |
| 2nd side corona treatability | Yes |

- Metallization
- Also applicable as base film (without metallization)
- UV lamination
- UV printing
- For production of pressure-sensitive labels



LGBM.M LGBL LWBL

Metallized, Transparent, Solid White films for production of pressure-sensitive labels



Properties

- Thick films
- Migratory additives are not added
- One side corona treated
- High adhesion for printing
- Not coated

Parameters

| | LGBM.M | LGBL | LWBL |
|-------------------|------------|---------|--------|
| Туре | Metallized | Transp. | White |
| Thickness, mic | 50 | 50, 60 | 50, 60 |
| Density, g/cm3 | 0.91 | 0.91 | 0.96 |
| Yield, m2/kg, 60µ | 18.3 | 18.3 | 17.4 |
| Transmission, % | - | - | 25 |
| Haze, % | 3.5 | 3.5 | - |
| COF, UT / UT | 0.4 | 0.4 | 0.4 |

- The base for production of pressure-sensitive labels
- For holt-melt, water-based, UV adhesive coating
- Base film for primer coating



PGS Transparent film for silicone coating



Properties

- Good receptivity for silicone coating
- Provides good adhesion of silicone layer
- Low COF on both sides
- Without coatings

Parameters

| Thickness, mic. | 1530 |
|----------------------|--------|
| COF, UT / UT | 0,4 |
| Gloss, 45°, not less | 90 |
| Treatment level | 38 |
| Treatment | Corona |

Application

• Release-liner for pressure-sensitive label stock



SOIL White pearl, "orange peel" film for in-mould labels production



Properties

- Both side corona treated
- Specially designed antistatic properties
- Without "blurring" the white dye of the film upon melting
- Without primer (not coated)

Parameters

| Thickness, mic | 50, 60, 70 |
|---|-------------------|
| Density, g/cm ³ | 0.55 |
| Yield, 60 μ, m²/kg | 30.3 |
| Transmission, % | 25 |
| Gloss on gloss side, % | 80 |
| Side for printing / Side for inmoulding | Gloss / Matt |
| Treatment, mN/m | 38 / 36 |
| Solvent based printing / UV printing | Yes / Yes, primer |
| Solvent pased printing / Ov printing | required |

- Roll or sheet feeding printing processes
- For injection molding
- For molding into PP and PE containers



Transparent, one side matt film for in-mould labels production



Properties

- Both side corona treated
- Specially designed antistatic properties
- Without primer (not coated)

Application

- Roll or sheet feeding printing processes
- For injection molding
- For molding into PP and PE containers

Parameters

| Thickness, mic | 57, 60 |
|---|----------------------------|
| Density, g/cm ³ | 0.91 |
| Yield, 60 μ, m²/kg | 18,32 |
| Haze, % | 70 |
| Gloss on gloss side, % | 50 |
| Side for printing / Side for inmoulding | Gloss / Matt |
| Treatment, mN/m | 38 / 36 |
| Solvent based printing / UV printing | Yes / Yes, primer required |

SWL | White film for in-mould labels production



Properties

- Both side corona treated
- Specially designed antistatic properties
- Without primer (not coated)

Application

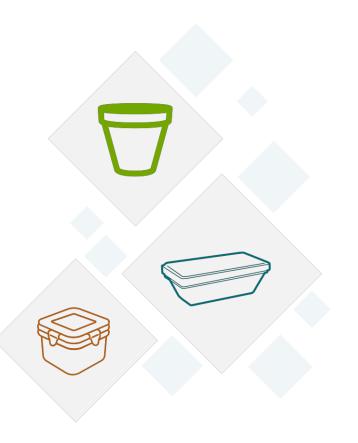
- Roll or sheet feeding printing processes
- For injection molding
- For molding into PP and PE containers

