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|---|---|--|--|----------------------|
| HellermannTyton TYPICAL MATERIAL PROPERTIES | PAEK Polyaryetherketone (Impact Modified PEEK) | SPECIFICATION NUMBER MTS1908CSU | | |
| | | Issued By: VM 11/19/12 Checked By: KAC 08/03/16 | REVISION Level:...02 Date:...08/03/16 By...LG ECN#:...013511 | Page 1 Of 2 |

DESCRIPTION

When compared to PEEK, PAEK shows increased flexibility and impact resistance at a reduced operating temperature. This PAEK (polyaryl ether ketone) polymer is unreinforced that offers more ductility and impact strength than PEEK, with higher chemical and environmental stress cracking resistance. It has been specifically formulated for applications requiring a balance of chemical resistance and mechanical strength along with good part aesthetics and high temperature resistance, bridging the gap within the high temperature polymer space.

These properties make it well-suited for applications in healthcare, transportation, electronics, chemical processing and other industrial uses.

PAEK can be easily processed by typical injection molding and extrusion methods using conventional processing equipment.

Commercial Name: PAEK, Polyaryl ether ketone
Catalog Code: PAEK
Chemical Name: Polyaryl ether ketone
Used On: Snapper clamps and structural components

GENERAL PERFORMANCE CHARACTERISTICS

| | |
|-----------------------------|------|
| Heat Resistance | High |
| High Impact | Good |
| Ductility | Good |
| Fatigue Resistant | Yes |
| Inherently Flame Retardant | Yes |
| Radiation (Gamma) Resistant | Yes |
| Steam Resistant | Yes |
| Good Dimensional Stability | Yes |

PERFORMANCE ADDITIVES

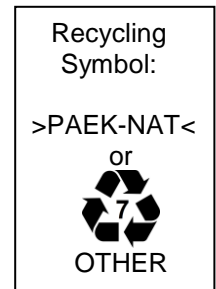
| | |
|--------------|------|
| Glass | None |
| Mineral | None |
| Carbon Black | None |


CHEMICAL RESISTANCE

| | |
|----------|--|
| Acids | Excellent |
| Bases | Excellent |
| Solvents | Excellent for most solvents but poor with Methylene Chloride |
| Gasoline | Excellent |
| Oil | Excellent |

MAJOR TOXIC ELEMENTS

No significant hazards associated with this material.



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PROPERTIES CHART

| | | Units | Test Method |
|---|----------------------|-------------------|--------------------|
| <u>FLAMMABILITY</u> | | | |
| Flammability @ 0.75, 1.5 and 3.0 mm | TBD, V-0 anticipated | - | |
| <u>PHYSICAL</u> | | | |
| Specific Gravity | 1.34 | g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (400°C/2.16 Kg) | 55 | g/10min | ASTM D1238 |
| Water Absorption – 24 hr | 0.3 | % | ASTM D570 |
| <u>MECHANICAL & IMPACT</u> | | | |
| Tensile Strength | 97.0 (14100) | MPa (psi) | ASTM D638 |
| Tensile Strain @ Yield @ Break | 6.3 >15 | % | ASTM D638 |
| Tensile Modulus | 3200 (464000) | MPa (psi) | ASTM D638 |
| Flexural Modulus | 3300 (479000) | MPa (psi) | ASTM D790 |
| Flexural Strength | 141 (20500) | MPa (psi) | ASTM D790 |
| Notched Izod Impact | 64 | J/m (ft-lb/in) | ASTM D256 |
| Unnotched Izod Impact | No break | J/m (ft-lb/in) | ASTM 4812 |
| Instrumented Dart Impact | 78.0 (690) | J (in-lb) | ASTM D3763 |
| <u>THERMAL</u> | | | |
| Continuous Operating Temp | 200 (392) | °C (°F) | ⁽¹⁾ Mfg |
| Deflection Temperature Under Load 1.8 MPa (264 psi), Annealed, 3.2mm (0.126in) | 208 (406) | °C (°F) | ASTM D648 |

(1) HT-Internal evaluation using PAT100L up to 3,000 hrs per ITS-0011 & ITS-0019

This document is intended as a general guide, in the material selection for a product, but does not guarantee satisfactory performance. All materials selected must be thoroughly tested in its intended application to determine its suitability. Consult a HellermannTyton Representative for assistance in the final material selection.

The information contained herein is believed to be accurate at the time of printing. However, this information has been obtained from a variety of sources and has not been independently verified by HellermannTyton Corporation; therefore, we cannot warrant fitness for a particular application. Furthermore, HellermannTyton Corporation reserves the right to make changes to this document, at any time, without notice to our customers.