

# Typical properties of biomass-balanced M·VERA® polypropylene compounds

	Unit	M·VERA® PPH2000	M·VERA® PPH4000	M·VERA® PPH4001	M·VERA® PPC6000	M·VERA® PPH6000	M·VERA® PPH6001
<b>Food contact approval EU 10/2011</b>	-	√ <sup>d</sup>	√ <sup>d</sup>	√ <sup>d</sup>	√ <sup>d</sup>	√ <sup>d</sup>	√ <sup>d</sup>
<b>Certificates</b>	-	ISCC PLUS; REDcert <sup>2</sup>	ISCC PLUS; REDcert <sup>2</sup>	ISCC PLUS; REDcert <sup>2</sup>	ISCC PLUS; REDcert <sup>2</sup>	ISCC PLUS; REDcert <sup>2</sup>	ISCC PLUS; REDcert <sup>2</sup>
<b>Allocation factor<sup>a</sup></b>	%	100	100	100	90	100	100
<b>Density</b>	g/cm <sup>3</sup>	0.905	0.905	0.905	0.905	0.905	0.905
<b>MVR (230 °C/2.16 kg)</b>	cm <sup>3</sup> /10 min	3.5	490	21	3.9	13	55
<b>Tensile modulus<sup>b</sup></b>	MPa	1,700	1,540	1,370	1,350	1,550	1,650
<b>Tensile strength at yield<sup>b</sup></b>	MPa	37	35	33	25	34	35
<b>Elongation at yield<sup>b</sup></b>	%	7	9	10	6	9	9
<b>Charpy notched impact strength +23 °C<sup>c</sup></b>	kJ/m <sup>2</sup>	6	1.5	4	15	3.5	2
<b>Charpy notched impact strength -20 °C<sup>c</sup></b>	kJ/m <sup>2</sup>	n.a.	n.a.	n.a.	6.5	n.a.	n.a.
<b>Suitable for</b>	-	Extrusion, BOPP films	Fiber applications (e.g. melt blown)	Staple fibers, continous filaments, non-wovens	Injection moulding (e.g. luggage, bins, crates, technical parts)	Injection moulding (e.g. thin wall packaging)	Injection moulding (e.g. thin wall packaging and containers with excellent transparency)

<sup>a</sup> The allocation factor is the percentage of biomass allocated to the product (max. value: 100%) = percentage of replaced fossil based resources in the value chain. The allocation factor does not indicate how much biomass is actually in the product. It refers to the organic content (e.g. polymers) in the product. <sup>b</sup> ISO 527-1/-2 <sup>c</sup> ISO 179-1/1eA <sup>d</sup> available on request n.a. = not applicable

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-CirColor® and AF-CirCarbon® masterbatches from AF-COLOR, certified according to the sustainability standard ISCC PLUS and/or REDcert<sup>2</sup>. Furthermore AF-CirComplex® additive masterbatches are available. Please note that the use of masterbatches might influence the mechanical and/or optical properties of the final part.



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