Parameters

| Thickness, mic | 55, 57 |
|---|----------------------------|
| Density, g/cm ³ | 0.96 |
| Yield, 60 μ, m ² /kg | 17,36 |
| Transmission, % | 25 |
| Gloss on gloss side, % | 50 |
| Side for printing / Side for inmoulding | Gloss / Matt |
| Treatment | 38 / 36 |
| Solvent based printing / UV printing | Yes / Yes, primer required |



STG | Transparent gloss film for production of in-mould labels



Properties

- Both side corona treated
- Specially designed antistatic properties
- Without primer (not coated)

Application

- Roll or sheet feeding printing processes
- For injection molding
- For molding into PP and PE containers

Parameters

| Thickness, mic | 57, 60 |
|---|----------------------------|
| Density, g/cm ³ | 0.91 |
| Yield, 60 μ, m²/kg | 19,28; 18,32 |
| Gloss, % | 85 |
| Side for printing / Side for inmoulding | Gloss / Matt |
| Treatment | 38 / 36 |
| Solvent based printing / UV printing | Yes / Yes, primer required |



Metallized films

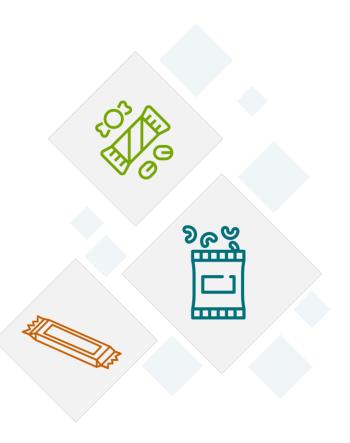
BIAXPLEN produces non-heat sealable and heat sealable metallized films with different barrier properties for production of flexible packaging of different types.

| Name | Descriprion | Thickness, µ | SIT, °C | OD | OTR | WTR | Production |
|----------|-----------------------------------|--------------------|---------|-----|-----|-----|------------|
| PMP.M | Plain both side treated | 15, 20, 30 | - | 2,2 | 100 | 1 | On request |
| HMIL.M | With longer surface tension | 20, 25 ,30, 35, 40 | 105 | 1,8 | 90 | 1 | Regular |
| HMHW.M | Low sealing intention temperature | 15, 20 | 75 | 1,8 | 100 | 1 | On request |
| HMPLB.M | Medium Barrier film | 18, 20 | 105 | 2,3 | 50 | 1 | Regular |
| HBV.M | High barrier film | 17.5 | 95 | 2,5 | 15 | 0.2 | Test |
| HOHMLB.M | Metallized pearl film | 30, 35 | 105 | 2.5 | 90 | 0,4 | Regular |

Metallized side is the aluminum as treated side of the film; SIT – sealing intention temperature ut/ut, "No" – means that this film is not heat sealable; OD – average kept optical density; OTR – oxygen transmission rate, cm3/m2/24h; WTR – water vapor transmission rate, g/m2/24h not higher that mentioned; UT – untreated film side.



PMP.M | Metallized, Plain, both side treated film



Properties

- Both side treated film
- Medium barrier properties
- Non-heat sealable

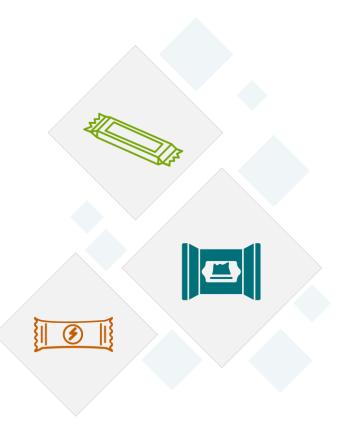
Parameters

| Thickness, mic. | 15, 20, 30 |
|---|-------------------|
| Optical density | 2,2 |
| COF, UT / UT | 0,3 |
| Surface tension, days | > 15 |
| OTR, cm3 / m2/ 24 h ~ | 100 |
| WTR, g/ m2 / 24 h ~ | 1 |
| All kinds of printing | Primer required |
| Dry lamination / Extrusion lamination | Yes / Yes |
| Hot melt glue coating / Cold seal coating for IIT side. | Yes / Yes |

