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Plastoplan 
Tworzywa

Karta techniczna tworzywa – fakty i mity
Jacek Łyżwa, Plastoplan Polska Sp. z o.o.



**plast
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CYCOLAC™ RESIN MG47F

REGION EUROPE

DESCRIPTION

Multi-purpose, injection molding ABS providing a favorable balance of engineering properties. FDA compliant.

TYPICAL PROPERTY VALUES

Revision 20170913

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	44	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	33	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	24	%	ASTM D 638
Tensile Modulus, 5 mm/min	2270	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	70	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2300	MPa	ASTM D 790
Hardness, Rockwell R	112	-	ASTM D 785
Tensile Stress, yield, 50 mm/min	47	MPa	ISO 527
Tensile Stress, break, 50 mm/min	35	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	2.6	%	ISO 527
Tensile Strain, break, 50 mm/min	25	%	ISO 527
Tensile Modulus, 1 mm/min	2370	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	70	MPa	ISO 178
Flexural Modulus, 2 mm/min	2200	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	320	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	30	J	ASTM D 3763
Izod Impact, notched 80°10'4 +23°C	22	kJ/m²	ISO 180/1A
Izod Impact, notched 80°10'4 -30°C	8	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10'4 sp=62mm	26	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80°10'4 sp=62mm	9	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	99	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	94	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	80	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.82E-05	1/°C	ASTM E 831



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	8.82E-05	1/°C	ASTM E 831
Vicat Softening Temp, Rate B/50	98	°C	ISO 306
Vicat Softening Temp, Rate B/120	100	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80°10'4 sp=64mm	81	°C	ISO 75/Af
Relative Temp Index, Elec	80	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	80	°C	UL 746B
PHYSICAL			
Specific Gravity	1.04	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 – 0.8	%	SABIC method
Melt Flow Rate, 230°C/3.8 kgf	5.6	g/10 min	ASTM D 1238
Melt Viscosity, 240°C, 1000 sec-1	2250	Poise	ASTM D 3825
Density	1.04	g/cm³	ISO 1183
Melt Flow Rate, 220°C/10.0 kg	18	g/10 min	ISO 1133
ELECTRICAL			
Arc Resistance, Tungsten (PLC)	6	PLC Code	ASTM D 495
Hot Wire Ignition (PLC)	3	PLC Code	UL 746A
High Voltage Arc Track Rate (PLC)	3	PLC Code	UL 746A
High Ampere Arc Ign, surface (PLC)	0	PLC Code	UL 746A
Comparative Tracking Index (UL) (PLC)	0	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.5	mm	UL 94
INJECTION MOLDING			
Drying Temperature	80 – 95	°C	
Drying Time	2 – 4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.1	%	
Melt Temperature	220 – 260	°C	
Nozzle Temperature	220 – 260	°C	
Front - Zone 3 Temperature	215 – 240	°C	
Middle - Zone 2 Temperature	205 – 225	°C	
Rear - Zone 1 Temperature	190 – 210	°C	
Mold Temperature	50 – 70	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	30 – 60	rpm	
Shot to Cylinder Size	50 – 70	%	
Vent Depth	0.038 – 0.051	mm	



DISCLAIMER

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SABIC® PP 83MF10

PP IMPACT COPOLYMER

DESCRIPTION

This grade combines a very high impact strength, even at low temperatures, with a high stiffness and moderate flow properties. It is typically used by our customers for injection moulding of technical components and containers exposed to heavy loads and needing a high toughness. It is typically used by our customers for extrusion applications like thin sheet, corrugated board and profiles.

Health, Safety and Food Contact regulations: Safety Data Sheets (SDS) and Product Safety declarations are available on our Internet site <http://www.SABIC.com>

The product mentioned herein is in particular not tested and therefore not validated for use in pharmaceutical / medical applications.

