

## Methylmethacrylat-Acrylnitrilbutadienstyrol (MABS)

### General

MABS is the transparent version of ABS. ABS is normally opaque / milky in the uncolored state.

With the MABS, the proportion that is responsible for the turbidity of the material has been reduced. This also means that the tendency to shrink is lower than with ABS. The result is better adhesion to the printing plate.

The smell is unlike ABS better.

The plastic also fulfills an unavoidable requirement for materials in medical technology, namely that it can be sterilized.

#### advantageous

- less shrinkage than ABS
- High scratch resistance and hardness
- High toughness
- Good soundproofing properties
- Good chemical resistance
- Good resistance to stress cracking
- easy to weld

#### disadvantageous

- more expensive than ABS and PLA
- Overstretching leads to stress whitening

### Processing data

#### Printing temperature

210-260 °C

#### Heated bed temperature

80-110 °C

#### Drying temperature

90°C

#### Drying time

2-4 h

### Technical specifications

Shrinkage (ASTM D955)	0.4-0.6	%
MFR (ISO 1133)	25	g/10min
Yield stress (ISO 527-2/50)	54	MPa
Elongation at yield (ISO 527-2/50)	17	%
Elongation at break (ASTM D638)	20	%
Tensile modulus (ISO 527-2/1)	2540	MPa
Heat deflection temperature 1.8 MPa (ASTM D648)	83	°C
Vicat softening temperature A	-	°C
Thermal conductivity 23°C	-	W/(K*m)
Flammability (UL 94)	HB	
Density (ISO 1183)	1.09	g/cm <sup>3</sup>