- Packaging with Cold seal coating
- As the middle layer in triplex lamination
- Lamination and printing



HMIL.M Metallized, heat-sealable film



Properties

- Good barrier properties
- Long surface tension shelf-life
- High adhesion of metallized layer
- Good slip properties

Parameters

| Thickness, mic. | 20, 25, 30, 35, 40 |
|--|--------------------|
| Optical density | 1,8 |
| COF, UT / UT ~ | 0.3 |
| SIT, ° C | 105 |
| OTR, cm3 / m2/ 24 h | 90 |
| WTR, g/ m2 / 24 h | 1 |
| Lamination / Cold seal coating for UT side | Yes / Yes |
| All kinds of printing | Primer required |

- Flow-pack packaging production
- Lamination to duplex & triplex
- Cold seal glue coating onto UT film side
- Enhanced water-gas barrier properties for packaging



HOHMLB.M | Metallized, medium barrier, white-pearl, heat sealable film



Properties

- One side metallized 2nd side white pearl
- High yield, low-weight

Parameters

| Thickness, mic. | 30, 35 |
|--------------------------|--------|
| Weight, g/m ² | 24.5 |
| Optical density | 2,5 |
| SIT, ° C | 105 |
| OTR, cm3 / m2/ 24 h ~ | 90 |
| WTR, g/ m2 / 24 h ~ | 0.4 |
| Cold seal coating | Yes |
| Inline treatment UT | Yes |

- Flow pack
- Biscuits, Chocolates, Chips, Truffles, etc
- In structure of tray covering
- Wrapping Cup bouillon



2 Opaque films

BIAXPLEN produces different grades of opaque heat sealable film for production of different types of flexible packaging.

| Name | Descriprion | Thickness, µ | Density, g/cm³ | Transparency, % | SIT, ° c | Production |
|--------------|--|--------------------|----------------|-----------------|----------|------------|
| HOHL | White pearl, CS | 30, 35, 40 | 0.72 | 30÷40* | 105 | Regular |
| НОН | White pearl, both sides treated | 30, 35, 40 | 0.72 | 30÷40* | 105 | On request |
| нон w | White pearl low temperature welding | 30, 35, 40 | 0.72 | 30÷40* | 75 | Regular |
| HOCL | Pearl | 25 | 0.65 | 25÷50* | 105 | Regular |
| HWHL | Solid white film | 20, 30, 35 | 0.96 | 35÷50* | 105 | Regular |
| HOHG | White pearl film, both sides treated for CSR | 20, 30, 35 | 0.74 | 35÷50* | 105 | On request |
| HOSL | White pearl 1 side treated for CSR | 35 , 40, 50 | 0.72 | 25 | 105 | Test |



UT - untreated side of the film; SIT - sealing intention temperature UT/UT; COF - coefficient of friction UT/UT;

CSR – cold seal reclosable; CS - cold seal single time opening

^{* -} depends on the thickness

HOHL | White-pearl, heat sealable film



Properties

- Cavitated, high yield
- Protection against UV light
- High opacity, gloss and whiteness

Parameters

| Thickness, mic. | 30, 35, 40 |
|--------------------------------|------------|
| Density, g/cm ³ | 0,72 |
| Gloss, % | 80 |
| COF, UT / UT | 0,35 |
| SIT, ° C | 105 |
| Transparency, % | 30 – 40* |
| Solvent based printing | Yes |
| Lamination / Cold seal coating | Yes / Yes |

- Flow-pack packaging production
- Chocolate, Candies, Ice cream, etc
- With / without cold seal glue coating



HOHW | White-pearl film with wide temperature sealing range



Properties

- Cavitated, high yield
- Protection against UV light
- High opacity, gloss and whiteness film
- High speed heat sealability

