

## Technical Data Sheet

### *Koattro* PB M 8510M



Polybutene-1

#### Product Description

Polybutene-1 grade *Koattro* PB M 8510M is a random copolymer of butene-1 with high ethylene content.

*Koattro* PB M 8510M is primarily used as a blend component in woodworking and assembly hot melt adhesive formulations. It can be used in combination with a wide variety of non-polar resins and waxes and maintains good cohesive strength of the HMA and higher Shear Adhesion Failure Temperature (SAFT).

*Koattro* PB M 8510M is also used to improve rheological properties in blends. It is highly compatible with polypropylene due to its similar structure. *Koattro* PB M 8510M is less compatible but still easily dispersible in blends with polyethylene. Its relatively slow kinetics of crystallization allow for an excellent wetting behavior. Its high shear-sensitive flow behavior means that it remains easily dispersible also in even more incompatible polymers like thermoplastic elastomers.

*Koattro* PB M 8510M can also be used in Spunbond applications offering reduced bonding temperature.

#### Regulatory Status

For regulatory compliance information, see *Koattro* PB M 8510M [Product Stewardship Bulletin \(PSB\) and Safety Data Sheet \(SDS\)](#).

This grade is not intended for medical and pharmaceutical applications.

|                          |                                                                                                             |
|--------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Status</b>            | Commercial: Active                                                                                          |
| <b>Availability</b>      | Africa-Middle East; Asia-Pacific; Australia and New Zealand; Europe; North America; South & Central America |
| <b>Application</b>       | Hot Melt Adhesives; Hygiene Nonwoven; Polymer Modifier                                                      |
| <b>Market</b>            | Compounding; Textile                                                                                        |
| <b>Processing Method</b> | Continuous Filament/Spinning; Fibers; Spunbond; Staple Fiber                                                |
| <b>Attribute</b>         | Extended Open Time; Good Adhesion; Good Thermal Stability                                                   |

| Typical Properties                                                                                               | Nominal Value | Units             | Test Method |
|------------------------------------------------------------------------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                                                                                  |               |                   |             |
| Melt Flow Rate, (190 °C/2.16 kg)                                                                                 | 45            | g/10 min          | ISO 1133-1  |
| Density                                                                                                          | 0.897         | g/cm <sup>3</sup> | ISO 1183-1  |
| Brookfield Viscosity, (190 °C)                                                                                   | 230600        | mPa·s             | ASTM D3236  |
| <b>Mechanical</b>                                                                                                |               |                   |             |
| Flexural Modulus                                                                                                 | 120           | MPa               | ISO 178     |
| Tensile Strength at Break                                                                                        | 25            | MPa               | ISO 8986-2  |
| Tensile Elongation at Break                                                                                      | 300           | %                 | ISO 8986-2  |
| <b>Thermal</b>                                                                                                   |               |                   |             |
| Melting Temperature                                                                                              |               |                   |             |
| Tm1                                                                                                              | 94            | °C                | ISO 11357-3 |
| Tm2                                                                                                              | 81            | °C                | ISO 11357-3 |
| Tm2 corresponds with the melting point of crystalline form 2 which is measured immediately after solidification. |               |                   |             |
| Tm2 corresponds with the melting point available for each batch on the Certificate of Analysis (COA).            |               |                   |             |

## Notes

These are typical property values not to be construed as specification limits.

## Processing Techniques

Recommended processing temperatures: 150 °C to 220 °C.

In cases where higher temperatures are required, please contact your appropriate technical contact for support.

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

## Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affect the quality of this product
- Keep material completely dry for good processing

## Further Information

### Health and Safety:

The resin is manufactured to the highest standards, but special requirements apply to certain applications such as food end-use contact and direct medical use. For specific information on regulatory compliance contact your local representative.

Workers should be protected from the possibility of skin or eye contact with molten polymer. Safety glasses are suggested as a minimal precaution to prevent mechanical or thermal injury to the eyes.

Molten polymer may be degraded if it is exposed to air during any of the processing and off-line operations. The products of degradation may have an unpleasant odor. In higher concentrations they may cause irritation of the mucus membranes. Fabrication areas should be ventilated to carry away fumes or vapours. Legislation on the control of emissions and pollution prevention should be observed.

The resin will burn when supplied with excess heat and oxygen. It should be handled and stored away from contact with direct flames and/or ignition sources. While burning, the resin contributes high heat and may generate a dense black smoke.

Recycled resins may have previously been used as packaging for, or may have otherwise been in contact with, hazardous goods. Converters are responsible for taking all necessary precautions to ensure that recycled resins are safe for continued use.

For further information about safety in handling and processing please refer to the Safety Data Sheet.

### Conveying:

Conveying equipment should be designed to prevent production and accumulation of fines and dust particles that are contained in polymer resins. These particles can under certain conditions pose an explosion hazard. Conveying systems should be grounded, equipped with adequate filters and regularly inspected for leaks.

**Storage:**

The resin is packed in 25 kg bags, octabins or bulk containers protecting it from contamination. If it is stored under certain conditions, i. e. if there are large fluctuations in ambient temperature and the atmospheric humidity is high, moisture may condense inside the packaging. Under these circumstances, it is recommended to dry the resin before use. Unfavorable storage conditions may also intensify the resin's slight characteristic odor.

Resin should be protected from direct sunlight, temperatures above 40°C and high atmospheric humidity during storage. Higher storage temperatures may reduce the storage time.

The information submitted is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. This information does not remove the obligation of the customer to inspect the material on arrival and notify us of any faults immediately. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

**Company Information**

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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