

# METZOPLAST HDPE/MF

## Brief characteristic:

High density polyethylene, excellent chemical and oil resistance as well as high mechanical strength.

### Mechanical properties

Yield strength	ISO 527	MPa	24
Elongation at yield	ISO 527	%	9
Tensile strength at break	ISO 527	MPa	15
Elongation at break	ISO 527	%	> 300
Tensile Modulus	ISO 527	MPa	950
Impact str. at 23 °C (15 J Pendulum)	EN ISO 179/1eU	kJ/m <sup>2</sup>	155 (without break)
Impact str. notched at 23 °C (15 J Pendulum)	EN ISO 179/1eA	kJ/m <sup>2</sup>	15
Shore D hardness	ISO 868		65

### Thermal properties

Vicat softening point VST B 50	ISO 306	°C	79
Vicat softening point VST A 50	ISO 306	°C	
ISO/R75 process A	ISO 75	°C	
ISO/R75 process B	ISO 75	°C	
Continuous working temperature		°C	(1)
Thermal coefficient of linear expansion	ISO 7991	10 <sup>-5</sup> /K	15
Thermal conductivity	ISO 8302	W/Km	0,42
Specific heat		kJ/kgK	1,8

### Electrical properties

Dielectric constant (at 10 <sup>6</sup> Hz)	IEC 250		2,35
Specific volume resistivity	DIN EN 61340-5-1	Ωcm	> 10 <sup>15</sup>
Surface resistivity	DIN EN 61340-5-1	Ω	> 10 <sup>16</sup>
Dielectric strength	VDE 0303	kV/mm	17

### Other properties

Shrinkage		%	(3)
Flame resistance	DIN 4102	Classification B2	≥ 1 mm
	ISO 3795	sheet thickness 1,5 mm	30 mm/min
		sheet thickness 5,0 mm	9 mm/min
	UL 94	self rating	HB (2)
Density	ISO 1183	g/cm <sup>3</sup>	0,96

- (1) The continuous working temperature of this formulation depends on many different external factors like place of installation, environmental effects like chemicals etc..
- (2) To test on the finish parts by the user
- (3) The shrinkage behaviour depends also on the thermoforming process, design and final wall thickness distribution of the final product, mould temperature, material being used to build the mould and draw ratio etc. We recommend to do tests when constructing the mould

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