Application

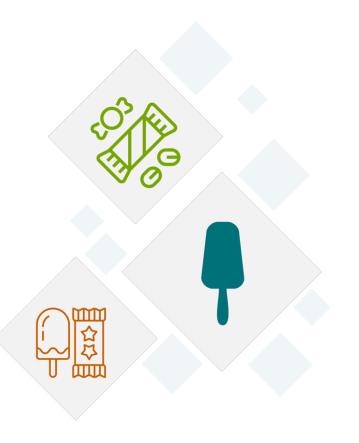
 Flow-pack packaging production: Candies, Ice-cream Cookies, Cracker

• Provides packaging speed up to + 40%

Parameters

| Thickness, mic. | 30, 35, 40 |
|----------------------------------|------------|
| Density, g/cm ³ | 0,72 |
| COF, UT / UT | 0,2 |
| SIT, ° C | 75 |
| Treatment | Corona |
| Solvent and water based printing | Yes |
| Lamination | Yes |

HOCL White-pearl film, very high yield



Properties

- Pearl, cavitated film
- Very high yield

Application

- Flexible packaging production
- Paper lamination

Parameters

| Thickness, mic. | 25 |
|-------------------------------|----------|
| Density, g/cm ³ | 0,65 |
| Weight, g/m ² 30 µ | 19,5 |
| SIT, ° C | 75 |
| Yield, m²/kg 30 μ | 51,3 |
| Transmission, % | 25 - 50* |
| Rigidity | Softer |
| Packs output, pcs | + 10 % |





HOHG

White-pearl, both side treated film for cold seal packaging



Properties

- High gloss and opacity
- Both side treated
- Without delamination of cavitated layer when open the packaging

Parameters

| Thickness, mic. | 40, 45, 50 | | | |
|----------------------------|------------|--|--|--|
| Density, g/cm ³ | 0,74 | | | |
| Transparency | 25-30* | | | |
| Film side treatment | Both | | | |
| Converting | | | | |
| Printing and lamination | Yes | | | |
| Cold seal coating | Yes | | | |

- Flow-pack packaging
- For CSR application
- For chocolate bars, ice-cream, etc.

HWHL | Solid white, heat- sealable film



Properties

- Outstanding whiteness
- Protection against UV light
- High opacity and gloss
- Low COF

Parameters

| 20, 30, 35 |
|------------|
| 0,96 |
| 0,35 |
| 105 |
| Yes / Yes |
| Yes |
| Yes |
| |

Application

• Flow-pack packaging production: Chocolate bars, Candy, Ice cream, Cookies, Cracker, Corn flakes



BIAXPLEN produces different grades of matt films to provide paper-look appearance for the packaging

| Name | Description | Thickness, µ | SIT, ° C | COF | Production |
|------|-------------------------------------|--------------|----------|------|------------|
| MGS | Non- heat sealable | 20, 30, 35 | No | 0.25 | Regular |
| MGPL | Heat sealable | 20 | 105 | 0.35 | Regular |
| MGR | Release film against cold seal glue | 18, 20 | No | 0.3 | Regular |
| MGFL | Heat sealable with high COF | 15, 20, 25 | 110 | 0.5 | Test |
| MGI | Low-matt appearance film | 18, 20 | No | 0.3 | Test |

COF - coefficient of friction, UT/UT

UT - untreated side of the film

SIT - sealing intention temperature matt/matt

COF - coefficient of friction matt/matt

MGS | Matt, non-heat sealable film



Properties

- Matt, silky appearance
- High haze, low gloss
- Low COF

Parameters

| Thickness, mic. | 20, 30, 35 |
|------------------------|------------|
| COF UT/ UT | 0.25 |
| SIT, °C | 130 |
| Haze, % | 70 |
| Solvent based printing | Yes |
| Lamination | Yes |

- Flow-pack packaging production
- Provide matt, paper like appearance for any kind of the packaging
- Uses as face film of packaging



