

M-CYCLOSE® rPE 055 UBQ20 nat

Preliminary technical description

Product description

M-CYCLOSE® rPE 055 UBQ20 nat:	rHDPE from closures of beverage cartons with 20% PCR content from household-waste for injection moulding
Applications:	Consumer goods, boxes, technical parts etc.
Suitable for:	Injection moulded parts

Properties

	Standard	Unit	rPE 055 UBQ20 nat
Recycling content	-	%	>98
Appearance	-	-	dark grey
MFR (190 °C/2.16 kg)	ISO 1133	g/10 min	5.5
Density	ISO 1183	g/cm ³	0.99
Tensile modulus	ISO 527-1/-2	MPa	1,150
Yield strength	ISO 527-1/-2	MPa	19
Strain at yield	ISO 527-1/-2	%	9
Stress at break	ISO 527-1/-2	MPa	18
Strain at break	ISO 527-1/-2	%	10
Charpy unnotched (23°C)	ISO 179-1/1eU	kJ/m ²	38
Charpy notched (23°C)	ISO 179-1/1eA	kJ/m ²	4.1
Heat distortion temperature, HDT-B	ISO 75/B	°C	63

The information given here is only valid for M-CYCLOSE® grades in their original packaging, sold by BIO-FED® and/or its authorized partners. If M-CYCLOSE® grades are mixed in any capacity with foreign material, beside masterbatches recommended by BIO-FED®, BIO-FED® declines any further responsibility. 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
- Processing with adequate 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 2-4 h by using a vacuum dryer or purging with dry air (dew point -35 °C)

Delivery & storage:

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

Start-up:

- Change the temperature to recommended settings
- Start transition while purging the screw, when the temperatures are within 10 °C of desired range

Equipment:

- M-CYCLOSE® grades are designed for standard equipment

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, empty the barrel and reduce temperature by 50 °C (Please, do not forget to increase afterwards.)

Processing temperatures

Grade	Mould temp.	Nozzle	Zone 3	Zone 2	Zone 1
rPE 055 UBQ20 nat	20-40 °C	190-200 °C	180-190 °C	180-190 °C	170-180 °C

