At DSM Additive Manufacturing, we draw on over 25 years of experience in 3D printing technologies, performance materials and deep application expertise to help manufacturers rethink the way they design products to manufacture tomorrow. Our goal is to unlock the full potential of additive manufacturing and help accelerate the adoption of 3D printing, creating brighter lives for all through both sustainable high-performance materials and processes.

As additive manufacturing evolves from a prototyping technology into a mainstream manufacturing technology, the parts themselves - the applications - come under increasing scrutiny. Whether these are medical prostheses, trainer insoles or car parts, they all have specific requirements - which in turn drive the quest for the right materials.

Materials strong and rigid, or soft and flexible, DSM Additive Manufacturing has a breadth of materials to meet a variety of application needs – with more in development.
### PP-LIKE AND FLEXIBLE

**Somos® 9120**  
Superior chemical resistance & fatigue properties, strong memory retention  
Automobile components, electrical housings, medical products  
Viscosity (cPs @ 30°C) | 450 | 65  
Viscosity (cPs @ 25°C) | 1,350 | 31  
Tensile Modulus (MPa) | 20% @ Yield | 51  
Tensile Strength (MPa) | 7.5% @ Break | 26  
Elongation | - | -  
Izod Impact Notched (J/m) | - | -  
Heat Deflection Temperature @ 0.46 MPa (°C) | - | -  
Heat Deflection Temperature @ 1.81 MPa (°C) | - | -  
Material Properties/Characteristics | - | -  
Key Application Areas | - | -

**Somos® Momentum**  
High accuracy, color facilitates inspection of feature detail & quality  
Footwear tooling  
Viscosity Photo-speed | 340 | 64  
Viscosity (E10 mJ/cm²) | 2,510 | 37  
Tensile Modulus (MPa) | 7.5% @ Break | 26  
Tensile Strength (MPa) | 41 | -  
Elongation | - | -  
Izod Impact Notched (J/m) | - | -  
Heat Deflection Temperature @ 0.46 MPa (°C) | - | -  
Heat Deflection Temperature @ 1.81 MPa (°C) | - | -  
Material Properties/Characteristics | - | -  
Key Application Areas | - | -

### ABS-LIKE

**Somos® GP Plus 14122**  
Water resistant, low viscosity, extremely accurate, excellent humidity resistance  
Functional prototypes, low volume production parts  
Viscosity Photo-speed | 340 | 64  
Viscosity (E10 mJ/cm²) | 2,510 | 37  
Tensile Modulus (MPa) | 7.5% @ Break | 26  
Tensile Strength (MPa) | 41 | -  
Elongation | - | -  
Izod Impact Notched (J/m) | - | -  
Heat Deflection Temperature @ 0.46 MPa (°C) | - | -  
Heat Deflection Temperature @ 1.81 MPa (°C) | - | -  
Material Properties/Characteristics | - | -  
Key Application Areas | - | -

**Somos® ProtoGen 18420**  
Superior chemical resistance, high tolerance to broad range of temperatures & humidity  
Applications that demand accurate RTV patterns, humidity & temperature resistant parts  
Viscosity Photo-speed | 350 | 69  
Viscosity (E10 mJ/cm²) | 2,250 | 43  
Tensile Modulus (MPa) | 12% @ Break | 21  
Tensile Strength (MPa) | 46 | -  
Elongation | - | -  
Izod Impact Notched (J/m) | - | -  
Heat Deflection Temperature @ 0.46 MPa (°C) | - | -  
Heat Deflection Temperature @ 1.81 MPa (°C) | - | -  
Material Properties/Characteristics | - | -  
Key Application Areas | - | -

**Somos® WaterShed Black**  
Easy to use & fast processing with minimal finishing, truer black material off the machine, superior moisture resistance  
Black ABS-like models & prototypes, general purpose prototyping, master patterns  
Viscosity Photo-speed | 260 | 93  
Viscosity (E10 mJ/cm²) | 2,770 | 50  
Tensile Modulus (MPa) | 15.5% @ Break | 25  
Tensile Strength (MPa) | 49 | -  
Elongation | - | -  
Izod Impact Notched (J/m) | - | -  
Heat Deflection Temperature @ 0.46 MPa (°C) | - | -  
Heat Deflection Temperature @ 1.81 MPa (°C) | - | -  
Material Properties/Characteristics | - | -  
Key Application Areas | - | -