MGPL | Matt, heat sealable film



Properties

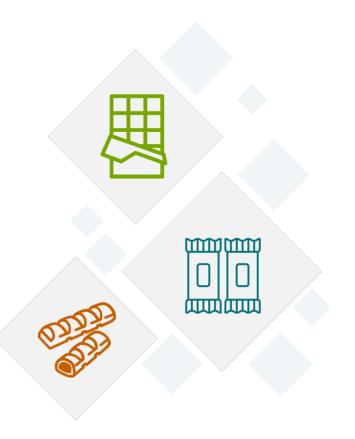
- Matt, silky appearance
- High haze, low gloss
- Low COF
- Heat sealable matt / matt side
- Overlap heat sealable

Parameters

| Thickness, mic. | 20 |
|----------------------------|------|
| Density, g/cm ³ | 0.91 |
| COF, UT/ UT | 0.35 |
| SIT, UT / UT, °C | 105 |
| Solvent based printing | Yes |
| Lamination | Yes |

- Производство упаковки Флоу Пак
- Придание упаковке матового, «бумажного» вида
- Применяется как лицевая пленка для упаковки
- Для производства «стоячих» пакетов

MGR | Matt, release film for production of packaging with cold seal coating



Properties

- Matt, silky appearance
- Release properties against CS latex glue
- High haze, low gloss
- Low COF

Parameters

| Thickness, mic. | 18, 20 |
|-------------------------------------|-----------|
| Density, g/cm ³ | 0.91 |
| Yield, m ² /kg | 61.1 |
| COF, UT / UT | 0.3 |
| Heat sealability | No |
| Solvent based printing / Lamination | Yes / Yes |
| Printable film side | Glossy |
| Release film side | Matt |

- Flow-pack packaging production
- Provide matt, paper-look appearance for any kind of the packaging
- Uses as face film of packaging
- Production of "Flow-Pack" for HFFS machines



Transparent heat sealable films

BIAXPLEN produces different grades of heat-sealable transparent film used for printing and lamination in flexible packaging industry.

| Name | Descriprion | Thickness, µ | SIT, ° c | COF | Production |
|---------|---|----------------------------|----------|------|-----------------|
| HGHL | Low COF film | 20, 30, 35 | 105 | 0.2 | On request |
| HGPL | Commonly used | 15, 20, 25, 30, 35, 38, 40 | 105 | 0.3 | Regular |
| HGP | Commonly used, both sides treated | 15, 20, 25, 30, 35, 40 | 105 | 0.3 | On request |
| HGSL | With a bit higher COF, for hot climate | 20 | 105 | 0.35 | On request |
| HGFL | High COF film | 20, 25, 30 | 105 | 0.45 | Regular |
| HGHW | With wide range temperature of heat sealing | 20, 25, 30 | 75 | 0.25 | On request |
| HGPL.PF | Commonly used. Phthalate-free | 15, 20, 25, 30, 35, 40 | 105 | 0.3 | On request NEW! |

SIT - sealing intention temperature ut/ut

COF - coefficient of friction Ut - untreated film side



HGPL | Transparent, heat sealable film for general application



Properties

- Wide temperature of heat sealing
- Medium coefficient of friction
- Good optical properties

Parameters

| Thickness, mic. | 15 - 40 |
|-------------------------------|---------|
| COF, UT/ UT | 0.3 |
| SIT, °C | 105 |
| Treatment | Corona |
| Solvent based printing | Yes |
| Lamination | Yes |
| Cold seal coating for UT side | Yes |

- Front and reverse printing
- Any kind of lamination processes
- Flow-pack packaging production
- For food and industrial goods



HGHL | Transparent, heat sealable film with low COF



Properties

- Wide range of heat sealing
- Both side low coefficient of friction
- Good optics

Parameters

| Thickness, mic. | 20, 30, 35 |
|-------------------------------------|------------|
| COF, UT / UT | 0.2 |
| COF, T / T | 0.2 |
| SIT, °C | 105 |
| Treatment | Corona |
| Solvent based printing / Lamination | Yes / Yes |
| Cold seal coating | NO |

