

HOSTAFORM® C 9021 M | POM | Tribological

Description

Chemical abbreviation according to ISO 1043-1: POM
Molding compound ISO 9988- POM-K, M-GNS, 03-002

POM copolymer

Injection molding type, modified with molybdenum disulphide; 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 a thickness more than 1.57 mm as UL 94 HB, temperature index UL 746 B electrical 105 °C, mechanical 90 °C (tensile impact) and 80 °C (tensile).

Burning rate ISO 3795 and FMVSS 302 < 100 mm/min for a thickness more than 1 mm.

Ranges of applications: For sliding combinations with high surface pressure and low sliding speed, only slight tendency to stick-slip.

UL = Underwriters Laboratories (USA)

FMVSS = Federal Motor Vehicle Safety Standard (USA)

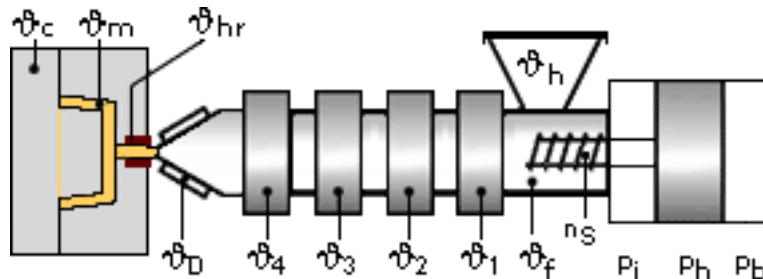
Physical properties	Value	Unit	Test Standard
Density	1420	kg/m ³	ISO 1183
Melt volume rate (MVR)	8.5	cm ³ /10min	ISO 1133
MVR test temperature	190	°C	ISO 1133
MVR test load	2.16	kg	ISO 1133
Mold shrinkage - parallel	2	%	ISO 294-4
Mold shrinkage - normal	1.8	%	ISO 294-4
Water absorption (23°C-sat)	0.75	%	ISO 62
Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	2800	MPa	ISO 527-2/1A
Tensile stress at yield (50mm/min)	65	MPa	ISO 527-2/1A
Tensile strain at yield (50mm/min)	9	%	ISO 527-2/1A
Nominal strain at break (50mm/min)	20	%	ISO 527-2/1A
Tensile creep modulus (1h)	2400	MPa	ISO 899-1
Tensile creep modulus (1000h)	1200	MPa	ISO 899-1
Flexural modulus (23°C)	2700	MPa	ISO 178
Charpy impact strength @ 23°C	120	kJ/m ²	ISO 179/1eU
Charpy impact strength @ -30°C	120	kJ/m ²	ISO 179/1eU
Charpy notched impact strength @ 23°C	6	kJ/m ²	ISO 179/1eA
Charpy notched impact strength @ -30°C	6	kJ/m ²	ISO 179/1eA
Thermal properties	Value	Unit	Test Standard
Melting temperature (10°C/min)	166	°C	ISO 11357-1,-2,-3
DTUL @ 1.8 MPa	100	°C	ISO 75-1/-2
Coeff.of linear therm. expansion (parallel)	1.1	E-4/°C	ISO 11359-2
Flammability @1.6mm nom. thickn.	HB	class	UL94
thickness tested (1.6)	1.57	mm	UL94

HOSTAFORM® C 9021 M | POM | Tribological

Thermal properties	Value	Unit	Test Standard
UL recognition (1.6)	UL	-	UL94
Flammability at thickness h	HB	class	UL94
thickness tested (h)	3.18	mm	UL94
UL recognition (h)	UL	-	UL94

Electrical properties	Value	Unit	Test Standard
Relative permittivity - 100 Hz	4.2	-	IEC 60250
Relative permittivity - 1 MHz	4.2	-	IEC 60250
Dissipation factor - 100 Hz	25	E-4	IEC 60250
Dissipation factor - 1 MHz	80	E-4	IEC 60250
Volume resistivity	1E12	Ohm*m	IEC 60093
Surface resistivity	1E14	Ohm	IEC 60093
Electric strength	35	kV/mm	IEC 60243-1
Comparative tracking index CTI	600	-	IEC 60112

Test specimen production	Value	Unit	Test Standard
Processing conditions acc. ISO	9988	-	Internal

Typical injection moulding processing conditions

Pre Drying:
Necessary low maximum residual moisture content: 0.15%

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.

The product can then be stored in standard conditions until processed.

Drying time: 3 - 4 h
Drying temperature: 100 - 120 °C
Temperature:

	$\varnothing_{\text{Manifold}}$	$\varnothing_{\text{Mold}}$	$\varnothing_{\text{Melt}}$	$\varnothing_{\text{Nozzle}}$	$\varnothing_{\text{Zone4}}$	$\varnothing_{\text{Zone3}}$	$\varnothing_{\text{Zone2}}$	$\varnothing_{\text{Zone1}}$	$\varnothing_{\text{Feed}}$	$\varnothing_{\text{Hopper}}$
min (°C)	190	80	190	190	190	190	180	170	60	20
max (°C)	210	120	210	210	210	200	190	180	80	30

HOSTAFORM® C 9021 M | POM | Tribological

Pressure:

	Inj press	Hold press	Back pressure
min (bar)	600	600	0
max (bar)	1200	1200	20

Speed:
Injection speed: slow
Screw speed

Screw diameter (mm)	16	25	40	55	75
Screw speed (RPM)	-	150	100	70	-

Injection Molding

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

Melt temperature 190-230 °C
 Mould temperature 80-120 °C

Contact Information

Americas

8040 Dixie Highway, Florence, KY 41042 USA
 Product Information Service
 t: +1-800-833-4882 t: +1-859-372-3244
 Customer Service
 t: +1-800-526-4960 t: +1-859-372-3214
 e: info-engineeredmaterials-am@celanese.com

Asia

4560 Jinke Road, Zhang Jiang Hi Tech Park

Shanghai 201203 PRC

Customer Service

t: +86 21 3861 9266 f: +86 21 3861 9599

e: info-engineeredmaterials-asia@celanese.com

Europa

Am Unisys-Park 1, 65843 Sulzbach, Germany

Product Information Service

t: +(00)-800-86427-531 t: +49-(0)-69-45009-1011

e: info-engineeredmaterials-eu@celanese.co

General Disclaimer

This publication was printed based on Celanese's present state of knowledge, and Celanese undertakes no obligation to update it. Because conditions of product use are outside Celanese's control, Celanese makes no warranties, express or implied, and assumes no liability in connection with any use of this information. Nothing herein is intended as a license to operate under or a recommendation to infringe any patents.

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. Colorants or other additives may cause significant variations in data values.

Properties of molded 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. 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 equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards.

HOSTAFORM® C 9021 M | POM | Tribological

We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed (+49 (0) 69 30516299 for Europe, +1 859-372-3244 for the Americas and +86 21 3861 9266 for Asia) for additional technical information. Visit our web site for the appropriate Safety Data Sheets (SDS) before attempting to process our products. Feel free to call Customer Services for additional assistance.

The products mentioned herein are not intended for use in medical or dental implants.

© 2014 Celanese or its affiliates. All rights reserved. (Published 26 September 2014)

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.