

# ABS

TDS - Technical Data Sheet

## Material specification

Commercial name: 3ntr ABS

Raw material: ABS (acrylonitrile butadiene styrene )

Designation: 3d printing material

Supplier: Jdeal-Form srl

## Mechanical properties\*

| Type                        | Test Method | Imperial   | Metric   |
|-----------------------------|-------------|------------|----------|
| Tensile Modulus             | ASTM D638   | 223213 psi | 1539 Mpa |
| Yeld Point                  | ASTM D638   | 4235,1 psi | 29,2 Mpa |
| Tensile Elongation at Yeld  | ASTM D638   | 2.60%      | 2,60%    |
| Tensile Strenght Ultimate   | ASTM D638   | 3669,4 psi | 25,3 MPa |
| Tensile Elongation at Break | ASTM D638   | 5,52%      | 5,52%    |

## Thermal properties

| Type                    | Test Method | Imperial | Metric |
|-------------------------|-------------|----------|--------|
| VICAT Softening         | ISO 306B50  | 215,6°F  | 70°C   |
| Glass Transition (TG)   |             | 226,4°F  | 75°C   |
| Degradation Temperature |             | 554°F    | 300°C  |

## Physical characteristics

| Type                | Imperial             | Metric          |
|---------------------|----------------------|-----------------|
| Density             | 0,037 lbs/in         | 1,05gr/cm3      |
| Diameter            | 0,1122 in +/- 0,0019 | 2,85mm +/- 0,05 |
| Roundness Deviation | Max 3%               | Max 3%          |

## Colors available

|                 | <b>Black</b> | <b>White</b> | <b>Red</b> | <b>Green</b> | <b>Blue</b> | <b>Yellow</b> |  |  |
|-----------------|--------------|--------------|------------|--------------|-------------|---------------|--|--|
| <b>Shrink**</b> |              | <b>0,43%</b> |            |              |             |               |  |  |

*\*test parts have been printed according to XZ orientation, using 100% infill, 0.2mm layer thickness, 0.4mm nozzle on a production A2v2 printer.*

*\*\*150x150x15 test part, 25% infill, 0.2mm layers*

*The information supplied is supplied as informative: user should use it as material selection tool and/or comparison with available materials.*

*Printed part performance may differ from published value, depending on part orientation, printing parameters, environmental conditions.*

*User must validate suitability of the printed part and its lawful to be used as desired: no warranty can be made (express or implied) to any use of 3ntr materials.*

*We reserve the right to improve our polymer formulations and/or revise our technical data.*