- Front and reverse printing
- Any kind of lamination processes
- Flow-pack packaging production
- When enhanced slip properties are required for external and/or internal packaging side



HGHW | Transparent, wide heat sealing range film



Properties

- Both side low COF film
- Both side wide range heat sealing temperature

Parameters

| Thickness, mic. | 20, 25, 30 |
|-------------------------------------|------------|
| COF, both sides | 0.25 |
| SIT, UT / UT, °C | 75 |
| SIT, T / T, °C | 100 |
| Treatment | Corona |
| Solvent based printing / Lamination | Yes / Yes |
| For cold seal | No |

- Very high packaging speed
- For printing and lamination
- For overlap and tail sealing
- Provides up to + 40% increasing packaging speed compared with film with SIT=105°C





Transparent films

BIAXPLEN produces different grades of transparent films for food packaging.

| Name | Descriprion | Sealing | Thickness, µ | SIT, ° c | COF | Production |
|------|--|---------|----------------------------|----------|--------|------------|
| PGR | Release film for packs with cold seal | No | 15, 20, 25 | 0.25 | Corona | Regular |
| PGI | Improved release properties for CS application | No | 20, 25 | 0.25 | Corona | Project |
| HASL | Antifog | Yes | 20, 25, 30, 35 | 0,25 | Corona | Regular |
| ReG | Film for lamination (sachets) for PET substitution | No | 20, 25, 28, 30, 35, 40, 48 | 0,45 | Corona | Regular |
| ReS | Film for lamination (sachets) for PET substitution With high anti-static properties | No | 28 | 0,40 | Corona | On request |

COF - coefficient of friction

Ut - untreated film side



PGR

Release, transparent film



Properties

- High release properties
- Low COF
- Good optical properties

Parameters

| Thickness, mic. | 15, 20, 25 | | |
|------------------------|-------------------|--|--|
| COF, UT/ UT | 0,25 | | |
| SIT, °C | Non- sealable | | |
| Treatment | Corona | | |
| Release side | Untreated | | |
| Converting | | | |
| Solvent based printing | Yes | | |
| Lamination | Yes | | |

- Packaging with cold seal latex glue
- Any kind of printing and lamination processes



PGI

Improved release, transparent film



Properties

- High release properties
- Low COF
- Good optical properties
- Advanced unwind behavior in complex with pearlized laminated films

Parameters

| Thickness, mic. | 15 , 20, 25 | | |
|------------------------|--------------------|--|--|
| COF, UT / UT ~ | 0,25 | | |
| SIT, °C | None sealable | | |
| Treatment | Corona | | |
| Converting | | | |
| Solvent based printing | Yes | | |
| Lamination | Yes | | |

- Packaging with cold seal latex glue
- Any kind of printing and lamination processes



HASL Antifog, transparent, heat-sealable film



Properties

- Good antifog properties at +4C and higher
- Both side low COF
- Without coating

Parameters

| Thickness, mic. | 2035 |
|------------------------|------|
| COF, both side | 0.25 |
| SIT, both side, °C | 120 |
| Treatment side | Both |
| Antifog, not less | 7D |
| Antifog side | IN |
| Solvent based printing | Yes |

- Packing for salads, herbs, vegetables
- With and without printability
- Flow-pack on horizontal and vertical machines



ReG Transparent non-heat sealable film for lamination (sachets) for PET substitution



Properties

- High clarity and rigidity
- 100% recyclable with other polyolefin films

Application

- Multi-layer packaging production
- Suitable for printing and lamination
- Could be used for leads productions
- Could be used for sachets

Parameters

| Thickness, mic. | 20, 25, 28, 30, 35, 40, 48 |
|------------------|----------------------------|
| COF, UT / UT | 0,45 |
| SIT, °C | No |
| Treatment | Corona |
| Solvent printing | Yes |
| Lamination | Yes |

