

Cycolac* Resin HMG47MD

Americas: COMMERCIAL

General purpose, injection molding ABS for medical applications. Biocompatible (ISO10993). FDA compliant. Gamma & EtO sterilizable.

| TYPICAL PROPERTIES ¹ | TYPICAL VALUE | UNIT | STANDARD |
|--|---------------|---------------------|-------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 5 mm/min | 440 | kgf/cm ² | ASTM D 638 |
| Tensile Stress, brk, Type I, 5 mm/min | 340 | kgf/cm ² | ASTM D 638 |
| Tensile Strain, yld, Type I, 5 mm/min | 2 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 5 mm/min | 24 | % | ASTM D 638 |
| Tensile Modulus, 5 mm/min | 23200 | kgf/cm ² | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 730 | kgf/cm ² | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 23900 | kgf/cm ² | ASTM D 790 |
| Tensile Stress, yield, 5 mm/min | 50 | MPa | ISO 527 |
| Tensile Stress, break, 5 mm/min | 35 | MPa | ISO 527 |
| Tensile Strain, yield, 5 mm/min | 2.6 | % | ISO 527 |
| Tensile Strain, break, 5 mm/min | 24.8 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2530 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 76 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2410 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 32 | cm-kgf/cm | ASTM D 256 |
| Izod Impact, notched, -30°C | 13 | cm-kgf/cm | ASTM D 256 |
| Instrumented Impact Total Energy, 23°C | 315 | cm-kgf | ASTM D 3763 |
| Izod Impact, notched 80*10*4 +23°C | 23 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | 8 | kJ/m ² | ISO 180/1A |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 98 | °C | ASTM D 1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 94 | °C | ASTM D 648 |

¹ Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume rate are measured on injection moulded samples. All samples are prepared according to ISO 294.

² Only typical data for material selection purpose. Not to be used for part or tool design.
³ This rating is not intended to reflect hazards presented this or any other material under actual fire conditions.
⁴ Own measurement according to UL.
⁵ Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Dongguan Yi-Ming Plastic Chemical Co., Ltd.

如需要更多物性资料请查阅 www.kedisujiao.com

备注：以上原料物性数据由厂家发布，我公司仅提供参考！数据如有变动，请联系原料生产厂家获知。我公司不承担任何法律责任！

Cycolac* Resin HMG47MD

Americas: COMMERCIAL

| TYPICAL PROPERTIES ¹ | TYPICAL VALUE | UNIT | STANDARD |
|---------------------------------------|---------------|-------------------|--------------|
| THERMAL | | | |
| HDT, 1.82 MPa, 3.2mm, unannealed | 80 | °C | ASTM D 648 |
| CTE, -40°C to 40°C, flow | 8.82E-05 | 1/°C | ISO 11359-2 |
| CTE, -40°C to 40°C, xflow | 8.82E-05 | 1/°C | ISO 11359-2 |
| Vicat Softening Temp, Rate B/50 | 100 | °C | ISO 306 |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 80 | °C | ISO 75/Af |
| PHYSICAL | | | |
| Specific Gravity | 1.05 | - | ASTM D 792 |
| Mold Shrinkage, flow, 3.2 mm (5) | 0.5 - 0.8 | % | SABIC Method |
| Melt Flow Rate, 230°C/3.8 kgf | 5.6 | g/10 min | ASTM D 1238 |
| Density | 1.05 | g/cm ³ | ISO 1183 |
| Melt Flow Rate, 220°C/10.0 kg | 19 | g/10 min | ISO 1133 |

¹ Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 230C/50% relative humidity. All properties, except the melt volume rate are measured on injection moulded samples. All samples are prepared according to ISO 294.

² Only typical data for material selection purpose. Not to be used for part or tool design.
³ This rating is not intended to reflect hazards presented this or any other material under actual fire conditions.
⁴ Own measurement according to UL.
⁵ Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Dongguan Yi-Ming Plastic Chemical Co., Ltd.

如需要更多物性资料请查阅 www.kedisujiao.com

备注：以上原料物性数据由厂家发布, 我公司仅提供参考！数据如有变动，请联系原料生产厂家获知。我公司不承担任何法律责任！

Cycolac* Resin HMG47MD

Americas: COMMERCIAL

| PROCESSING PARAMETERS | TYPICAL VALUE | UNIT |
|-----------------------------|---------------|------|
| Injection Molding | | |
| Drying Temperature | 80 - 95 | °C |
| Drying Time | 2 - 4 | hrs |
| Drying Time (Cumulative) | 8 | hrs |
| Maximum Moisture Content | 0.1 | % |
| Melt Temperature | 220 - 260 | °C |
| Nozzle Temperature | 220 - 260 | °C |
| Front - Zone 3 Temperature | 215 - 240 | °C |
| Middle - Zone 2 Temperature | 205 - 225 | °C |
| Rear - Zone 1 Temperature | 190 - 210 | °C |
| Mold Temperature | 50 - 70 | °C |
| Back Pressure | 0.3 - 0.7 | MPa |
| Screw Speed | 30 - 60 | rpm |
| Shot to Cylinder Size | 50 - 70 | % |
| Vent Depth | 0.038 - 0.051 | mm |

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity.
All properties, except the melt volume rate are measured on injection moulded samples.
All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.
3) This rating is not intended to reflect hazards presented this or any other material under actual fire conditions.
4) Own measurement according to UL.
5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Dongguan Yi-Ming Plastic Chemical Co., Ltd.

如需要更多物性资料请查阅 www.kedisujiao.com

备注：以上原料物性数据由厂家发布，我公司仅提供参考！数据如有变动，请联系原料生产厂家获知。我公司不承担任何法律责任！