

**TENAC™-C CF454**

Asahi Kasei Corporation - Acetal (POM) Copolymer

## General Information

**General**

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Filler / Reinforcement	• Carbon Fiber, 20% Filler by Weight
Features	• Electrically Conductive
Uses	• Engineering Parts • Gears • Housings
Part Marking Code (ISO 11469)	• >POM-CF20<

 Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.46		ASTM D792
Density	1.46	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.0	g/10 min	ISO 1133
Molding Shrinkage - Flow	1.0E-3 to 2.0E-3	in/in	Internal Method
Molding Shrinkage - Across Flow	6.0E-3 to 8.0E-3	in/in	Internal Method
Water Absorption (24 hr, 73°F, 50% RH)	0.20	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1.89E+6	psi	ISO 527-1
Tensile Strength	17100	psi	ASTM D638
Tensile Stress (Break)	18900	psi	ISO 527-2
Tensile Elongation (Break)	5.0	%	ASTM D638
Tensile Strain (Break)	1.0	%	ISO 527-2
Flexural Modulus	1.77E+6	psi	ASTM D790
Flexural Modulus	1.81E+6	psi	ISO 178
Flexural Strength	26800	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	2.4	ft·lb/in <sup>2</sup>	ISO 179
Notched Izod Impact	0.73	ft·lb/in	ASTM D256
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	104		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	331	°F	ASTM D648
Deflection Temperature Under Load (66 psi, Unannealed)	331	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	325	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed)	325	°F	ISO 75-2/A
CLTE - Flow	2.2E-5	in/in/°F	ASTM D696
CLTE - Flow	2.2E-5 to 5.0E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	5.0E-5	in/in/°F	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+2 to 1.0E+3	ohms	ASTM D257
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.030 in)	HB		UL 94

## Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Hot Air Dryer	176 to 194	°F
Drying Time - Hot Air Dryer	3.0 to 4.0	hr



Processing (Melt) Temp	356 to 410 °F
Mold Temperature	> 140 °F

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

