

M·VERA® A5002 (B0281)

Preliminary technical description

Product description

M·VERA® A5002 (B0281):	Biodegradable polyester compound for film extrusion
Applications:	Agriculture films
Suitable for:	Mono- and multilayer films
Recommended thickness range:	20–50 µm
Certification:	BIODEGRADABLE IN SOIL (EN 17033, certified by DIN CERTCO)

Properties

	Standard	Unit	A5002 (B0281)
MVR (190 °C/2.16 kg)	ISO 1133	cm ³ /10 min	3–5
Density	ISO 1183	g/cm ³	1.25
Tensile modulus (MD)	ISO 527-3	MPa	300
Tensile modulus (TD)	ISO 527-3	MPa	190
Tensile strength (MD)	ISO 527-3	MPa	23
Tensile strength (TD)	ISO 527-3	MPa	23
Elongation at break (MD)	ISO 527-3	%	420
Elongation at break (TD)	ISO 527-3	%	470
Tear strength (MD)	ISO 6383	N/mm	100
Tear strength (TD)	ISO 6383	N/mm	120

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

Remark: The mechanical values above were determined on 25 µm M·VERA® A5002 (B0281) blown film samples, processed at 145 °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.

Important note

BIO-FED does not guarantee the duration of the degradation process. The degradation can happen more quickly in very warm conditions, with high humus content and moisture from frequent irrigation, especially where the film has been weighed down with soil. Conversely, in more mineral soils with low soil activity combined with cooler conditions, e.g. in autumn/winter, the film will degrade more slowly. It may therefore be necessary to add additional weight to the middle of the film every few meters, which is what you do anyway in windy areas so that the film does not fly away. Pesticides can also change the rate of degradation: In particular, weed control in uncovered paths leads to faster degradation in the edge area.

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 six (6) 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 165 °C
- Process with adequate room ventilation
- Smoke may occur when melt temperature is high (e.g. due to glycerine content) - lower melt temperature will lead to reduced smoke generation

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 0.2 %
- 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 1 ton Bigbags 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

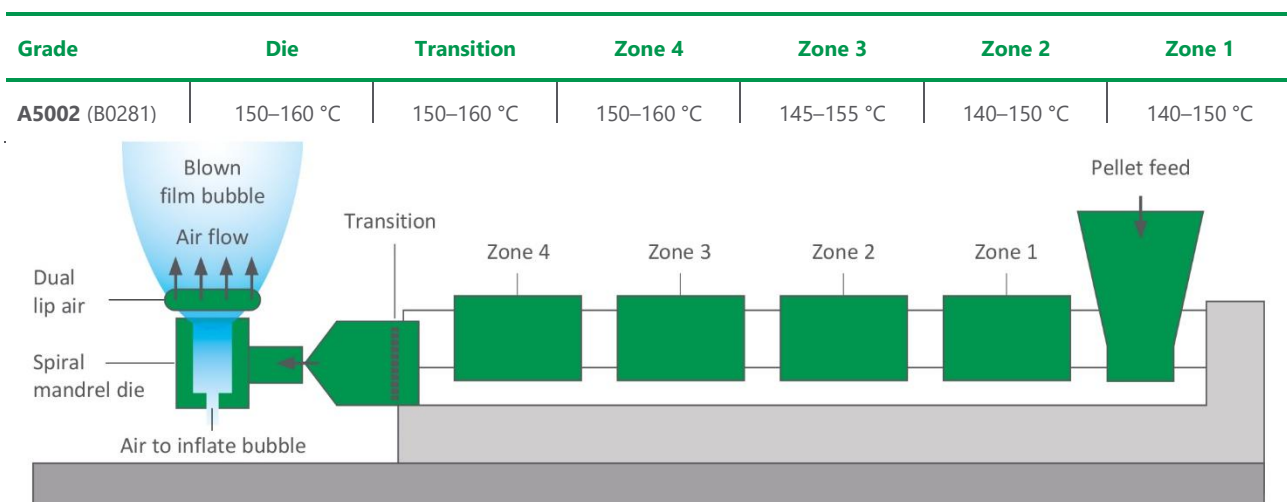
Equipment:

- 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



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