This grade material is UL registered under File E111275 (www.ul.com).
IMDS ID: 80775790

TYPICAL PROPERTY VALUES

Revision 20190507

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate			
at 230 °C and 2.16 kg	1.8	dg/min	ISO 1133
Density	905	kg/m ³	ASTM D 1505
FORMULATION			
UV stabilizer	<input type="checkbox"/>	-	-
Anti static agent	<input type="checkbox"/>	-	-
Nucleating agent	<input type="checkbox"/>	-	-
MECHANICAL PROPERTIES			
Tensile test			
strain at yield ⁽¹⁾	5	%	ISO 527-2 1A
stress at yield	23	MPa	ISO 527-2 1A
tensile modulus ⁽²⁾	1200	MPa	ISO 527-2 1A
Izod impact notched			
at -20 °C	12	kJ/m ²	ISO 180/1A
Izod impact notched			
at 23 °C	No Break	kJ/m ²	ISO 180/1A
Charpy Impact Strength Notched			
at -20 °C	10	kJ/m ²	ISO 179/1eA
at 0 °C	40	kJ/m ²	ISO 179/1eA
at 23 °C	75	kJ/m ²	ISO 179/1eA
Charpy impact unnotched			
at 23 °C	No Break	kJ/m ²	ISO 179/1eU
Hardness Shore D	61	-	ISO 868
THERMAL PROPERTIES			
Heat deflection temperature ⁽³⁾			
at 1.80 MPa (HDT/A)	55	°C	ISO 75
at 0.45 MPa (HDT/B)	85	°C	ISO 75
Vicat Softening Temperature ⁽⁴⁾			



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
at 10 N (VST/A)	148	°C	ISO 306
at 50 N (VST/B)	68	°C	ISO 306

- (1) Speed of testing: 50 mm/min
 (2) Speed of testing: 1 mm/min
 (3) Flat wise (testbar 80°10°4mm)
 (4) Temperature rate: 120°C/h

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Color & Comfort

DIC.PPS

Polyphenylene Sulfide

October, 2016

FZ-1130-D5

■ **Product Summary:** FZ-1130-D5 is a glass fiber 30% reinforced branched PPS compound with reduced flash and improved flexibility compared to conventional grades of PPS.

■ **Color:** Black and Natural (Brown)

Engineering Properties of FZ-1130-D5

Properties	Test Method	Unit	FZ-1130-D5
General Information			
			GF30% Low flash
Physical			
Density	ISO 1183	g/cm ³	1.59
Water absorption, 23°C /24hrs.	ISO 62	%	0.02
Mold shrinkage ^a	ISO 294-4	%	0.3/0.8
Mechanical			
Tensile strength	ISO 527-1,2	MPa	180
Tensile modulus	ISO 527-1,2	GPa	13.5
Tensile strain at break	ISO 527-1,2	%	1.7
Flexural strength	ISO 178	MPa	265
Flexural modulus	ISO 178	GPa	12.0
Flexural strain at break	ISO 178	%	2.3
Charpy impact strength, notched	ISO 179/1eA	kJ/m ²	9
unnotched	ISO 179/1eU	kJ/m ²	40
Co-eff. of friction ^b , static/dynamic	-	-	0.35/0.35
Thermal			
Heat deflection temperature, 1.80MPa	ISO 75-1,2	°C	265
Co-eff. of linear thermal expansion ^a , -50-50 °C	ISO 11359-2	x 10 ⁻⁵ /K	1.5/4.5
Co-eff. of linear thermal expansion ^a , 100-200 °C	ISO 11359-2	x 10 ⁻⁵ /K	1.5/12.5
Flammability ^c /thickness (mm)	UL-94	-	V-0/0.75
Electrical			
Dielectric strength, t=1.0mm	IEC 60243-1	kV/mm	25
Dielectric constant, 1MHz	IEC 60250	-	4
Dissipation factor, 1MHz	IEC 60250	-	0.004
Comparative Tracking Index (CTI)	IEC 60112	V	175
Volume resistivity	IEC 60093	Ω · cm	10 ¹⁶
Molding Condition			
Cylinder temperature	-	°C	300-340
Mold temperature	-	°C	130-150

a: Flow direction/Transverse direction
b: P=150kPa, V=0.3m/s, PPS vs. carbon steel
c: UL file No. E53829

DIC Corporation

Please refer to Safety Data Sheet for safety precautions prior to use. The information contained in this data sheet is based on tests or research DIC Corporation ("DIC") believes to be reliable, but no warranty is given by DIC concerning the accuracy or completeness thereof. The supply of the information does not release the recipient from the obligation to test the products as to their suitability for the intended applications and processes. DIC has no liability for any consequence of the application, processing or use of the information or the products. Information concerning the application of the products is not and should not be construed as a warranty as to non-infringement of intellectual property for a particular application.

