Celanese
The chemistry inside innovation™

HOSTAFORM® C 2521

Stiff-flowing grade for injection molding and extrusion
Chemical abbreviation according to ISO 1043-1: POM
Molding compound ISO 29988- POM-K, M-GNR, 01-002

POM copolymer

Stiff-flowing type for injection molding and extrusion with high impact toughness and good tracking resistance over a high range of temperature; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation.

Monomers and additives are listed in EU-Regulation (EU) 10/2011 FDA compliant according to 21 CFR 177.2470
Burning rate ISO 3795 and FMVSS 302 < 75 mm/min for a thickness more than 1 mm.

Ranges of applications: injection molding thick-walled, void-free molded parts; extrusion e.g. for boards and pipes.
FDA = Food and Drug Administration (USA)
FMVSS = Federal Motor Vehicle Safety Standard (USA)

Rheological properties

Melt volume-flow rate	2.5	cm^3/10min	ISO 1133
Melt mass-flow rate	2.8	g/10min	ISO 1133
Temperature	190	°C	
Load	2.16	kg	
Melt mass-flow rate, Temperature	190	°C	
Melt mass-flow rate, Load	2.16	kg	
Moulding shrinkage, parallel	2.1	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.8	%	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	2600	MPa	ISO 527-1/-2
Yield stress, 50mm/min	62	MPa	ISO 527-1/-2
Yield strain, 50mm/min	9	%	ISO 527-1/-2
Nominal strain at break	32	%	ISO 527-1/-2
Flexural Modulus	2500	MPa	ISO 178
Flexural Stress at 3.5%	66	MPa	ISO 178
Shear Modulus	1000	MPa	ISO 6721
Tensile creep modulus, 1h	2300	MPa	ISO 899-1
Tensile creep modulus, 1000h	1100	MPa	ISO 899-1
Charpy impact strength, 23°C	250[P]	kJ/m^2	ISO 179/1eU
Charpy impact strength, -30°C	250	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	8.5	kJ/m^2	ISO 179/1eA
Charpy notched impact strength, -30°C	7	kJ/m^2	ISO 179/1eA
Ball indentation hardness, H 358/30	144	MPa	ISO 2039-1

[P]: Partial Break

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Thermal properties

Melting temperature, 10 °C/min	165	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	101	°C	ISO 75-1/-2
Vicat softening temperature, 50 °C/h, 50N	151	°C	ISO 306
Coeff. of linear therm. expansion, parallel	110	E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.155	W/(m K)	Internal
Spec. heat capacity of melt	2210	J/(kg K)	Internal

Flammability

Burning Behav. at 1.5mm nom. thickn.	HB	class	UL 94
Thickness tested	1.5	mm	UL 94
Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	3.00	mm	UL 94
UL recognition	yes		UL 94

Electrical properties

Relative permittivity, 100Hz	4		IEC 62631-2-1
Relative permittivity, 1MHz	4		IEC 62631-2-1
Dissipation factor, 100Hz	15	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	50	E-4	IEC 62631-2-1
Volume resistivity	1E12	Ohm.m	IEC 62631-3-1
Surface resistivity	1E14	Ohm	IEC 62631-3-2
Electric strength	35	kV/mm	IEC 60243-1
Comparative tracking index	PLC 0	PLC	UL 746A

Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62
Water absorption, 2mm	0.65	%	Sim. to ISO 62
Density	1410	kg/m³	ISO 1183
Density of melt	1200	kg/m³	Internal

Injection

Drying Temperature	100 - 120	°C	
Drying Time, Dehumidified Dryer	3 - 4	h	
Processing Moisture Content	0.15	%	
Melt Temperature Optimum	210	°C	Internal
Screw tangential speed	0.2 - 0.21	m/s	
Max. mould temperature	80 - 120	°C	
Back pressure	4	MPa	
Injection speed	slow-medium		
Ejection temperature	140	°C	Internal

