

# Full polyolefin solutions for medical bags

Polyolefin grades for cast film and/or blown film extrusion



The LYB *Purell* and *Adflex* resins product portfolio includes grades intended to be used for cast film and/or blown film extrusion (air quenching and water quenching), meeting the high quality standards in healthcare applications. Those grades are characterized by excellent homogeneity and melt strength, providing high film quality, surface smoothness, planarity, aesthetics.

The film obtained with LYB *Purell* and *Adflex* resins can be used to produce different structures of film for medical bags.

The combination of the different grades allow a good balance of optical, physical and mechanical properties. All LYB resin for these applications are produced with a non-phthalate based catalytic system.

- **Purell HP572M** is a polypropylene homopolymer that offers excellent thermal stability and high scratch resistance.
- **Purell RP370M** and **Purell RP270G** are polypropylene random copolymers that exhibit clarity, softness, impact resistance, while also offering excellent sealing properties of the film structures.
- **Purell SP170G** is a polypropylene random copolymer that provides an excellent balance of mechanical softness and toughness, and optical properties (transparency). It also offers excellent sealing properties combined with great processability.
- **Super Soft** grade is a polypropylene heterophasic copolymer that combines transparency with high softness and high toughness at low temperatures.
- **Purell KT MR 07** is a PB-1 plastomer that is highly compatible with polypropylene. It offers outstanding softness, flexibility, elasticity and transparency while enhancing optical and mechanical properties when blended with other Purell polypropylene grades.

## Features and benefits

- Low gel content with outstanding optical and aesthetic properties
- Excellent sealing performance and heat weldability
- Excellent thermal stability
- Wide processing window
- Excellent balance of mechanical and optical properties

## Typical applications

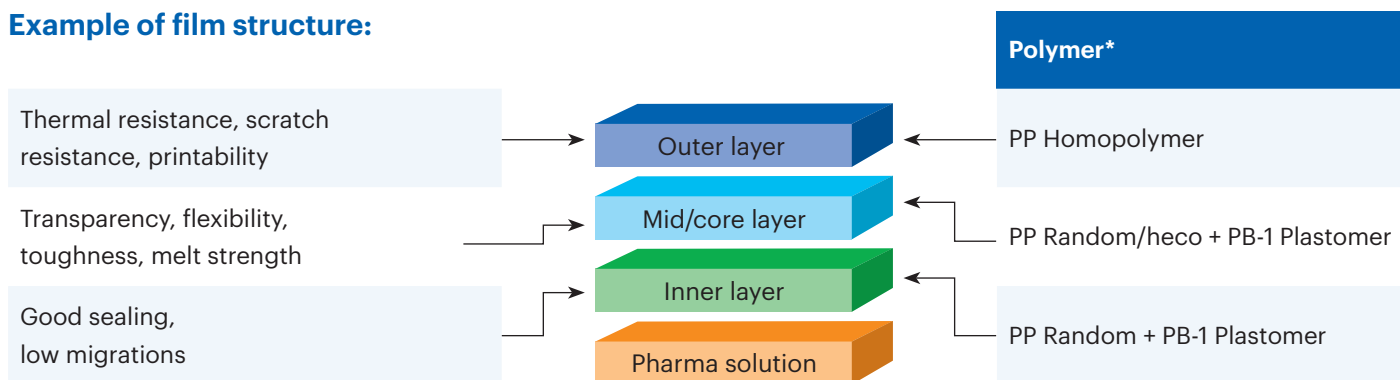


Medical and IV bags



Healthcare film applications for primary/secondary packaging

## Example of film structure:



(\*) Detailed information will be shared under confidential agreement.

## Resin properties

| Properties                      | Purell HP572M                     | Purell RP270G         | Purell RP370M         | Purell SP170G                   | Super Soft | Purell KT MR 07        |
|---------------------------------|-----------------------------------|-----------------------|-----------------------|---------------------------------|------------|------------------------|
| Type                            | HOMO                              | RACO                  | RACO                  | SUPER RACO                      | HECO       | PLASTOMER              |
| Key property                    | Thermal stability                 | Transparency, sealing | Transparency, sealing | Better transparency and sealing | Softness   | Softness, transparency |
| Regulatory                      | EP, USP, non phthalate, no tallow |                       |                       |                                 |            | USP, non phthalate     |
| MFR (@ 230°C/2.16kg) (g/10 min) | 7.5                               | 1.8                   | 8.0                   | 1.5                             | 6.0        | 1.3 (190°C)            |
| Tensile modulus (MPa)           | 1400                              | 1000                  | 850                   | 600                             | 200        | <10                    |
| Melting temperature (°C)        | 161                               | 144                   | 144                   | 136                             | 142        | -                      |
| Vicat softening point A/50 (°C) | 154                               | 136                   | 135                   | 126                             | 80         | -                      |

Note: Typical properties, not to be construed as specifications

Before using a product sold by a company of the LyondellBasell family of companies, users should make their own independent determination that the product is suitable for the intended use and can be used safely and legally. SELLER MAKES NO WARRANTY; EXPRESS OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY WARRANTY) OTHER THAN AS SEPARATELY AGREED TO BY THE PARTIES IN A CONTRACT. This product(s) may not be used in: (i) any U.S. FDA Class I, Health Canada Class I, and/or European Union Class I Medical Devices, without prior notification to Seller for each specific product and application; or (ii) the manufacture of any of the following, without prior written approval by Seller for each specific product and application: (1) U.S. FDA Class II, Health Canada Class II or Class III, and/or European Union Class II Medical Devices; (2) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned Medical Devices; (3) packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration; (4) tobacco related products and applications; (5) electronic cigarettes and similar devices; and (6) pressure pipe or fittings that are considered a part or component of a nuclear reactor. (iii) Additionally, the product(s) may not be used in: (1) U.S. FDA Class III, Health Canada Class IV, and/or European Class III Medical Devices; (2) applications involving permanent implantation into the body; (3) life-sustaining medical applications; and (4) lead, asbestos or MTBE related applications. All references to U.S. FDA, Health Canada, and European Union regulations include another country's equivalent regulatory classification. Users should review the applicable Material Safety Data Sheet before handling the product.

Purell and Adflex are trademarks owned or used by the LyondellBasell family of companies and are registered in the U.S. Patent and Trademark Office.

For more information, please contact us at [medical@lyb.com](mailto:medical@lyb.com) or visit [lyb.com](http://lyb.com)