

Injection molding type like C 9021; special modified with anti-friction additives for prevention of squeaking noise Chemical abbreviation according to ISO 1043-1: POM-KD10

Molding compound ISO 29988-POM-K, KD10, GNRS2, 3-2

POM copolymer Injection molding type, special modified with anti-friction additives for prevention of squeaking noise; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation. UL-registration in natural and black and a thickness more than 1.5 mm as UL 94 HB. Burning rate ISO 3795 and FMVSS 302 < 100 mm/min for a thickness more than 1,5 mm. Ranges of applications: For sliding combinations with low wear and low coefficient of friction, prevents squeaking noise. UL = Underwriters Laboratories (USA) FMVSS = Federal Motor Vehicle Safety Standard (USA)

Product information

Part Marking Code	POM-KD10		ISO 11469
Rheological properties			
Melt volume-flow rate	6.5	cm ³ /10min	ISO 1133
Temperature	190		
Load	2.16	ka	
Moulding shrinkage, parallel	2.1	•	ISO 294-4, 2577
Moulding shrinkage, normal	1.7	%	ISO 294-4, 2577
Typical mechanical properties			
Tensile Modulus	2850	MPa	ISO 527-1/-2
Yield stress, 50mm/min	53	MPa	ISO 527-1/-2
Yield strain, 50mm/min	7	%	ISO 527-1/-2
Nominal strain at break	16	%	ISO 527-1/-2
Tensile creep modulus, 1h	2400	MPa	ISO 899-1
Tensile creep modulus, 1000h	1200	MPa	ISO 899-1
Charpy impact strength, 23°C	90	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	85	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	4	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	4	kJ/m²	ISO 179/1eA
Ball indentation hardness, H 358/30	135	MPa	ISO 2039-1
Thermal properties			
Melting temperature, 10°C/min	166	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	80	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h, 50N	140	°C	ISO 306
Coeff. of linear therm. expansion, parallel	120	E-6/K	ISO 11359-1/-2

Printed: 2023-08-07 Page: 1 of 7



Flammability

Burning Behav. at 1.5mm nom. thickn.	НВ	class	UL 94
Thickness tested	1.6	mm	UL 94
Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	3.18	mm	UL 94
UL recognition	yes		UL 94

Electrical properties

Relative permittivity, 100Hz	4.1	IEC 62631-2-1
Relative permittivity, 1MHz	4.1	IEC 62631-2-1
Dissipation factor, 100Hz	35 E-4	IEC 62631-2-1
Dissipation factor, 1MHz	75 E-4	IEC 62631-2-1
Volume resistivity	1E12 Ohm.m	IEC 62631-3-1
Surface resistivity	1E14 Ohm	IEC 62631-3-2
Comparative tracking index	PLC 0 PLC	UL 746A

Other properties

Humidity absorption, 2mm	0.2 %	Sim. to ISO 62
Water absorption, 2mm	1.2 %	Sim. to ISO 62
Density	1420 kg/m ³	ISO 1183

Injection

Drying Temperature	100 - 120	$^{\circ}\mathrm{C}$
Drying Time, Dehumidified Dryer	3 - 4	h
Processing Moisture Content	0.15	%
Screw tangential speed	0.2 - 0.21	m/s
Max. mould temperature	80 - 120	°C
Back pressure	2	MPa
Injection speed	slow	

Characteristics

Additives Release agent

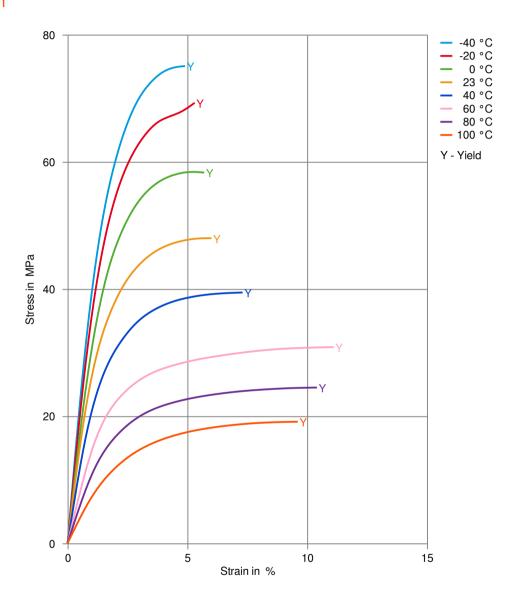
Additional information

Injection molding Standard injection moulding machines with three phase (15 to 25 D) plasticating screws will fit.

