

M-VERA® A5003 (B0162)

Technical description

Product description

M-VERA® A5003 (B0162):	Biodegradable polyester compound for film extrusion
Applications:	Agriculture films
Suitable for:	Mono- and multilayer films
Recommended thickness range:	20–50 µm
Certification:	OK compost INDUSTRIAL (EN 13432, certified by TÜV AUSTRIA Belgium)

Properties

	Standard	Unit	A5003 (B0162)
MVR 190 °C/2.16 kg	ISO 1133	cm ³ /10 min	2–5
Density	ISO 1183	g/cm ³	1.33
Tensile modulus (MD)	ISO 527-3	MPa	320
Tensile modulus (TD)	ISO 527-3	MPa	155
Tensile strength (MD)	ISO 527-3	MPa	30
Tensile strength (TD)	ISO 527-3	MPa	40
Elongation at break (MD)	ISO 527-3	%	450
Elongation at break (TD)	ISO 527-3	%	455
Tear strength (MD)	ISO 6383	N/mm	105
Tear strength (TD)	ISO 6383	N/mm	33

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

Remark: The mechanical values above were determined on 25 µm M-VERA® A5001 (B0090) blown film samples, processed at 165 °C with a BUR of 1:3, according to ISO 527. 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-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® and AF-Eco® are registered brands of AKRO-PLASTIC GmbH.



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Processing guide

Processing recommendations

Safety precautions:

- Processing at a melt temperature not higher than 200 °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:

- 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)
- Recommended humidity below 0.06 %

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

Extrusion equipment:

- Designed for standard extrusion lines
- Die gap: 0.5–1.6 mm
- Dual-lip air ring recommended, also IBC if possible
- Chilled air supply leads to more stable bubble on higher output rates

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	Die	Transition	Zone 4	Zone 3	Zone 2	Zone 1
A5003 (B0162)	150–170 °C	150–170 °C	155–175 °C	155–175 °C	155–175 °C	155–175 °C

