

Typical Properties of AGS Thermoplastics

INJECTOBLEND™ FABS007

General Purpose ABS

FABS007 is available in black color only. Further information and details are available upon request

| Properties | Test Method | English (U.S.) | Units System | Metric (S.I.) | Units System | | |
|--|-------------|-----------------------|--------------------------|---------------------|--------------|----------------|----|
| PHYSICAL | | | | | | | |
| Specific Gravity, solid | D 792 | - | 1.05 | - | 1.05 | | |
| Mold Shrinkage, 0.125" (3.2mm) | D 955 | % | 0.4-0.7 | % | 0.4-0.7 | | |
| Water Absorption, 73F (23C), 24 hrs | D 570 | % | - | % | - | | |
| Melt Flow Rate @ 230C / 3.8kg, nominal | D 1238 | g/10min | 5 | g/10min | 5 | | |
| MECHANICAL | | | | | | | |
| Tensile Strength @ Yield, 73 ⁰ F (23 ⁰ C) | D 638 | psi | 6,000 | MPa | 41 | | |
| Tensile Elongation @ Break, 73 ⁰ F (23 ⁰ C) | D 638 | % | 20 | % | 20 | | |
| Flexural Strength, 73 ⁰ F (23 ⁰ C) | D 790 | psi | 9,000 | MPa | 62 | | |
| Flexural Modulus, 73 ⁰ F (23 ⁰ C) | D 790 | psi | 330,000 | MPa | 2,277 | | |
| Shear Modulus, 73 ⁰ F (23 ⁰ C) | D 4065 | psi | - | MPa | - | | |
| Izod Impact, notched, 73 ⁰ F (23 ⁰ C), 0.125" (3.2mm) | D256 | ft-lb/in | 2.5 | J/m | 134 | | |
| Izod Impact, notched, -22 ⁰ F (-30 ⁰ C), 0.125" (3.2mm) | D256 | ft-lb/in | 1.2 | J/m | 64 | | |
| Izod Impact, notched, 73 ⁰ F (23 ⁰ C), 4 mm | ISO 180 | - | - | kJ/m ² | - | | |
| Instrumented Impact Total Energy, 73 ⁰ F (23 ⁰ C), 0.125" (3.2mm) | D 3763 | ft-lb | - | J | - | | |
| THERMAL | | | | | | | |
| Deflection Temperature, unannealed | D 648 | | 264 psi (1.82 MPa), Load | ⁰ F | 176 | ⁰ C | 80 |
| | | | 66 psi (0.45 MPa), Load | ⁰ F | 190 | ⁰ C | 88 |
| CLTE, -40 ⁰ C - +80 ⁰ C (-40 ⁰ F - +176 ⁰ F) | D 696 | in/in/ ⁰ F | 5.3 E-5 | m/m/ ⁰ C | 9.5 E-5 | | |
| FLAMMABILITY | | | | | | | |
| UL 94 Flame Class. 0.058" (1.47mm) | UL 94 | - | HB | - | HB | | |

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Typical Properties of AGS Thermoplastics

INJECTOBLEND™ FABSPC003

ABS/PC Blend

FABSPC003 is available with internal and external lubricants, UV stabilized and other modifications.

Further information and details are available upon request

| Properties | Test Method | English (U.S.) | Units System | Metric (S.I.) | Units System |
|--|-------------|----------------|--------------|-------------------|--------------|
| PHYSICAL | | | | | |
| Specific Gravity, solid | D 792 | - | 1.13 | - | 1.13 |
| Mold Shrinkage, 0.125" (3.2mm) | D 955 | % | 0.5-0.8 | % | 0.5-0.8 |
| Water Absorption, 73F (23C), 24 hrs | D 570 | % | 0.10 | % | 0.10 |
| MECHANICAL | | | | | |
| Tensile Strength @ Yield, 73°F (23°C) | D 638 | psi | 7,200 | MPa | 50 |
| Tensile Elongation @ Break, 73°F (23°C) | D 638 | % | 75 | % | 75 |
| Flexural Strength, 73°F (23°C) | D 790 | psi | 11,000 | MPa | 76 |
| Flexural Modulus, 73°F (23°C) | D 790 | psi | 275,000 | MPa | 1,898 |
| Izod Impact, notched, 73°F (23°C), 0.125" (3.2mm) | D256 | ft-lb/in | 11.0 | J/m | 587 |
| Izod Impact, notched, -22°F (-30°C), 0.125" (3.2mm) | D256 | ft-lb/in | 8.0 | J/m | 427 |
| Izod Impact, notched, 73°F (23°C), 4 mm | ISO 180 | - | - | kJ/m ² | 46 |
| Instrumented Impact Total Energy, 73°F (23°C), 0.125" (3.2mm) | D 3763 | ft-lb | 40 | J | 54 |
| Instrumented Impact Total Energy, -22°F (-30°C), 0.125" (3.2mm), | D 3763 | ft-lb | 44 | J | 60 |
| THERMAL | | | | | |
| Deflection Temperature, unannealed | D 648 | | | | |
| 264 psi (1.82 MPa), Load | | °F | 234 | °C | 112 |
| 66 psi (0.45 MPa), Load | | °F | 259 | °C | 126 |
| CLTE, -40 °C - +80 °C (-40 °F - +176 °F) | D 696 | in/in/°F | 4.0 E-5 | m/m/°C | 7.2 E-5 |
| Vicat Softening Temperature, 50N | ISO 306 | °F | 268 | °C | 131 |
| FLAMMABILITY | | | | | |
| UL 94 Flame Class, 0.058" (1.47mm) | UL 94 | - | HB | - | HB |

