

【Inquiries】

AsahiKASEI Engineering Plastics Information Comprehensive Site
URL : <https://www.asahi-kasei-plastics.com/en/contact/>

AsahiKASEI



TENAC™-C CF454

Asahi Kasei Corporation - Acetal (POM) Copolymer

Tuesday, March 19, 2024

General Information

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Carbon Fiber, 20% Filler by Weight		
Features AKEP website	• Electrically Conductive		
Uses	• Engineering Parts	• Gears	• Housings
Part Marking Code (ISO11469) (ISO 11469)	• >POM-CF20<		

Other Documentation

Literature	• Molding Conditions • SDS • Technical Handbook
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ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.46	g/cm ³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.0	g/10 min	ISO 1133
Molding Shrinkage			Internal Method
Flow	0.10 to 0.20	%	
Across Flow	0.60 to 0.80	%	
Water Absorption (24 hr, 23°C, 50% RH)	0.20	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	13000	MPa	ISO 527-1
Tensile Stress			
Break	130	MPa	ISO 527-2
--	118	MPa	ASTM D638
Tensile Elongation			
Break	5.0	%	ASTM D638
Break	1.0	%	ISO 527-2
Flexural Modulus			
--	12200	MPa	ASTM D790
--	12500	MPa	ISO 178
Flexural Strength	185	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	5.0	kJ/m ²	ISO 179
Notched Izod Impact	39	J/m	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			
0.45 MPa, Unannealed	166	°C	ASTM D648 ISO 75-2/B
1.8 MPa, Unannealed	163	°C	ASTM D648 ISO 75-2/A
CLTE			
Flow	4.0E-5	cm/cm/°C	ASTM D696
Flow	4.0E-5 to 9.0E-5	cm/cm/°C	ISO 11359-2
Transverse	9.0E-5	cm/cm/°C	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 (0.75 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	180 to 210	°C
Mold Temperature	> 60	°C

Notes

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

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