### TOUGH AND STRONG

**Somos® EvoLVe 128**  
Fast processing, easy finishing, high durability, accuracy & dimensionally stable  
Jigs & fixtures, snap-fit designs, functional prototypes  
Viscosity Photo-speed | 380 | 95  
Viscosity (E10 mJ/cm²) | 2,964 | 57  
Tensile Modulus (MPa) | 11% @ Break | 39  
Tensile Strength (MPa) | 50 | -  
Elongation | - | -  
Izod Impact Notched (J/m) | - | -  
Heat Deflection Temperature @ 0.46 MPa (°C) | - | -  
Heat Deflection Temperature @ 1.81 MPa (°C) | - | -  
Material Properties/Characteristics | - | -  
Key Application Areas | - | -

**Somos® Next**  
Highly durable, superior strength, exceptionally versatile, thermoplastic-like performance, look & feel  
Functional end-use performance prototypes, connectors & electronic covers, automotive housings  
Viscosity Photo-speed | 1,000 | 67  
Viscosity (E10 mJ/cm²) | 2,430 | 42  
Tensile Modulus (MPa) | 9% @ Break | 50  
Tensile Strength (MPa) | 50 | -  
Elongation | - | -  
Izod Impact Notched (J/m) | - | -  
Heat Deflection Temperature @ 0.46 MPa (°C) | - | -  
Heat Deflection Temperature @ 1.81 MPa (°C) | - | -  
Material Properties/Characteristics | - | -  
Key Application Areas | - | -

**Somos® DMK-SL 100**  
High feature detail, withstands extreme autoclave process temperatures utilized in composites manufacturing  
Intricate & hollow composite parts, transportation ducts, pipes & conduits, robotic components  
Viscosity Photo-speed | 1,500 | 92  
Viscosity (E10 mJ/cm²) | 2,410 | 45  
Tensile Modulus (MPa) | 20% @ Break | 66  
Tensile Strength (MPa) | 41 | -  
Elongation | - | -  
Izod Impact Notched (J/m) | - | -  
Heat Deflection Temperature @ 0.46 MPa (°C) | - | -  
Heat Deflection Temperature @ 1.81 MPa (°C) | - | -  
Material Properties/Characteristics | - | -  
Key Application Areas | - | -

**Somos® Taurus**  
Superior strength & durability, heat tolerance up to 90°C, excellent surface quality & isotropy  
Functional prototyping & end-use applications, automotive parts, low volume connectors for electronics  
Viscosity Photo-speed | 350 | 111  
Viscosity (E10 mJ/cm²) | 2,310 | 47  
Tensile Modulus (MPa) | 24% @ Break | 48  
Tensile Strength (MPa) | 73 | -  
Elongation | - | -  
Izod Impact Notched (J/m) | - | -  
Heat Deflection Temperature @ 0.46 MPa (°C) | - | -  
Heat Deflection Temperature @ 1.81 MPa (°C) | - | -  
Material Properties/Characteristics | - | -  
Key Application Areas | - | -

### HIGH-TEMP AND COMPOSITE

**Somos® ProtoTherm 12120**  
High temperature resistance up to 121°C, dimensional stability in high humidity, precise accuracy for small details  
High-temperature fluid flow analysis, functional prototypes requiring heat & humidity resistance  
Viscosity Photo-speed | 550 | 63  
Viscosity (E10 mJ/cm²) | 3,250 | 77  
Tensile Modulus (MPa) | 4.5% @ Break | 17  
Tensile Strength (MPa) | 126 | N/A  
Elongation | - | -  
Izod Impact Notched (J/m) | - | -  
Heat Deflection Temperature @ 0.46 MPa (°C) | - | -  
Heat Deflection Temperature @ 1.81 MPa (°C) | - | -  
Material Properties/Characteristics | - | -  
Key Application Areas | - | -

**Somos® PerFORM**  
Rigid, high strength, excellent detail resolution, high heat tolerance  
Electrical casings, automotive housings  
Viscosity Photo-speed | 1,000 | 80  
Viscosity (E10 mJ/cm²) | 9,800 | 80  
Tensile Modulus (MPa) | 1.2% @ Break | 20  
Tensile Strength (MPa) | 268 | 119  
Elongation | - | -  
Izod Impact Notched (J/m) | - | -  
Heat Deflection Temperature @ 0.46 MPa (°C) | - | -  
Heat Deflection Temperature @ 1.81 MPa (°C) | - | -  
Material Properties/Characteristics | - | -  
Key Application Areas | - | -