Printed: 2023-08-07 Page: 2 of 7



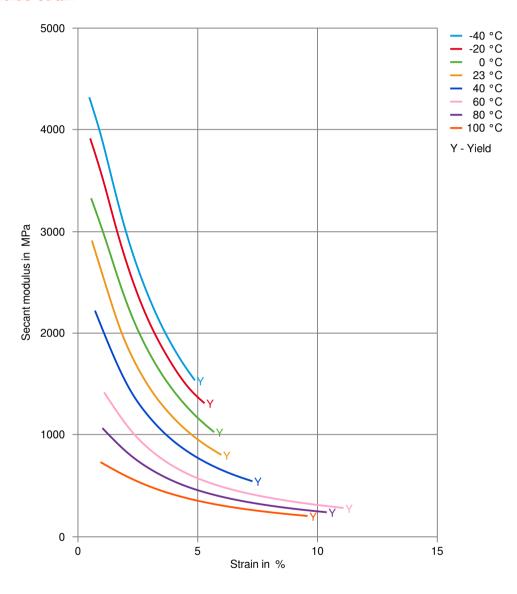
Stress-strain



Printed: 2023-08-07 Page: 3 of 7



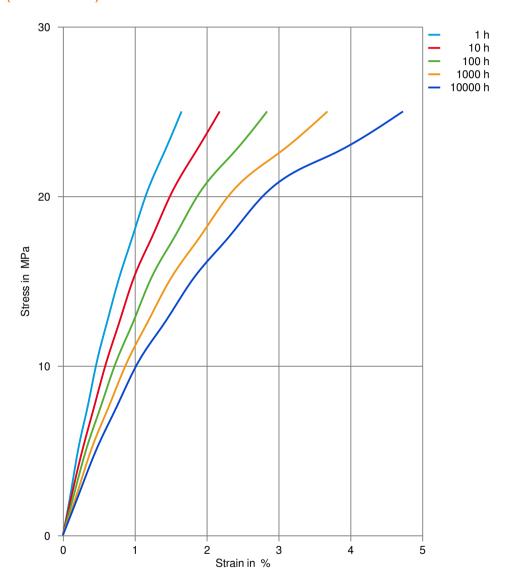
Secant modulus-strain



Printed: 2023-08-07 Page: 4 of 7



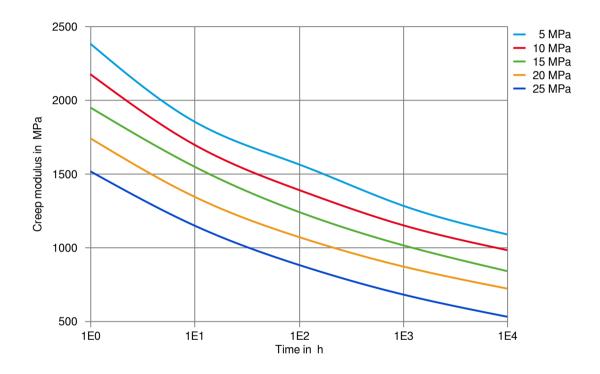
Stress-strain (isochronous) 23°C



Printed: 2023-08-07 Page: 5 of 7



Creep modulus-time 23°C



Printed: 2023-08-07 Page: 6 of 7



Processing Texts

Pre-drying Drying is not normally required. If material has come in contact with moisture

through improper storage or handling or through regrind use, drying may be

necessary to prevent splay and odor problems.

Longer pre-drying times/storage The product can then be stored in standard conditions until processed.

Injection molding Standard injection moulding machines with three phase (15 to 25 D)

plasticating screws will fit.

Injection molding Preprocessing General drying is not necessary due to low moisture absorption of

the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm

layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Injection molding Postprocessing Conditioning e.g. moisturizing is not necessary.

Other Approvals

Other Approvals

OEM	Specification	Additional Information
Bosch	N28 BN22-O015	Natural & Black
Continental	TST N 055 54.23	
Nissan	POM(0xx)-lxx-1	

Printed: 2023-08-07 Page: 7 of 7

Revised: 2023-05-26 Source: Celanese Materials Database

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any e

© 2023 Celanese or its affiliates. All rights reserved. Celanese®, registered C-ball design and all other trademarks identified herein with ®, TM, SM, unless otherwise noted, are trademarks of Celanese or its affiliates. Fortron is a registered trademark of Fortron Industries LLC. KEPITAL is a registered trademark of Korea Engineering Plastics Company, Ltd.