



# Perfactory<sup>®</sup> Materials

## E-Shell<sup>®</sup> 450 Series

EnvisionTEC's E-Shell 450 Series is a liquid photopolymer that produces strong, tough, water-resistant parts especially for applications in the hearing aid industries and is distinguished for rigidity and durability. They are tough, opaque, water- and perspiration-resistant and available in two different transparent versions. The E-Shell 450 Clear is the clearest 3D printing material currently on the market. E-Shell 451 Carbon Black is a fashionable shade that is ideal for high visibility applications such as custom in-ear monitors.

Material Properties	
Description	E-Shell <sup>®</sup> 450/451
Tensile Strength	40-48 MPa
Elongation at Break	2-4%
Tensile Modulus	2150-3250 MPa
Flex Strength	60-80 MPa
Flex Modulus	1200-1500MPa
Hardness, D Scale	82-85
Viscosity	320 cP @ 30°C

\*All data provided is preliminary data and must be verified by the individual user.

Recommended Machines
Desktop XL Plus, DDSP Plus, Perfactory <sup>®</sup> 3 DSP, Perfactory <sup>®</sup> 4 DSP, Perfactory <sup>®</sup> 4 DSP XL, Vida Hi-Res DSP, Micro Plus Advantage DSP

Applications
Hearing Aid

### Sample Usages

- » Hearing aid device manufacturing
- » Water resistant applications
- » High humidity environment applications
- » Durable concept models
- » Appearance models with minimal finishing
- » Tough functional prototypes
- » RTV patterns



E-Shell 450 Clear



E-Shell 451 Carbon Black

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