**Somos® PerFORM Reflect**  
Ready-to-use material for PIV wind tunnel testing & laser imaging, saves up to 30% post treatment, improved surface quality  
Wind tunnel aerodynamic testing, velocity measurements in water flows, high-temperature testing, electrical casings, automotive housings  
Viscosity Photo-speed | 1,100 | 93  
Viscosity (E10 mJ/cm²) | 10,135 | 64  
Tensile Modulus (MPa) | 0.79% @ Break | 17  
Tensile Strength (MPa) | 276 | 122  
Elongation | - | -  
Izod Impact Notched (J/m) | - | -  
Heat Deflection Temperature @ 0.46 MPa (°C) | - | -  
Heat Deflection Temperature @ 1.81 MPa (°C) | - | -  
Material Properties/Characteristics | - | -  
Key Application Areas | - | -

* Values for materials that have been thermally post-cured.  
All listed products will function on any 355 nm SL system.  
Values are indicative, and final results depend on machine and processing parameters.
### SLA, DLP

<table>
<thead>
<tr>
<th>Key Benefits</th>
<th>Applications</th>
<th>Appearance</th>
<th>Viscosity</th>
<th>Photo-speed</th>
<th>Tensile Modulus (MPa)</th>
<th>Tensile Strength (MPa)</th>
<th>Elongation</th>
<th>Izod Impact Notched (J/m)</th>
<th>Heat Deflection Temperature @ 0.46 Mpa (°C)</th>
<th>Heat Deflection Temperature @ 1.81 Mpa (°C)</th>
<th>Material Properties/Characteristics</th>
<th>Key Application Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low viscosity, antimony free, strong green strength, dimensionally stable, minimal ash residue after burnout</td>
<td>High-end alloy castings</td>
<td>Clear</td>
<td>125</td>
<td>68</td>
<td>3,770</td>
<td>53 @ Break</td>
<td>2.3% @ Break</td>
<td>22</td>
<td>58</td>
<td>53</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Dimensionally stable, accurate, fast processing, good clarity, excellent water &amp; chemical resistance, easy to use &amp; finish</td>
<td>Highly detailed parts with superior clarity &amp; water resistance, fluid flow analysis, duct work, lenses</td>
<td>Clear</td>
<td>260</td>
<td>54</td>
<td>2,770</td>
<td>50</td>
<td>15.5% @ Break</td>
<td>25</td>
<td>50</td>
<td>49</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Meets high level of detail required in medical &amp; dental industries, passed ISO 10993-5 Cytotoxicity, ISO 10993-10 Irritation &amp; Sensitization &amp; USP Class VI testing</td>
<td>Small run, customized, non-implantable limited body contact (&lt;24hr) medical &amp; dental applications, anatomical models, surgical guides</td>
<td>Clear</td>
<td>260</td>
<td>54</td>
<td>2,770</td>
<td>50 @ Break</td>
<td>15.5% @ Break</td>
<td>25</td>
<td>50</td>
<td>49</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Colorless, fast cure, extraordinary optical clarity, superior moisture resistance, easy to use &amp; finish</td>
<td>Fluid flow analysis, concept &amp; functional models, automotive lenses, bottles, light pipes</td>
<td>Clear</td>
<td>165</td>
<td>47</td>
<td>2,880</td>
<td>56 @ Break</td>
<td>7.5% @ Break</td>
<td>25</td>
<td>47</td>
<td>47</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Fast printing, general purpose resin offering a balance of flexibility and stiffness for general and functional prototypes</td>
<td>General and functional prototyping resin, semi-flexible applications, applications with detailed features, fluid flow analysis</td>
<td>Opaque</td>
<td>1,450</td>
<td>22</td>
<td>465</td>
<td>20.4</td>
<td>42% @ Break</td>
<td>70</td>
<td>N/A</td>
<td>N/A</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th><strong>Polymer</strong></th>
<th><strong>Key Benefits</strong></th>
<th><strong>Applications</strong></th>
<th><strong>Appearance</strong></th>
<th><strong>Tensile Strength (MPa)</strong></th>
<th><strong>Tensile Modulus (MPa)</strong></th>
<th><strong>Elongation at Break (%)</strong></th>
<th><strong>Heat Deflection Temperature @ 0.45 MPa (°C)</strong></th>
<th><strong>Heat Deflection Temperature @ 1.80 MPa (°C)</strong></th>
<th><strong>Hardness (Shore D)</strong></th>
<th><strong>Material Properties/Characteristics</strong></th>
<th><strong>Key Application Areas</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Polyamide Filaments</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Novamid® AM4030 FR (F)</td>
<td>Non halogenated fire retardant PA6/66</td>
