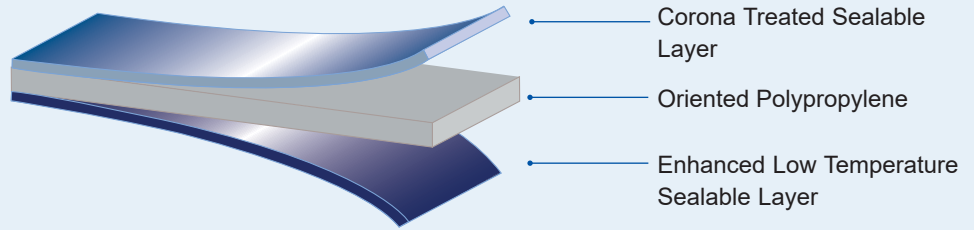


Propafilm™ REF

Technical Data Sheet

REF - Low Temperature Heat-Seal Film - Biaxially oriented co-extruded polypropylene (BOPP) film with a low temperature heat-seal surface to allow high speed form-fill-seal and overwrap packaging.



Features

- Heat-sealable on both sides
- Low heat-seal threshold on one surface
- Wide heat-seal range
- Excellent hot-tack
- Superior optical properties
- Excellent water vapour barrier
- Treated on one side for printing and laminating
- Exceptional puncture and impact-resistance

Applications

REF25/30 are suitable for use in high speed form-fill-seal and overwrap applications, giving excellent hot-tack and seal integrity. The film may be used as a single web or in lamination applications.

REF is suitable for most standard printing and lamination techniques.

Technical Properties (Typical Values)

| Property | Test Method | Test Conditions | Units | REF | |
|---|--------------------|---|----------------------------|------------------------|--------|
| Thickness | Innovia Films test | | micron | 25 | 30 |
| | | | gauge | 100 | 120 |
| Yield | Innovia Films test | | m ² /kg | 44.0 | 36.6 |
| | | | in ² /lb | 31000 | 25800 |
| | | | g/m ² | 22.7 | 27.3 |
| Permeability to: Water vapour | ASTM F 1249 | 38°C 90% RH 100°F 90% RH | g/m ² .24 hrs | 6.0 | 5.0 |
| | | | g/100 ² .24 hrs | 0.39 | 0.32 |
| Oxygen | ASTM F 1927 | 23°C 0% RH 73°F 0% RH | cc/m ² .24 hrs | 1800 | 1600 |
| | | | g/100 ² .24 hrs | 116 | 103 |
| Optical: Gloss | ASTM D 2457 | 45° | units | 185 | |
| Haze (wide angle) | ASTM D 1003 | 2.5° | % | 1.0-2.0 | |
| Coefficient of friction (film to film) | ASTM D 1894 | Dynamic | | 0.25-0.40 | |
| Corona Treatment | Innovia Films Test | | dynes/cm | >38 | |
| Tensile strength | ASTM D 882 | Strain rate 50% / min | MN/m ² | MD | 230 |
| | | | | TD | 192 |
| | | | lb/in ² | MD | 33300 |
| | | | | TD | 27500 |
| Elongation at break | ASTM D 882 | Strain rate 50% / min | % | MD | 90 |
| | | | | TD | 125 |
| Elasticity modulus (1% secant) | ASTM D 882 | Strain rate 10% / min | MN/m ² | MD | 2500 |
| | | | | TD | 2100 |
| | | | lb/in ² | MD | 361700 |
| | | | | TD | 303800 |
| Sealing Range | Innovia Films test | 2 secs; 0.10MN/m ² 2 secs; 15 psi | °C | 85-145 | |
| | | | °F | 185-295 | |
| | | | | untreated to untreated | |
| Seal Strength | Innovia Films test | 130°C; 2 secs; 0.10MN/m ² 265°F; 2 secs; 15 psi | g(f)/25mm/ in | >400 | |
| | | | | untreated to untreated | |
| Shrinkage | Innovia Films test | 60 secs at 130°C (265°F) | % | MD | 6.0 |
| | | | | TD | -1.0 |

MD Machine Direction TD Transverse Direction All properties are tested under standard laboratory conditions: 23 ± 2°C, 50 ± 5% RH, (73 ± 4°F; 50 ± 5% RH) unless otherwise stated.

Where relevant, tests are based on international testing standards.

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use our imagination...

Propafilm™ REF

Technical Data Sheet

Reel Specifications

Nominal Reel Diameters

| Film | Single Length (metres) | 12x Length (metres) |
|-------|------------------------|---------------------|
| REF25 | 1500 | 18000 |
| REF30 | 1250 | 15000 |

| Film | Single Length (feet) | 12x Length (feet) |
|--------|----------------------|-------------------|
| REF100 | 4900 | 59050 |
| REF120 | 4100 | 49200 |

Other reel lengths are available in multiples of the single length as per the core diameter listed below.

| Outside Diameter | 1x | 2x | 4x | 6x | 8x | 12x |
|----------------------|---------------|---------------|----------------|----------------|----------------|---------------|
| For 77mm / 3in core | 240mm 9½in | 330mm 13in | 450mm 18in | - | - | - |
| For 153mm / 6in core | - | - | 475mm 18¾in | 570mm 22½in | 650mm 25½in | 785mm 31in |

Corona Discharge Treatment

Corona discharge treatment is available on either the inner or outer surface of Propafilm™ REF. The treated surface is identified by a symbol on a label as below.

| Treated Surface | Ordering Code | Label Symbol |
|-----------------|---------------|--------------|
| Inside | I | |
| Outside | O | |

Film Storage and Handling

No special conditions are required for the storage of Propafilm™ REF but it is recommended that dry conditions at temperatures below 30°C (85°F) are employed to minimise any deterioration of surface discharge treatment level. Propafilm™ REF is suitable for use for 6 months from the date of delivery and stocks should be used in rotation. Films should be allowed to reach operating room temperatures for 24 hours before use.

Food Contact

Propafilm™ REF complies with the applicable EU and US legislation for most applications involving direct contact with foods. Full details are given on the food contact certificate. Customers intending to use Propafilm™ REF in a food contact application should request a copy of this document from Innovia Films. Details of compliance with food contact legislation in other countries are also available upon request.

Health & Safety Guidelines

For Health & Safety information, please refer to literature reference B190.

Additional Information

To maintain security of supply Innovia Films will use a qualified third party sheeting subcontractor as required.

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