

M-CYCLOSE® rPELD 050 nat

Preliminary technical description

Product description

M-CYCLOSE® rPELD 050 nat:	PCR PE-LD for blown film extrusion, injection moulding, extrusion blow moulding
Applications:	Industrial packaging, waste bags, small hollow bottles, hollow parts, etc.
Suitable for:	Applications where high content of post consumer recyclates are needed. The material can be used pure or in blends.

Properties

	Standard	Unit	rPELD 050 nat
Recycling content	-	%	100
Appearance	-	-	green translucent
MFR (190 °C/2.16 kg)	ISO 1133	g/10 min	5.0
Density	ISO 1183	g/cm ³	0.93
Tensile modulus (MD)	ISO 527-3	MPa	70
Tensile modulus (TD)	ISO 527-3	MPa	99
Tensile strength (MD)	ISO 527-3	MPa	5
Tensile strength (TD)	ISO 527-3	MPa	4
Elongation at break (MD)	ISO 527-3	%	120
Elongation at break (TD)	ISO 527-3	%	100
Tear strength (MD)	ISO 6383	N/mm	6
Tear strength (TD)	ISO 6383	N/mm	19
Tensile modulus	ISO 527-1/-2	MPa	240
Tensile strength	ISO 527-1/-2	MPa	11
Elongation at break	ISO 527-1/-2	%	132
Charpy notched impact strength (+23°C)	ISO 179-1/1eA	kJ/m ²	57

(MD) = Machine direction; (TD) = Transversal direction

Remark: The mechanical values above according to ISO 527-3 and ISO 6383 were determined on 50 µm M-CYCLOSE® PELD 050 blown film samples, processed at 170 °C with a BUR of 1:3. Please note, that the given numbers above are typical values and not to be construed as specification.

The information given here is only valid for M-CYCLOSE® grades in their original packaging, sold by BIO-FED® and/or its authorized partners. M-CYCLOSE® grades shall be stored in dry, closed rooms in closed packaging in original state. For keeping the product properties, the material must be protected against direct sun and the temperature must not exceed 50 °C at any time during transport and storage. M-CYCLOSE® grades have a remaining shelf life of twelve (12) months at room temperature (23 °C) from the delivery date. We recommend that products made of M-CYCLOSE® grades shall be stored under same conditions. Please note that the use of M-CYCLOSE® might influence the mechanical and/or optical properties of the final part.

The information contained herein is based on our current knowledge and experience. A legally binding promise of certain characteristics or suitability for a concrete individual case cannot be derived from this information. The information supplied here is not intended to release processors and users from the responsibility of carrying out their own tests and inspections in each concrete individual case. BIO-FED®, M-VERA®, M-BIOBASE®, M-CYCLOSE®, AF-Eco®, AF-CirColor®, AF-CirCarbon® and AF-CirComplex® are registered brands of AKRO-PLASTIC GmbH.



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Preliminary processing guide



Processing recommendations

Safety precautions:

- Processing at a melt temperature not higher than 210 °C
- Process with adequate room ventilation

Handling:

- Delivered ready-to-use
- Keep package sealed until use
- Reseal opened package of the M-CYCLOSE® product directly after use

Drying:

- Recommended humidity below 0.1 %
- In case the M-CYCLOSE® product becomes too humid, drying at 80 °C for 4 h by using a vacuum dryer or purging with dry air (dew point -35 °C)

Delivery & storage:

- Supply in 25 kg foil-aluminum bags or 1 ton octabin with PE-inliner
- To be stored in dry place, protected from heat and direct sun radiation

Start-up:

- Purge with polyolefin with MFR = 4-7 g/10 min for ~10 minutes
- Lower the temperature to recommended settings
- Start transition while purging when the temperatures are within 10 °C of desired range

Processing equipment:

- Designed for standard processing machines

Interruption & shut-down:

- Never leave M-CYCLOSE® product in the extruder for a longer period, e.g. over night
- By interruption for a considerable time, slow down screw speed to 5 rpm approx.
- For a longer period, please purge with same polyolefin from start-up procedure

Processing temperatures

Grade	Nozzle	Zone 4	Zone 3	Zone 2	Zone 1
rPELD 050 nat	160–180 °C	160–180 °C	160–180 °C	150–170 °C	150–170 °C



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