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Characteristics

Additives	Release agent

Additional information

Injection molding	Standard injection moulding machines with three phase (15 to 25 D) plasticating screws will fit.
Film extrusion	Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit. Melt temperature 180-190 °C
Other extrusion	Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit. Melt temperature 180-190 °C
Profile extrusion	Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit. Melt temperature 180-190 °C
Sheet extrusion	Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit. Melt temperature 180-190 °C

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Blow molding

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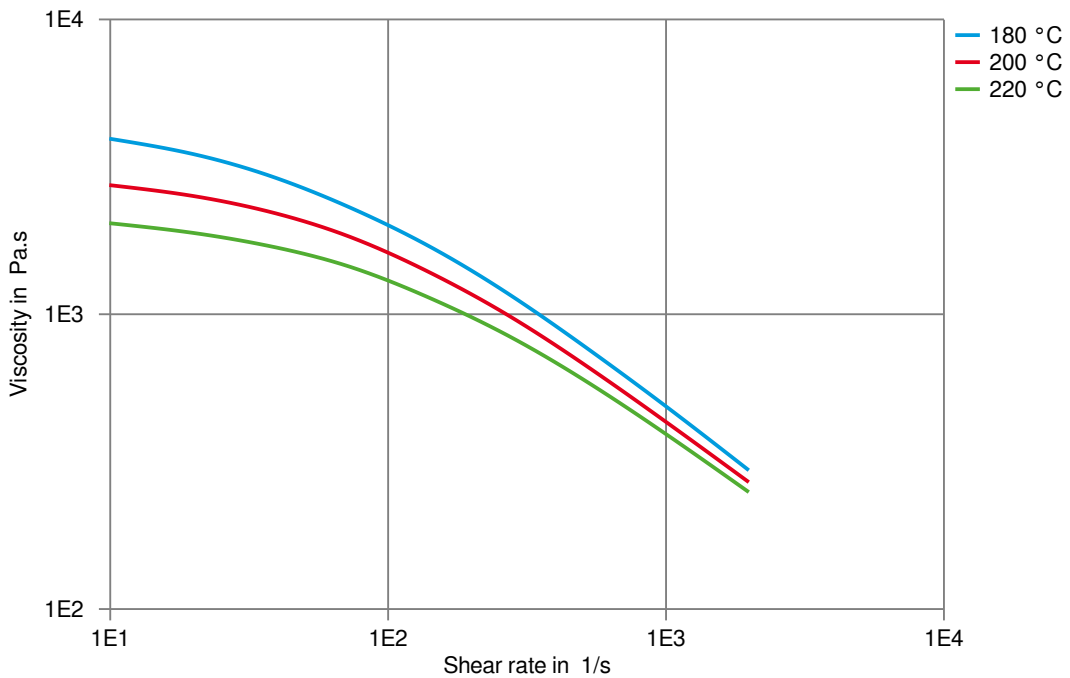
Standard extruders with plasticating screws (20 to 25 D) will fit.