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Typical Properties of AGS Thermoplastics

INJECTOBLEND™ FPA66233

Nylon 6'6, 33% Glass Fiber Reinforced, Heat Stabilized

Properties reported DAM. Further information is available upon request

| Properties Reported DAM. Properties @ 50% RH are available upon request | Test Method | English (U.S.) | Units (System) | Metric (S.I.) | Units (System) |
|--|-------------|-------------------|-------------------|-------------------|-------------------|
| PHYSICAL | | | | | |
| Specific Gravity, solid | D 792 | - | 1.40 | - | 1.40 |
| Mold Shrinkage, flow, 0.125" (3.2mm) | D 955 | % | 0.3 | % | 0.3 |
| Mold Shrinkage, cross-flow, 0.125" (3.2mm) | D 955 | % | 1.1 | % | 1.1 |
| Water Absorption, 73F (23C), 24 hrs | D 570 | % | 0.6 | % | 0.6 |
| Water Absorption, saturation, 73F (23C) | D 570 | % | 5.4 | % | 5.4 |
| Fiberglass Content | D 2584 | % | 33 | % | 33 |
| MECHANICAL | | | | | |
| Tensile Modulus, 73°F (23°C) | ISO 527-1/2 | - | - | MPa | 10,000 |
| Tensile Strength @ Break, 73°F (23°C) | D 638 | Psi | 25,000 | MPa | 173 |
| Tensile Elongation @ Break, 73°F (23°C) | ISO 527-1/2 | - | - | MPa | 170 |
| | D 638 | % | 2 | % | 2 |
| Flexural Strength, 73°F (23°C) | ISO 178 | - | - | MPa | 255 |
| Flexural Modulus, 73°F (23°C) | ISO 178 | - | - | MPa | 8,500 |
| Izod Impact Strength, notched, 73°F (23°C), 0.125" (3.2mm) | D256 | ft-lb/in | 2.0 | J/m | 107 |
| Izod Impact, Strength, notched, 23°C, 4 mm | ISO 180 1/A | - | - | kJ/m ² | 10 |
| Izod Impact Strength, notched, -30°C, 4 mm | ISO 180 1/A | - | - | kJ/m ² | 7 |
| Charpy Impact Strength, 23°C, 4 mm | ISO 179/1eU | - | - | kJ/m ² | 70 |
| THERMAL | | | | | |
| Deflection Temperature, unannealed | D 648 | °F | 473 | °C | 245 |
| 264 psi (1.82 MPa), Load | | °F | 482 | °C | 250 |
| 66 psi (0.45 MPa), Load | | °C | - | °C | 248 |
| 1.82 MPa Load, flatwise | ISO 75-1/2 | - | - | °C | 248 |
| CLTE, -40 °C - +35 °C (-40 °F - +95 °F) | D 696 | in/in/°F | 1.38 E-5 | m/m/°C | 2.50 E-5 |
| Melting Point | ISO 3146 | °F | 502 | °C | 261 |
| FLAMMABILITY | | | | | |
| UL 94 Flame Class, 0.058" (1.47mm) | UL 94 | - | HB | - | HB |
| 2.00mm +/- 0.2 mm | ISO 3795 | - | - | mm/min | <100 |

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Typical Properties of AGS Thermoplastics