Competitors

PET films



ReS

Transparent non-heat sealable film for lamination (PET substitution) with high anti-static properties



Properties

- High anti-static properties
- High clarity
- 100% recyclable with other polyolefin films

Parameters

| Thickness, mic. | 28 |
|------------------|--------|
| COF, UT / UT | 0,40 |
| SIT, °C | No |
| Treatment | Corona |
| Solvent printing | Yes |
| Lamination | Yes |

Application

- Multi-layer packaging production (also with high speeds)
- Suitable for printing and lamination
- Could be used for leads productions
- Could be used for sachets

Competitors





➢ Non-food films

BIAXPLEN produces different grades of transparent films for industrial packaging.

| Name | Description | Thickness, µ | COF | Treatment | Production |
|-------|--|----------------------------|------|-----------|------------|
| PMD.M | Non- heat sealable, metallized | 30, 35 | 0.3 | Corona | Regular |
| MGT | Semi-matt, non-heat sealable film | 27 | 0.3 | Flame | Regular |
| PGA | For adhesive tapes | 2340 | 0.5 | Corona | Regular |
| PGA | For no-noise adhesive tapes | 2340 | 0.5 | Flame | Regular |
| MGD | Both sides matt | 35 | 0.35 | Corona | On request |
| PGD | Non- heat sealable, for decorative packaging | 20, 25, 28, 30, 35, 40, 48 | 0,45 | Corona | Regular |

COF - coefficient of friction

PMD.M | Metallized, Plain film



Properties

- Long time tension of metallized surface
- Low COF

Application

- Decorative packaging / overwrapping
- For "pockets" production

Parameters

| Thickness, mic. | 30, 35 |
|---|-----------------|
| Optical density | 1,8 |
| COF, UT / UT | 0,3 |
| Surface tension, days | > 30 |
| All kinds of printing | Primer required |
| Dry and Extrusion lamination | Yes/Yes |
| Hot melt and solvent based glue coating | Yes |



MGT | Semi-matt, non-heat sealable film



Properties

- Matt appearance
- High clarity level
- High antistatic properties
- Low COF

Parameters

| | MGS | MGT |
|----------------------------|--------|--------|
| Thickness, mic. | All | 27 |
| Density, g/cm ³ | 0,91 | 0.91 |
| COF, UT/ UT | 0,25 | 0.3 |
| Opacity, % | 70 | 25-35 |
| Gloss (matt side), % | 12 | 25-35 |
| Treated side | Gloss | Matt |
| Treatment | Corona | Corona |

Application

- Production of envelops with filmic "window"
- Adhesive coating onto the matt side
- To be used as decorative packaging for flower, inside decoration of gifts when paper-look is required

Competitors

- PET and Polystyrene films:
- DOW PROCITE 27
- MULTIPLASTICS EWF 2003



PGD

Transparent non-heat sealable film for decorative packaging



Properties

- High clarity
- 100% recyclable with other polyolefin grades

Application

- For printing and lamination
- Suitable for different kinds of decorative packaging and overwrapping

Parameters

| Thickness, mic. | 20, 25, 28, 30, 35, 40, 48 |
|------------------|----------------------------|
| COF, UT/ UT | 0,45 |
| SIT, °C | No |
| Treatment | Corona |
| Solvent printing | Yes |
| Lamination | Yes |

BIAXPLEN Technical Service

TECHNICAL ISSUES



Gianfranco Prota
Expert, Technical Service
+43 664 887 52242
protag@sibur-int.com

CLAIM PROCEEDING



Smirnova Nadezhda Chief Expert, Technical Service +7 (495) 733-93-18, 2609 ClientService@biaxplen.sibur.ru



Sosnitskaya Maria Specialist, Technical Service +7 (495) 733-93-18 ,2212 +7 (985) 217-04-34 ClientService@biaxplen.sibur.ru