Melt temperature 180-190 °C
Mould-surface temperature 60-100 °C

Viscosity-shear rate



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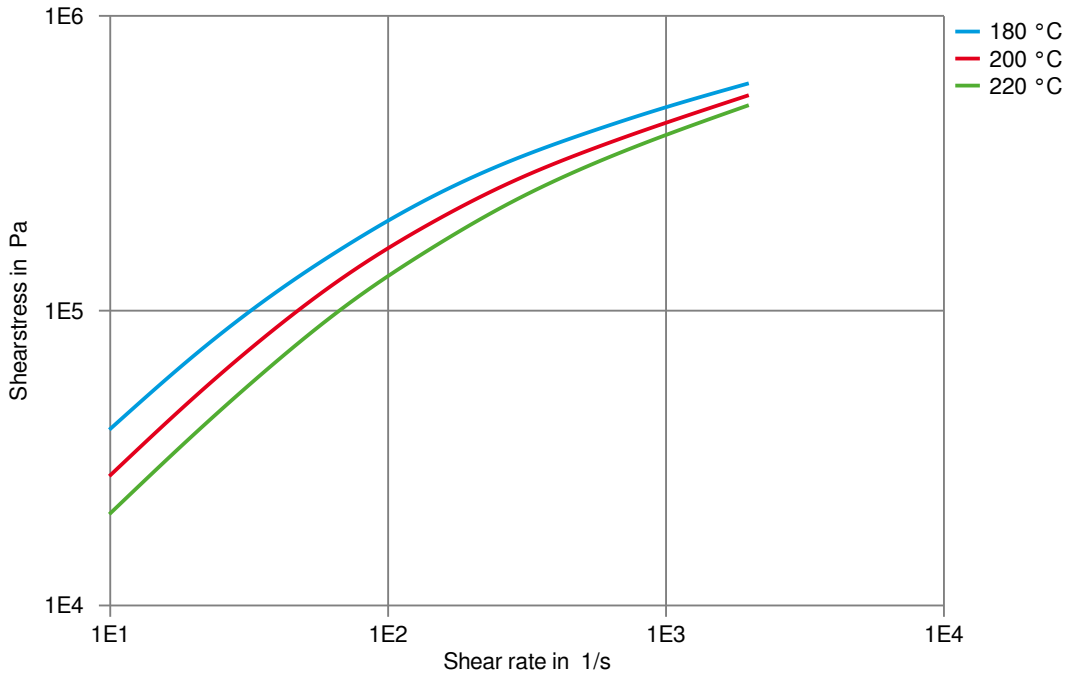
Shearstress-shear rate



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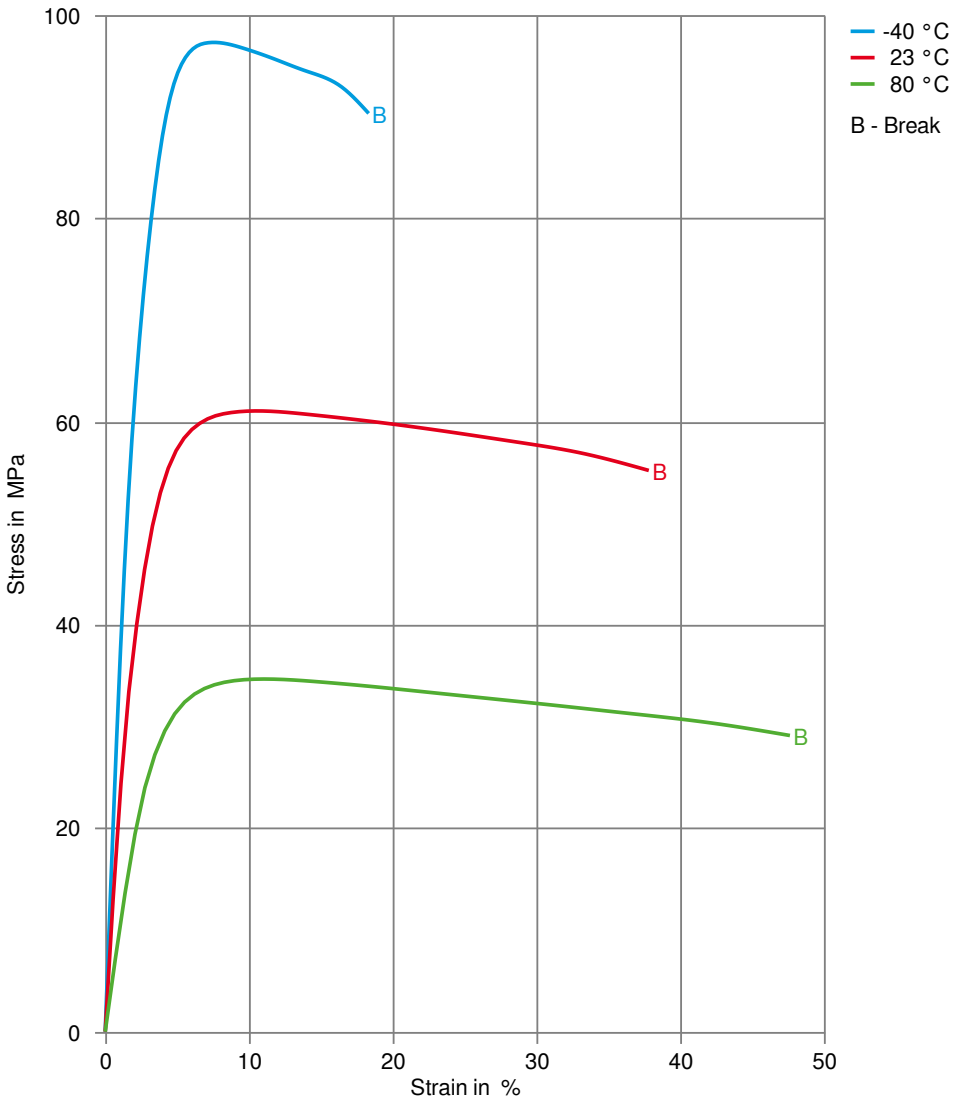
Stress-strain