<td>UL Blue Card certified, V0 @ 1.6 &amp; 3.2mm, V2 @ 0.85mm, open platform solution, easy to print</td>
<td>Electric &amp; electronic connectors &amp; enclosures, lighting enclosures, automotive connectors</td>
<td>Natural</td>
<td>50</td>
<td>3,300</td>
<td>7</td>
<td>TBD</td>
<td>TBD</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Novamid® ID1030</td>
<td>PA6/66</td>
<td>Easy to print, high inter-layer strength, excellent mechanical properties up to 125°C</td>
<td>Jigs &amp; fixtures, functional prototyping</td>
<td>Green, White</td>
<td>45.5</td>
<td>2,300</td>
<td>&gt;50</td>
<td>84</td>
<td>51</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Novamid® ID7030 CF10</td>
<td>10% carbon fiber reinforced PA6/66</td>
<td>Same print speed as unreinforced plastics, low warpage compared to unfilled PA &amp; ABS</td>
<td>Automotive brackets, structural jigs &amp; fixtures, sports gear, medical braces &amp; prosthetics</td>
<td>Black</td>
<td>110</td>
<td>7,570</td>
<td>3</td>
<td>184</td>
<td>153</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Novamid® ID1070</td>
<td>PA6</td>
<td>Optimized for ductility &amp; stiffness, high inter-layer strength, temp resistant up to 150°C, suitable for harsh environments</td>
<td>Automotive air intake parts, ski binders</td>
<td>Black, White</td>
<td>47.5</td>
<td>2,590</td>
<td>&gt;50</td>
<td>104</td>
<td>54</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Flexible Thermoplastic Copolyester (TPC) Filaments</strong></td>
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</tr>
<tr>
<td>Arnitel® ID2045</td>
<td>TPC</td>
<td>Highly elastic bio-based with Shore D34, 2x faster printer vs. other TPCs, high UV &amp; chemical resistance, natural filament passes ISO 10993-10, ISO 10993-5 &amp; USP class VI tests</td>
<td>Shoe insoles, midsoles, protective sports equipment, earbuds, watches, flexible tools &amp; electronics, prosthetics</td>
<td>Natural, Black, Gray</td>
<td>8</td>
<td>29</td>
<td>350</td>
<td>N/A</td>
<td>N/A</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Arnitel® ID2060 HT</td>
<td>TPC</td>
<td>Sustained high temperature use TPC filament: 175°C (1000 hrs), 190°C (500 hrs), 100% recyclable, excellent chemical resistance</td>
<td>Air-fuel management systems, automotive gaskets &amp; seals, aluminium &amp; rubber replacement for lightweighting applications, end-of-arm tooling</td>
<td>Black</td>
<td>32</td>
<td>305</td>
<td>245</td>
<td>N/A</td>
<td>N/A</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td><strong>Polyester Filaments</strong></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Arnitel® ID3040</td>
<td>PET</td>
<td>High stiffness &amp; ductility, low warpage, good resistance to weathering, high temperature use</td>
<td>Lamp housings, brake booster body valves, wipers, structural parts undergoing weathering phenomenon</td>
<td>Black, Gray</td>
<td>26.5</td>
<td>2,350</td>
<td>&gt;50</td>
<td>71</td>
<td>65</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

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### Material Properties/Characteristics

<table>
<thead>
<tr>
<th>Material Properties/Characteristics</th>
<th>Key Application Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Deflection Temperature @ 0.45 MPa (°C)</td>
<td>Structural lightweight parts for automotive, tooling for production such as jigs &amp; fixtures, components in contact with fuel, components requiring resistance to wear &amp; friction</td>
</tr>
<tr>
<td>Heat Deflection Temperature @ 1.80 MPa (°C)</td>
<td>Structural lightweight parts for automotive, tooling for production such as jigs &amp; fixtures, components in contact with fuel, components requiring resistance to wear &amp; friction</td>
</tr>
<tr>
<td>Hardness (Shore D)</td>
<td>Structural lightweight parts for automotive, tooling for production such as jigs &amp; fixtures, components in contact with fuel, components requiring resistance to wear &amp; friction</td>
</tr>
</tbody>
</table>

### Key Application Areas

- **Transportation**
- **Sports & Leisure**
- **Electronics**
- **Medical**
- **Functional Prototyping**

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**Notes:**

- **good**
- **better**
- **best**

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