INJECTOBLEND™ FPC120

Impact Modified Grade Polycarbonate

FPC120 is available with internal and external lubricants, UV stabilized and other modifications.
Further information and details are available upon request

| Properties | Test Method | English (U.S.) | Units System | Metric (S.I.) | Units System |
|--|-------------|----------------|--------------|-------------------|--------------|
| PHYSICAL | | | | | |
| Specific Gravity, solid | D 792 | - | 1.19 | - | 1.19 |
| Mold Shrinkage, 0.125" (3.2mm) | D 955 | % | 0.5-0.8 | % | 0.5-0.8 |
| Water Absorption, 73F (23C), 24 hrs | D 570 | % | 0.15 | % | 0.15 |
| Melt Flow Rate @ 300C / 1.2kg, nominal | D 1238 | g/10min | 20 | g/10min | 20 |
| MECHANICAL | | | | | |
| Tensile Strength @ Yield, 73°F (23°C) | D 638 | psi | 8,400 | MPa | 58 |
| Tensile Elongation @ Break, 73°F (23°C) | D 638 | % | 50 | % | 50 |
| Flexural Strength, 73°F (23°C) | D 790 | psi | 12,500 | MPa | 86 |
| Flexural Modulus, 73°F (23°C) | D 790 | psi | 330,000 | MPa | 2,277 |
| Shear Modulus, 73°F (23°C) | D 4065 | psi | 125,500 | MPa | 866 |
| Izod Impact, notched, 73°F (23°C), 0.125" (3.2mm) | D256 | ft-lb/in | 13.0 | J/m | 694 |
| Izod Impact, notched, -22°F (-30°C), 0.125" (3.2mm) | D256 | ft-lb/in | 7.0 | J/m | 374 |
| Izod Impact, notched, 73°F (23°C), 4 mm | ISO 180 | - | - | kJ/m ² | 52 |
| Charpy Impact, notched, 73°F (23°C), 4 mm | ISO 179 | - | - | kJ/m ² | 30 |
| Instrumented Impact Total Energy, 73°F (23°C), 0.125" (3.2mm) | D 3763 | ft-lb | 42 | J | 57 |
| Instrumented Impact Total Energy, -22°F (-30°C), 0.125" (3.2mm), | D 3763 | ft-lb | 46 | J | 63 |
| THERMAL | | | | | |
| Deflection Temperature, unannealed | D 648 | | | | |
| 264 psi (1.82 MPa), Load | | °F | 259 | °C | 126 |
| 66 psi (0.45 MPa), Load | | °F | 275 | °C | 135 |
| CLTE, -40 °C - +80 °C (-40 °F - +176 °F) | D 696 | in/in/°F | 4.31 E-5 | m/m/°C | 7.76 E-5 |
| Vicat Softening Temperature, 50N | ISO 306 | °F | 288 | °C | 142 |
| FLAMMABILITY | | | | | |
| UL 94 Flame Class, 0.058" (1.47mm) | UL 94 | - | HB | - | HB |

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Typical Properties of AGS Thermoplastics

INJECTOBLEND™ FPOM110 Medium Viscosity Acetal Copolymer

FPOM110 is available in black color, UV stabilized and with other modifications. Further information and details are available upon request

| Properties | Test Method | English (U.S.) | Units (System) | Metric (S.I.) | Units (System) |
|---|-------------|----------------|----------------|-------------------|----------------|
| PHYSICAL | | | | | |
| Specific Gravity, solid | D 792 | - | 1.41 | - | 1.41 |
| Mold Shrinkage, 0.125" (3.2mm) | D 955 | % | 1.8 – 2.2 | % | 1.8 – 2.2 |
| Water Absorption, 73F (23C), 24 hrs | D 570 | % | 0.3 | % | 0.3 |
| Water Absorption, Saturation 73F (23C) | D 570 | % | 0.9 | % | 0.9 |
| Melt Flow Rate | D 1238 | g/10min | 10 | g/10min | 10 |
| MECHANICAL | | | | | |
| Tensile Strength @ Yield, 73°F (23°C) | D 638 | psi | 9,000 | MPa | 62 |
| Tensile Elongation @ Break, 73°F (23°C) | D 638 | % | 20 | % | 20 |
| Flexural Strength, 73°F (23°C) | D 790 | psi | 13,500 | MPa | 93 |
| Flexural Modulus, 73°F (23°C) | D 790 | psi | 390,000 | MPa | 2,691 |
| Izod Impact, notched, 73°F (23°C), 0.125" (3.2mm) | D256 | ft-lb/in | 1.1 | J/m | 59 |
| Izod Impact, notched, 73°F (23°C), 4 mm | ISO 180 | - | - | kJ/m ² | 5.0 |
| THERMAL | | | | | |
| Deflection Temperature, unannealed 264 psi (1.82 MPa), Load 66 psi (0.45 MPa), Load | D 648 | °F | 221 | °C | 105 |
| | | °F | 320 | °C | 160 |
| Melting Point | D 3418 | °F | 325 | °C | 163 |
| CLTE, -40°C to +35°C (-40°F to +95°F) | D 696 | in/in/°F | - | in/in/°C | - |
| FLAMMABILITY | | | | | |
| UL 94 Flame Class, 0.058" (1.47mm) | UL 94 | - | HB | - | HB |

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Typical Properties of AGS Thermoplastics