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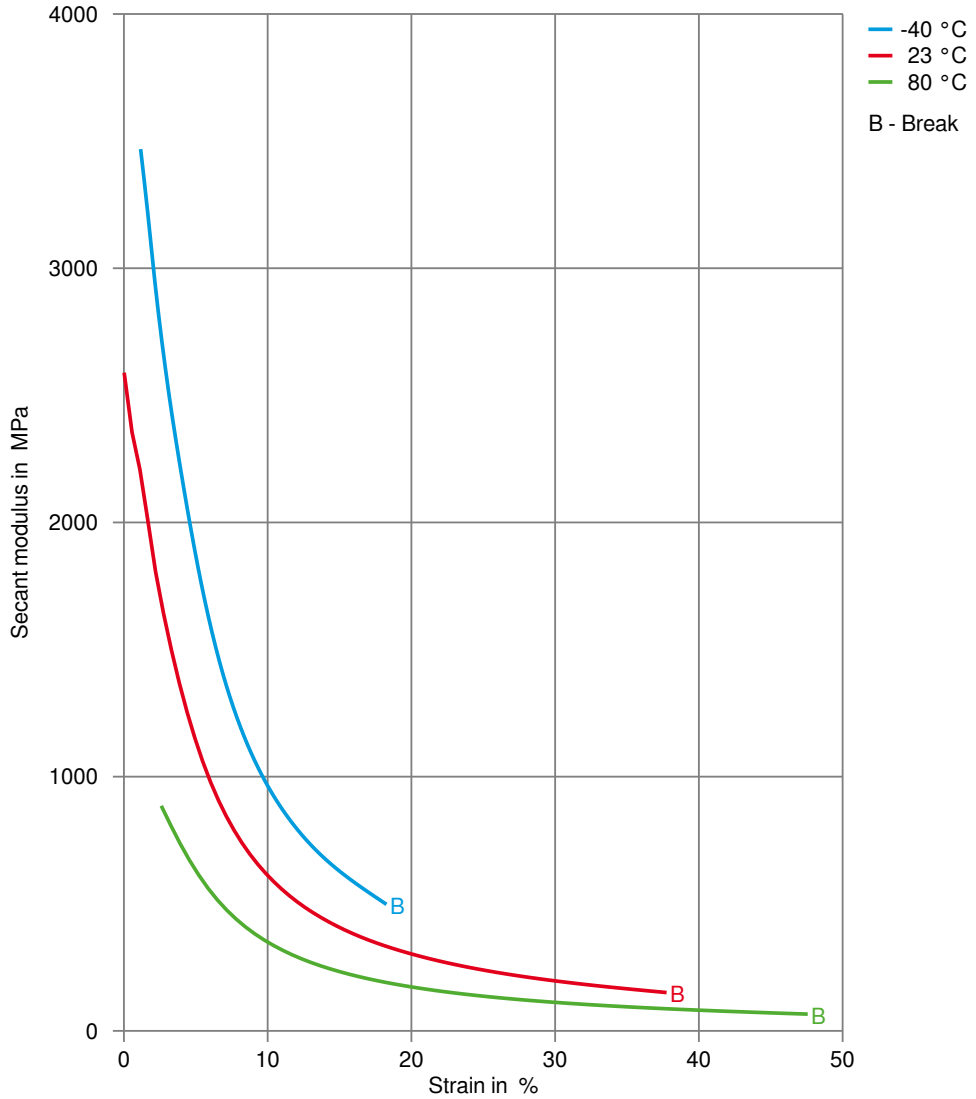
Secant modulus-strain