PRODUKT INFORMATION

PRODUCT INFORMATION



Lieferant:
Distributor:

Vorläufiges Datenblatt

Edition: 10.2019

SAXAKETON 160 GF20

SAXAKETON 160 GF20 ist ein mittel-fließendes Polyketon mit 20% Glasfaser.

SAXAKETON 160 GF20 is a medium flowing polyketone containing 20% glass fibre.

Eigenschaft Property	Einheit Unit	Norm Norm	Bedingungen Conditions	Wert Value
Bruchspannung - Stress at break	N/mm ²	ISO 527-1	23°C/50% relH	117
Bruchdehnung - Tensile Strain	%	ISO 527-1	23°C/50% relH	3,6
Zugmodul - Tensile Modulus	N/mm ²	ISO 527-1	23°C/50% relH	5700
IZOD Schlagzähigkeit - Impact Strength	KJ/m ²	ISO 180/1U	23°C/50% relH -30°C	-
IZOD Kerbschlagzähigkeit - Notched Impact Strength	KJ/m ²	ISO 180/1A	23°C/50% relH -30°C	-
CHARPY Schlagzähigkeit - Impact Strength	KJ/m ²	ISO 179/1eU	23°C/50% relH -30°C	65
CHARPY Kerbschlagzähigkeit - Notched Impact Strength	KJ/m ²	ISO 179/1eA	23°C/50% relH -30°C	12
Vicat	°C	ISO 308/B50	50N	-
HDT A	°C	ISO 75-1A	1.8 Mpa	210
HDT B	°C	ISO 75-1B	0.45 Mpa	-
MVR	cm ³ /10min	ISO 1133	240°C/2.16kg	-
Dichte - Density	g/cm ³	-	20°C	1.4
Verarbeitungsschwindung - Mold shrinkage	%	-	-	2
Verarbeitungshinweise - Processing				
Empfohlene Masstemperatur - Melt Temperature	225-235°C	-	-	-
Empfohlene Werkzeugtemperatur - Mold Temperature	70-80°C	-	-	-
Vortrocknungstemperatur - Drying Temperature	70-80°C	-	-	-
Vortrocknungszeit - Drying Time	2-4 h	-	-	-
max. Verarbeitungsfeuchte - max. moisture before processing	0.1%	-	-	-

Alle Messwerte beziehen sich auf Naturmaterial - Test results refer to natural color material

www.saxpolymers.com

Haftungsausschluss: Alle obigen Angaben erfolgen nach bestem Wissen, jedoch ohne Garantie, Gewähr oder Haftung jeglicher Art, weder implizit noch explizit. Alle Aussagen betreffend mögliche Anwendungen sind unverbindlich, da der tatsächliche Einsatz im ausschließlichen Einflussbereich des Verarbeiters liegt. Dieser darf weiteres nicht davon ausgehen, dass Sicherheitsmaßnahmen hier angegeben sind oder dass keine anderen Vorkehrungen erforderlich sind. - Disclaimer: Although all statements, information and data given herein are believed to be accurate, they are presented without guarantee, warranty or responsibility of any kind, express or implied. Statements or suggestions concerning possible use of this product are made without representation. The user should not assume that all safety measures are indicated, or that other measures may not be required.