INJECTOBLEND™ FPP135

Polypropylene Copolymer

FPP135 is available in a variety of viscosities and other modifications.
Further information and details are available upon request

| Properties | Test Method | English (U.S.) | Units System | Metric (S.I.) | Units System |
|---|-------------------|----------------|--------------|---------------|--------------|
| PHYSICAL | | | | | |
| Specific Gravity, solid | D 792 | - | 0.91 | - | 0.91 |
| Mold Shrinkage, 0.125" (3.2mm) | D 955 | % | 1.3 - 2.0 | % | 1.3 - 2.0 |
| MECHANICAL | | | | | |
| Tensile Strength @ Yield. 73°F (23°C) | D 638 | psi | 3,900 | MPa | 27 |
| Tensile Elongation @ Yield. 73°F (23°C) | D 638 | % | 6 | % | 6 |
| Flexural Strength. 73°F (23°C) | D 790 | psi | 4,000 | MPa | 28 |
| Flexural Modulus. 73°F (23°C) | D 790 | psi | 145,000 | MPa | 1,000 |
| Izod Impact, notched. 73°F (23°C), 0.125" (3.2mm) | D256 | ft-lb/in | 2.0 | J/m | 107 |
| Dart Impact. -22°F (-30°C), 0.125" (3.2mm) | GM9300P | ft-lb | 4.5 | J | 6.1 |
| THERMAL | | | | | |
| Deflection Temperature, unannealed 264 psi (1.82 MPa), Load 66 psi (0.45 MPa), Load | D 648 | °F | 126 | °C | 52 |
| | | °F | 185 | °C | 85 |
| CLTE. 20 °C - +75 °C (68 °F - +167 °F) | D 696 | in/in/°F | 5.5 E-5 | m/m/°C | 9.9 E-5 |
| Thermal Oxidative Stability. 150°C | D 3012 | hours | 350 | hours | 350 |
| FLAMMABILITY | | | | | |
| UL 94 Flame Class. 0.058" (1.47mm) GM | UL 94 ISO 3795 | - mm/min | HB < 100 | - mm/min | HB < 100 |

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Typical Properties of AGS Thermoplastics

INJECTOBLEND™ FPP330

Polypropylene Homopolymer, 30% Glass Fiber Reinforced, Heat Stabilized

| Properties / Reported DAM | Test Method | English (U.S.) | Units System | Metric (S.I.) | Units System |
|--|-------------------|----------------|--------------|-------------------|--------------|
| PHYSICAL | | | | | |
| Specific Gravity, solid | D 792 | - | 1.13 | - | 1.13 |
| Mold Shrinkage, 0.125" (3.2mm) | D 955 | % | 0.2 – 1.0 | % | 0.2 – 1.0 |
| Fiberglass Content | D 2584 | % | 30 | % | 30 |
| MECHANICAL | | | | | |
| Tensile Strength @ Break. 73°F (23°C) | D 638 | psi | 11,000 | MPa | 76 |
| Tensile Elongation @ Break. 73°F (23°C) | D 638 | % | 3 | % | 3 |
| Tensile Modulus. 73°F (23°C) | D 638 | psi | 980,000 | MPa | 5,800 |
| Flexural Strength. 73°F (23°C) | D 790 | psi | 16 | MPa | 110 |
| Flexural Modulus. 73°F (23°C) | D 790 | psi | 740,000 | MPa | 5,100 |
| Izod Impact Strength, notched. 73°F (23°C), 0.125" (3.2mm) | D 256 | ft-lb/in | 1.1 | J/m | 60 |
| Izod Impact Strength, notched. 73°F (23°C), 4 mm | ISO 180 | - | - | kJ/m ² | 6.8 |
| Izod Impact Strength, notched. -22°F (-30°C), 4 mm | ISO 180 | - | - | kJ/m ² | 4.5 |
| Charpy Impact Strength, notched. 73°F (23°C), 4 mm | ISO 179 | - | - | kJ/m ² | 8.0 |
| Charpy Impact Strength, notched. -22°F (-30°C), 4 mm | ISO 179 | - | - | kJ/m ² | 5.0 |
| THERMAL | | | | | |
| Deflection Temperature, unannealed | D 648 | | | | |
| 264 psi (1.82 MPa), Load | | °F | 295 | °C | 146 |
| 66 psi (0.45 MPa), Load | | °F | 312 | °C | 155 |
| CLTE. -30 °C - +150 °C (-22 °F - +302 °F) Flow | D 696 | in/in/°F | 4.4 E-5 | m/m/°C | 7.9 |
| CLTE. -30 °C - +150 °C (-22 °F - +302 °F) Cross Flow | D 696 | in/in/°F | 4.0 E-5 | m/m/°C | 7.2 |
| FLAMMABILITY | | | | | |
| UL 94 Flame Class. 0.058" (1.47mm) | UL 94 ISO 3795 | - | HB | - | HB |
| | | - | - | mm/min | < 100 |

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