# KYNAR®
# 705

Kynar® resins are fluorinated thermoplastic homopolymers.

Outstanding characteristics: chemical resistance, imperviousness to UV, high barrier properties, high purity, good mechanical and thermo-mechanical properties.

Kynar® 705 resin is a grade of granules for injection molding, rotomolding applications and multifilament extrusion.

| 特性 | 値 | 単位 | テスト基準 |
|---|---|---|---|
| レオロジー特性 | | | |
| メルトボリュームレイト | 40 | cm³/10min | ISO 1133 |
| 温度 | 230 | °C | - |
| | 446 | °F | |
| 荷重 | 5 | kg | - |
| | 11 | lb | |
| メルトフローレイト | 25 - 40 | g/10min | ASTM D1238 |
| 温度 | 230 | °C | - |
| 荷重 | 2.16 | kg | - |
| 成形収縮率, 平行 | 2.0 | % | ISO 294-4, 2577 |
| 成形収縮率, 直角 | 2.0 | % | ISO 294-4, 2577 |
| 溶融粘度, 230°C, 100 $s^{-1}$ | 2 - 5 | kPoise | ASTM D3835 |
| 機械的特性 | | | |
| 引張弾性率 | 2400 | MPa | ISO 527-1/-2 |
| | 348000 | psi | |
| 引張弾性率, 73 °F | 1380 - 2310 | MPa | ASTM D638 |
| | 200000 - 335000 | psi | |
| 降伏応力 | 54 | MPa | ISO 527-1/-2 |
| | 7830 | psi | |
| 降伏応力, 73 °F | 44.8 - 55.2 | MPa | ASTM D638 |
| | 6500 - 8000 | psi | |
| 降伏ひずみ | 8 | % | ISO 527-1/-2 |
| 降伏点伸び, 73 °F | 5 - 10 | % | ASTM D638 |
| 破壊呼びひずみ | >50 | % | ISO 527-1/-2 |
| 破壊応力, 73 °F | 34.5 - 55.2 | MPa | ASTM D638 |
| | 5000 - 8000 | psi | |
| 破断伸び, 73 °F | 10 - 50 | % | ASTM D638 |

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|---|---|---|---|
| Taber 耐摩耗性, CS 17 1000g:pad | 5 - 9 | mg/1000 cycles | ASTM-G195-13A |
| ショア硬さ, D, 73 °F | 76 - 80 | - | ASTM D2240 |
| 曲げ弾性率, 73 °F | 1380 - 2310 | MPa | ASTM D790 |
| | 200000 - 335000 | psi | |
| 5%伸び時の曲げ強度, 73 °F | 58.6 - 75.8 | MPa | ASTM D790 |
| | 8500 - 11000 | psi | |
| 圧縮強度, 73 °F | 68.9 - 103 | MPa | ASTM D695 |
| | 10000 - 15000 | psi | |
| シャルピー衝撃強さ, +23°C | 200 | kJ/m² | ISO 179/1eU |
| | 95.1 | ftlb/in² | |
| ノッチ付きシャルピー衝撃強さ, +23°C | 6 | kJ/m² | ISO 179/1eA |
| | 2.85 | ftlb/in² | |
| ノッチ付き衝撃強さ, 73 °F | 0.0534 - 0.107 | kJ/m | ASTM D256 |
| | 1 - 2 | ftlb/in | |
| 摩擦係数, 静力学対鋼, 73°F | 0.2 | - | ASTM D1894 |
| 摩擦係数, 動的対鋼, 73°F | 0.14 | - | ASTM D1894 |
| 熱的特性 | | | |
| 溶融温度, 10°C/min | 170 | °C | ISO 11357-1/-3 |
| 溶融温度 | 165 - 172 | °C | ASTM D3418 |
| ガラス転移点, 10°C/min | -40 | °C | ISO 11357-1/-2 |
| ガラス転移温度 (Tg) | -40.6 - -38.3 | °C | ASTM D7028 |
| | -41 - -37 | °F | |
| 荷重たわみ温度, 1.80 MPa | 112 | °C | ISO 75-1/-2 |
| | 234 | °F | |
| 荷重たわみ温度, 264 Psi, 248 °F/hr | 105 - 115 | °C | ASTM D648 |
| | 221 - 239 | °F | |
| 荷重たわみ温度, 66 Psi, 248 °F/hr | 125 - 140 | °C | ASTM D648 |
| | 257 - 284 | °F | |
| 線膨張係数-40°C to +100°C, 平行 | 150 | E-6/K | ISO 11359-1/-2 |
| 線膨張係数-40°C to +100°C, 直角 | 150 | E-6/K | ISO 11359-1/-2 |
| 線膨張係数, 73 °F | 11.9 - 14.4 | 10E-5/°C | ASTM D696 |
| | 6.6 - 8 | 10E-5/°F | |
| 1.5mm厚さでの燃焼性 | V-0 | class | IEC 60695-11-10 |
| 厚さhでの燃焼性 | V-0 | class | IEC 60695-11-10 |

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|---|---|---|---|
| 試験片の厚さ | 0.8 | mm | - |
| | 0.0315 | in | |
| 酸素指数 | 43 | % | ISO 4589-1/-2 |
| 酸素指数 | 42 | % | ASTM D2863 |
| 熱伝導率 | 0.17 - 0.19 | W/(m K) | ASTM D433 |
| | 1.18 - 1.32 | BTU in /(hr ft2 F) | |
| 比熱 | 745 - 958 | J/(kg K) | DSC |
| | 0.28 - 0.36 | BTU/(lb·°F) | |
| 空気中の熱分解 | 375 | °C | 1% wt. loss |
| | 707 | °F | |
| 窒素中での熱分解 | 410 | °C | 1% wt. loss |
| | 770 | °F | |
| 相対熱指数, 機械的 | 150 | °C | UL 746B |
| | 302 | °F | |
| 相対熱指数, 電気 | 150 | °C | UL 746B |
| | 302 | °F | |
| 電気的特性. | | | |
| 比誘電率, 1 kHz | 4.5 - 9.5 | - | ASTM D150 |
| 誘電正接, 100 kHz | 0.01 - 0.21 | - | ASTM D150 |
| 体積抵抗率, DC 68 °F, 65% R.H. | 2E14 | Ohm* cm | ASTM D257 |
| 耐電圧, 73°F | 1.6 | kV/mil | ASTM D149 |
| その他の特性. | | | |
| 吸水率, 23°C, immersion, equilibrium | 0.02 | % | ISO 62 |
| 吸水率 | ≤ 0.05 | % | ASTM D570 |
| 密度 | 1780 | kg/m³ | ISO 1183 |
| | 1.78 | g/cm³ | |
| 比重, 73 °F | 1.77 - 1.79 | - | ASTM D792 |
| 溶融時の熱伝導率 | 0.19 | W/(m K) | - |
| 光学特性 | | | |
| Refractive Index @ sodium D line | 1.42 | - | ASTM D542 |

Main applications:

- corrosion protection in the chemical industry
- wire and cable
- coating (painting, co-extrusion)
- off shore

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| 成形加工法 | Headquarters: |
| --- | --- |
| 射出成形 | Arkema France<br>420 rue d'Estienne d'Orves 92705<br>Colombes Cedex France<br>T +33 (0)1 49 00 80 80<br>hpp.arkema.com |
| **納入形状** | |
| ペレット | |
| | Arkema Inc. – High Performance Polymers<br>900 First Avenue<br>King of Prussia, PA 19406<br>Tel.: +1 610 205 7000<br>hpp.arkema.com |

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