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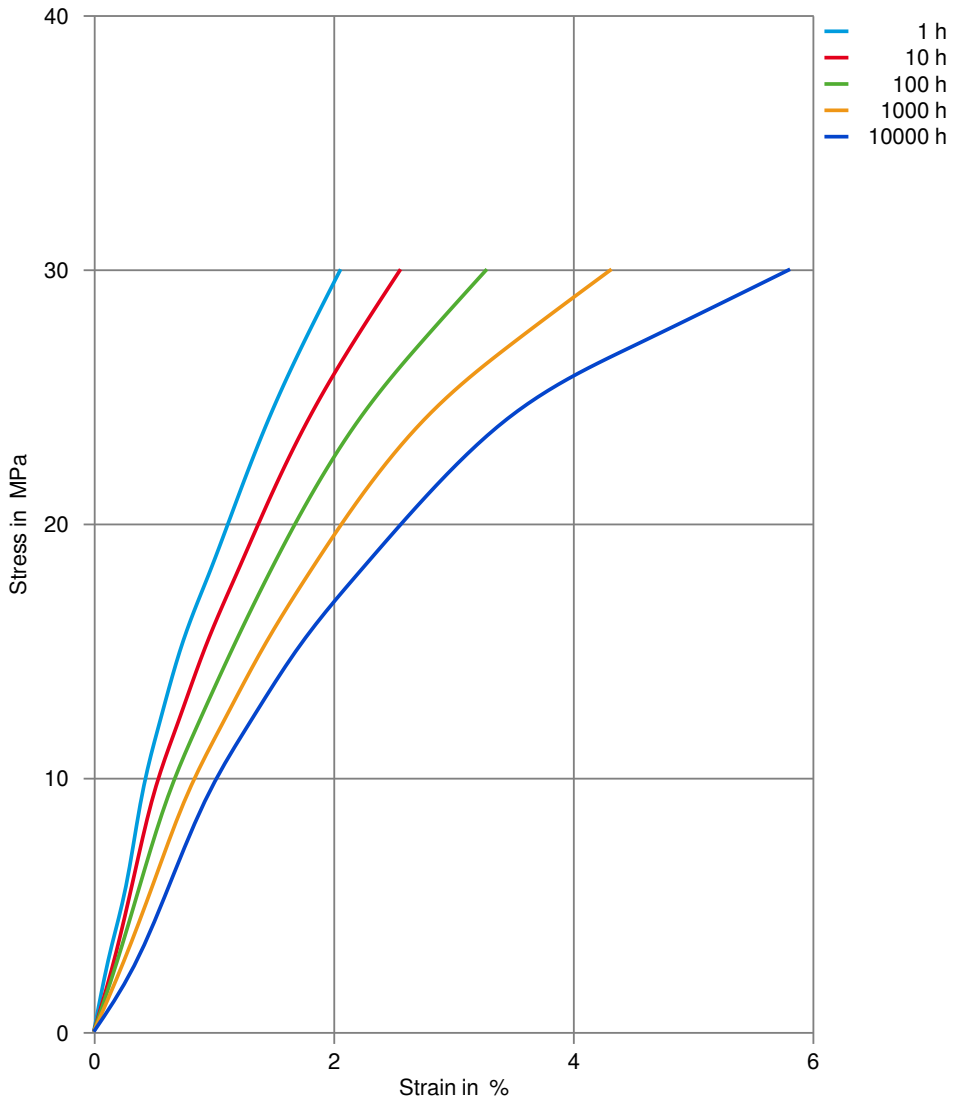
Stress-strain (isochronous) 23 °C



