



# Ultrasint® TPU01

Thermoplastic Polyurethane Powder for HP Jet Fusion Printers

Ultrasint® TPU01 is a multi-purpose material for application in Multi Jet Fusion. Parts produced with this material offer a balanced property profile with good flexibility, shock absorption and the possibility to print very fine structures with a high level of detail. In addition, the material is easy to print, and has good UV and hydrolysis resistance. Ultrasint® TPU01 passed skin sensitisation and cytotoxicity tests in accordance with ISO 10993-10 and ISO 10993-5., making it suitable for applications close to the human skin, e.g in the medical industry. Ultrasint® TPU01 is only processable in HP Multi Jet Fusion printers.

## Benefits at a Glance

- Elasticity and rebound
- Complex geometries
- High throughput

## Example Applications

- Sports and leisure
- Footwear
- Transportation Industry
- Jigs & Fixtures

## Material Properties

Hardness Shore A	88–90
Tensile strength (MPa)	9
Young's Modulus (MPa)	85
Elongation at Break (%)	280
Charpy Impact notched	no break
Rebound resilience (%)	63

## Application Example:

### Industrial tubes and pipes

- Water-tight down to 0.6mm wall thickness
- High burst pressure, e.g. 7.4 bar at 3mm wall thickness
- Good resistance to water and various chemicals
- Readily implemented material model allows for further part optimization via BASF Ultrasim® simulation and design services

