# Polyurethane (PU) tooling materials

## Low Density

| | | BP80* | BP150 | BP240 | BP350 | BP450 |
|---|---|---|---|---|---|---|
| **Application recommendations** | Master models | | | ✓ | ✓ | ✓ |
| | Jigs & fixtures | | | | ✓ | ✓ |
| | Prototype models | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Automotive modelling | | | ✓ | ✓ | ✓ |
| | Decorative arts & crafts | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Film & theatre props | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Foundry patterns and pattern plates | | | ✓ | ✓ | ✓ |
| | Production tools and plugs for GRP/FRP | | | | | ✓ |
| **Key properties** 1 - good 2 - very good 3 - excellent | Surface finish | ● | ● | ● | ●● | ●● |
| | Dimensional stability | ●● | ●● | ●● | ●● | ●● |
| | Machinability | ●●● | ●●● | ●●● | ●●● | ●●● |
| | Low dust | ●● | ●● | ●●● | ●●● | ●●● |
| **Technical information** | Colour | CREAM | LIGHT GREEN | PEACH | APRICOT | ORANGE |
| | Deflection temperature (Tg) °C | 100 | 76 | 79 | 72 | 70 |
| | Coefficient of thermal expansion (CTE) °C | 80 | 65 | 65 | 60 | 52 |
| | Density kg/m³ | ca. 80 | ca. 150 | ca. 240 | ca. 350 | ca. 450 |
| | Hardness shore D | N/A | 9 | 23 | 35 | 40 |
| | Compressive strength Mpa | 0.7 | 1.6 | 3.6 | 7 | 9.5 |
| | Flexural strength Mpa | 1.05 | 2.2 | 5.1 | 9 | 10 |
| | Board dimensions mm | 2500 x 1200 | 2000 x 1000 | 2000 x 1000 | 2000 x 1000 | 1500 x 500 |
| | Thickness mm | 50*, 100, 150*, 200 | | | | 50, 100, 150*, 200* |
| | Recommended adhesives | BB370, BB470 | | | | |

* This material or thickness is made to order.

Data shown is indicative. Product testing should be carried out to confirm suitability.

# Polyurethane (PU) tooling materials

## Medium Density

| | | BP600 | BP700 | BP701 | BP750 | BP850 |
|---|---|---|---|---|---|---|
| **Application recommendations** | Master models | ✓ | ✓ | | | |
| | Prototype models | ✓ | ✓ | | | |
| | Automotive modelling | ✓ | ✓ | | ✓ | ✓ |
| | Vacuum forming & thermoforming | ✓ | ✓ | | ✓ | ✓ |
| | Jigs & fixtures | ✓ | ✓ | | ✓ | |
| | Foundry patterns & pattern plates | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Reactive Injection Moulding (RIM) | | ✓ | | | |
| | Architectural models | ✓ | ✓ | | | |
| | Film & theatre props | ✓ | | | | |
| | Decorative arts & crafts | ✓ | ✓ | | | |
| **Key properties** 1 - good 2 - very good 3 - excellent | Surface finish | ●● | ●●● | ●●● | ●●● | ●●● |
| | Dimensional stability | ●● | ●● | ●●● | ●●● | ●●● |
| | Machinability | ●●● | ●●● | ●● | ●● | ●● |
| | Low dust | ●●● | ●●● | ●●● | ●●● | ●●● |
| **Technical information** | Colour | IVORY | BROWN | BROWN | AQUA-MARINE | GREY |
| | Deflection temperature (Tg) °C | 67 | 70 | 94 | 91 | 94 |
| | Coefficient of thermal expansion (CTE) °C | 40 | 45 | 40 | 40 | 42 |
| | Density kg/m³ | ca. 600 | ca. 700 | ca. 700 | ca. 750 | ca. 850 |
| | Hardness shore D | 65 | 70 | 72 | 73 | 76 |
| | Compressive strength Mpa | 30 | 35 | 44 | 53 | 59 |
| | Flexural strength Mpa | 30 | 25 | 40 | 43 | 52 |
| | Board dimensions mm | | | 1524 x 608 | | |
| | Thickness mm | 50, 75, 100 150, 200 | 50, 75, 100 150, 200 | 50, 75, 100, 150, 200 | 50, 75, 100 | 50, 75, 100 |
| | Recommended adhesives | | | BB470, BB551, BB580 | | |
| | Recommended repair paste | | | 879 | | |

Data shown is indicative. Product testing should be carried out to confirm suitability.

# Polyurethane (PU) tooling materials

## High Density

| | | BP1100 | BP1200 | B1250 | BP1400 | BP1404 | BP1700 |
|---|---|---|---|---|---|---|---|
| **Application recommendations** | Automotive modelling | ✓ | ✓ | ✓ | | | |
| | Vacuum forming & thermoforming | ✓ | ✓ | ✓ | | ✓ | ✓ |
| | Jigs & fixtures | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Hammer or metal forming | | ✓ | ✓ | | ✓ | ✓ |
| | Foundry patterns & pattern plates | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Core boxes | | ✓ | ✓ | ✓ | ✓ | |
| | Reactive Injection Moulding (RIM) | | ✓ | ✓ | | ✓ | ✓ |
| **Key properties** 1 - good 2 - very good 3 - excellent | Surface finish | ●●● | ●●● | ●●● | ●●● | ●●● | ●●● |
| | Dimensional stability | ●●● | ●●● | ●●● | ●● | ●●● | ●●● |
| | Machinability | ●●● | ●●● | ●●● | ●● | ●●● | ●● |
| | Abrasion resistance | - | ●●● | ●●● | ●●● | ●●● | ●●● |
| **Technical information** | Colour | IVORY | RED | EMERALD GREEN | COBALT BLUE | GREEN | DARK BLUE |
| | Deflection temperature (Tg) °C | 85 | 65 | 85 | 96 | 80 | 130 |
| | Coefficient of thermal expansion (CTE) °C | 45 | 50 | 80 | 46 | 80 | 39 |
| | Density kg/m³ | ca. 1100 | ca. 1200 | ca. 1250 | ca. 1400 | ca. 1400 | ca. 1785 |
| | Hardness shore D | 84 | 83 | 85 | 85 | 85 | 93 |
| | Compressive strength Mpa | 55 | 80 | 75 | 104 | 80 | 125 |
| | Flexural strength Mpa | 50 | 85 | 87 | 107 | 77 | 85 |
| | Board dimensions mm | 1524 x 608 | 1000 x 500, 1509 x 605 | 1000 x 500, 1515 x 608 | 1000 x 500, 1515 x 608 | 1000 x 500, 1515 x 608 | 1000 x 500 |
| | Thickness mm | 50, 75, 100 | | | | | |
| | Recommended adhesives | BB475, BB551, BB580 | - | BB425, BB551, BB580 | | | - |
| | Recommended repair paste | 879 | - | BB425 | | | - |

Data shown is indicative. Product testing should be carried out to confirm suitability.