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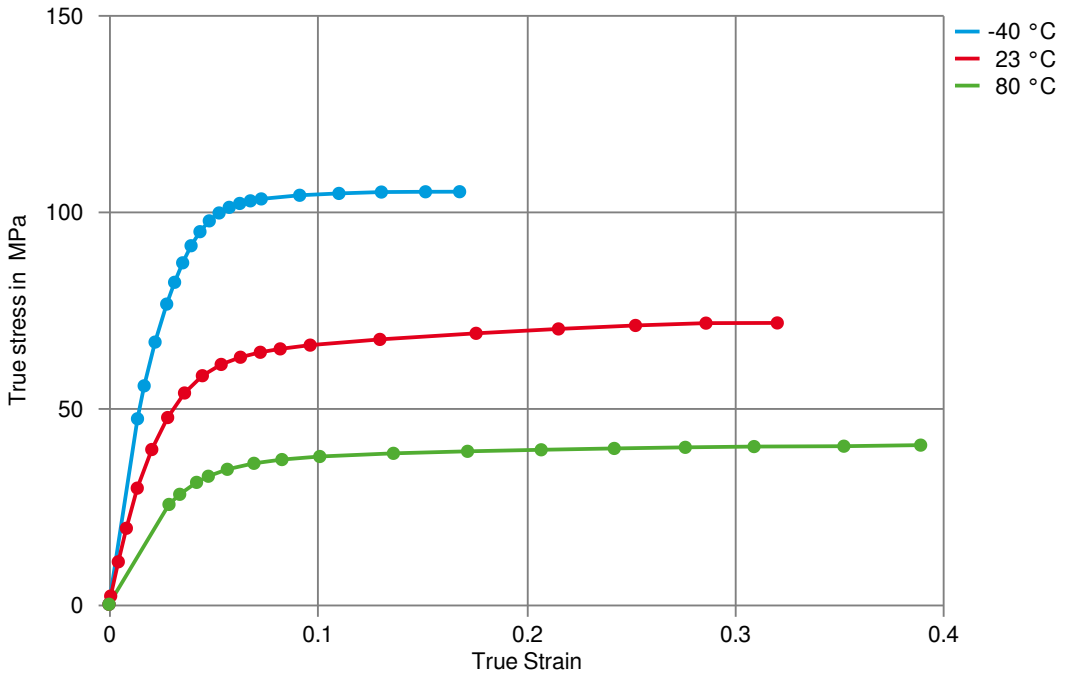
True stress-strain



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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
BMW	GS 93016	
Bosch	N28 BN22-O004	Colors
Continental	TST N 055 54.07	
Mercedes-Benz Group (Daimler)	DBL 5403	(5403.00)
Mercedes-Benz Group (Daimler)	DBL 5405	(5405.01)
Mercedes-Benz Group (Daimler)	DBL 5410	(5410.00)
Mercedes-Benz Group (Daimler)	DBL 5420	(5420.00)
Ford	WSK-M4D635-A1	Natural & Black 12
Nissan	POM-IVx-1	

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Toyota	TSM5515G-1A	