

M·VERA® GP4001 (B0148)

Preliminary technical description

Product description

M·VERA® GP4001 (B0148):	Biodegradable polyester compound for extrusion and thermoforming
Applications:	Coffee capsules, rigid packaging etc.
Suitable for:	Thermoformed parts
Certification:	OK compost INDUSTRIAL (EN 13432, certified by TÜV AUSTRIA Belgium)

Properties

	Standard	Unit	GP4001 (B0148)
MVR (190 °C/2.16 kg)	ISO 1133	cm ³ /10 min	2–5
Density	ISO 1183	g/cm ³	1.44
Renewable content in the polymer	-	%	> 78
Tensile modulus	ISO 527-3 (1 mm/min)*	MPa	2,650
Tensile strength	ISO 527-3 (100 mm/min)*	MPa	34
Yield strength	ISO 527-3 (100 mm/min)*	MPa	34
Elongation at yield	ISO 527-3 (100 mm/min)*	%	3.1
Elongation at break	ISO 527-3 (100 mm/min)*	%	30
Dart-drop Impact Test Force_{max} @ 23 °C	ISO 6603-2 (4.4 m/s)	N	1,030
Dart-drop Impact Test Energy_{max} @ 23 °C	ISO 6603-2 (4.4 m/s)	J	3.7
Dart-drop Impact Test Deformation_{max} @ 23 °C	ISO 6603-2 (4.4 m/s)	mm	7.6
Dart-drop Impact Test Force_{max} @ 4 °C	ISO 6603-2 (4.4 m/s)	N	1,070
Dart-drop Impact Test Energy_{max} @ 4 °C	ISO 6603-2 (4.4 m/s)	J	2.7
Dart-drop Impact Test Deformation_{max} @ 4 °C	ISO 6603-2 (4.4 m/s)	mm	5.7

* in machine direction (MD); determined on 0.8 mm specimen

The information given here is only valid for M·VERA® grades in their original packaging, sold by BIO-FED® and/or its authorized partners. If M·VERA® grades are mixed in any capacity with foreign material, beside masterbatches recommended by BIO-FED®, BIO-FED® declines any further responsibility. M·VERA® 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·VERA® 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·VERA® grades shall be stored under same conditions. All M·VERA® products listed here can be colored with AF-Eco® masterbatches from AF-COLOR, also certified according to EN 13432. Please note that the use of AF-Eco® 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 220 °C
- Processing with adequate ventilation

Handling:

- Delivered with ready-to-use moisture content
- Keep package sealed until use
- Reseal opened package of the M-VERA® product directly after use

Drying:

- Recommended humidity below 0.1 %
- In case the M-VERA® 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-aluminium 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 = 6 g/10 min for ~10 minutes
- Lower the temperature to recommended settings
- Start transition while purging the screw, when the temperatures are within 10 °C of desired range

Equipment:

- Designed for standard extrusion lines

Interruption & shut-down:

- Never leave M-VERA® 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	Chill rolls	Die	Zone 4	Zone 3	Zone 2	Zone 1
GP4001 (B0148)	40–60 °C	170–190 °C	170–190 °C	170–190 °C	170–190 °C	170–190 °C

