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AsahiKASEI Engineering Plastics Information Comprehensive Site
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AsahiKASEI

TENAC™ LM511

Asahi Kasei Corporation - Acetal (POM) Homopolymer

Wednesday, March 20, 2024

General Information

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Lubricant		
Features AKEP website	• Friction, Low	• Lubricated	• Wear Resistant
Uses	• Engineering Parts	• Gears	• Housings
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403)		
Part Marking Code (ISO11469) (ISO 11469)	• >POM<		
Other Documentation			
Literature	• Moldflow Data • Molding Conditions • SDS • Technical Handbook		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.42	g/cm³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	22	g/10 min	ISO 1133
Molding Shrinkage - Flow	1.8 to 2.2	%	Internal Method
Water Absorption (24 hr, 23°C, 50% RH)	0.20	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	3000	MPa	ISO 527-1
Tensile Stress			
Yield	65.0	MPa	ISO 527-2
--	65.0	MPa	ASTM D638
Tensile Elongation (Break)	30	%	ASTM D638
Nominal Tensile Strain at Break	25	%	ISO 527-2
Flexural Modulus			
--	2900	MPa	ASTM D790
--	2800	MPa	ISO 178
Flexural Strength	97.0	MPa	ASTM D790

Disclaimer:
- Data shown are typical values obtained by proper testing methods and should not be used for specification purpose. Please use these data for selecting the most appropriate grade suitable for specific usage.
  These data may be changed because of improvement in properties.
- Be sure to read the relevant SDS before handling and use, and always follow the Important Precautions.
- Do not use plastics in any of the following orally- or medically-related applications.
- Orally-related applications: any part, device or component which may come into direct oral contact or into direct contact with drinking foods or beverages.
  For drinking water application, please consult Asahi Kasei Corporation.
- Medically-related applications: any part, device or component which may be used intracorporeally or which may in dialysis or other processes come into direct or indirect contact with body tissue, body fluids or transfusion fluids.

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	7.0	kJ/m²	ISO 179
Notched Izod Impact	63	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Unannealed	170	°C	ASTM D648
0.45 MPa, Unannealed	160	°C	ISO 75-2/B
1.8 MPa, Unannealed	120	°C	ASTM D648
1.8 MPa, Unannealed	95.0	°C	ISO 75-2/A
CLTE - Flow	1.0E-4	cm/cm/°C	ASTM D696 ISO 11359-2
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.70 mm)	HB		UL 94

Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Hot Air Dryer	80 to 90	°C
Drying Time - Hot Air Dryer	3.0 to 4.0	hr
Processing (Melt) Temp	190 to 210	°C
Mold Temperature	> 60	°C

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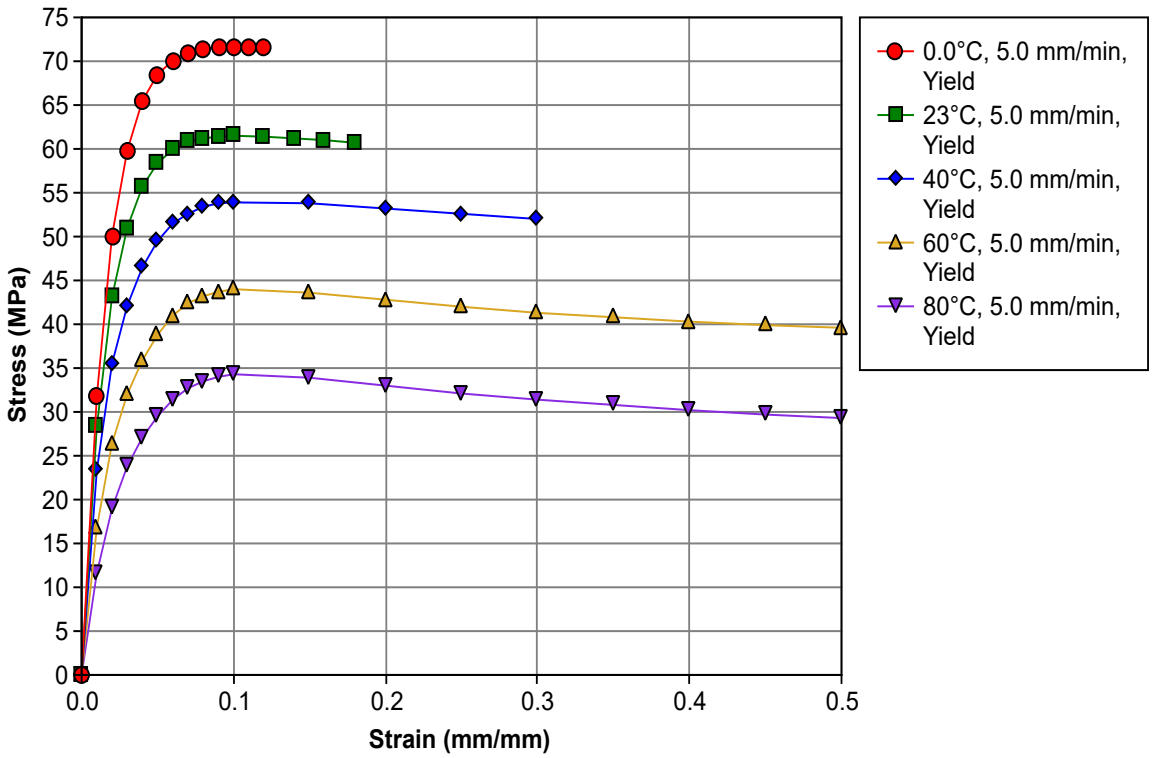
Curve Data

Isothermal Stress vs. Strain (ISO 11403)



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Notes

[1] Typical properties: these are not to be construed as specifications.