PMMA Heat Resistant Grade

IH830HR

Description

Appropriate for injection molding
The highest heat resistance grades
Excellent weatherability (AMECA listed)
Free colorability
Mold flow simulation data is available

Application

Windows for electric home appliances, Food containers
Inner lense and reflex plates (only colored parts), Rear combination lamp

Table

PROPERTY	CONDITION	UNIT	METHOD	VALUE
OPTICAL PROPERTIES				
Refractive Index	nd	-	ISO 489	1.49
Light Transmittance	3mm	%	ISO 13468-1	92
Haze	3mm	%	ISO 14782	<0.5
THERMAL PROPERTIES				
Melt Flow Index	230°C/3.8kg	g/10min	ISO 1133	1.7
VICAT Softening Point	B/50	°C	ISO 306	115
Heat Deflection Temperature	1.8MPa	°C	ISO 75	105
Coefficient of Linear Expansion	-	1/°C	ASTM D696	6x10 ⁻⁵
MECHANICAL PROPERTIES				
Charpy Impact Strength	notched	kJ/m ²	ISO 179	1.5
Rockwell Hardness	M scale	-	ISO 2039-2	99
Tensile Strength at Break	5mm/min	MPa	ISO 527	73
Tensile Strain at Break	5mm/min	%	ISO 527	5.3
Tensile Modulus	1mm/min	GPa	ISO 527	3.0
Flexural Strength	2mm/min	MPa	ISO 178	120
Flexural Modulus	2mm/min	GPa	ISO 178	3.2
GENERAL PROPERTIES				
Density	-	g/cm ³	ISO 1183	1.19
Mold Shrinkage	-	%	ASTM D955	0.2-0.6
Water Absorption	24hr	%	ASTM D570	0.3
Flammability UL94	1.5mm	Class	IEC 60695-11-10	HB
RECOMMENDED PROCESSING CONDITIONS				
Predrying Temperature	-	°C	-	90-100
Predrying Time in Desiccant-Type Drier	-	hr	-	4-6
Melt Temperature	-	°C	-	230-260
Mold Temperature	-	°C	-	60-90

REMARKS : The listed values should be used for reference purpose only.

Opis tworzywa – PN-EN ISO 1043-1:2011



HIGH PERFORMANCE POLYMERS

PRODUCT INFORMATION

radiflam®

RADIFLAM A RV250K AE 121 C NT

DESCRIPTION

PA66 flame retardant injection moulding grade. 25% glass fibre reinforced. Natural colour.

Suitable for parts requiring fire retardancy, medium stiffness and good mechanical resistance. Rated V-0 according to UL-94.

ISO 1043: PA66-T GF25 FR(17+72)

REGIONAL AVAILABILITY: North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Opis tworzywa – IMDS

SABIC® PPCOMPOUND 9110

PP COMPOUND MINERAL FILLED IMPACT MODIFIED

DESCRIPTION

SABIC® PPcompound 9110 is a talc filled impact modified PP with excellent impact and stiffness ratio. The material exhibits high flow combined with a very high scratch resistance, no stickiness and a low density.

SABIC® PPcompound 9110 designated automotive grade.

IMDS ID: 136528993

TYPICAL PROPERTY VALUES

Revision 20211207

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 230 °C and 2.16 kg	23	dg/min	ISO 1133

Opis tworzywa – cechy i zastosowanie

SABIC[®] HDPE B5823

HIGH DENSITY POLYETHYLENE

DESCRIPTION

SABIC[®] HDPE B5823 is typically used for blow moulding of consumer packaging up to 5 l, combining high stiffness and a good ESCR level. This grade is typically used for packaging the majority of household and industrial chemicals, such as detergents, cleaners, shampoos and cosmetics, as well as food packaging.

This product is not intended for and must not be used in any pharmaceutical/medical applications.

TYPICAL PROPERTY VALUES

Revision 20190506

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate			
at 190 °C and 2.16 kg	0.16	dg/min	ISO 1133
at 190 °C and 5 kg	0.89	dg/min	ISO 1133
at 190 °C and 21.6 kg	23	dg/min	ISO 1133
Density ⁽¹⁾	958	kg/m ³	ASTM D1505

Cechy fizyczne

www.victrex.com



Flow				
Melt Viscosity	400°C	ISO 11443	Pa.s	225
Miscellaneous				
Density	Crystalline	ISO 1183	g cm ⁻³	1.43
Shore D hardness	23°C	ISO 868		86
Water Absorption by immersion	Saturation, 23°C	ISO 62-1	%	0.4
	Saturation, 100°C			0.45

Właściwości mechaniczne

> **Material Properties**

	CONDITIONS	TEST METHOD	UNITS	TYPICAL VALUE
Mechanical Data				
Tensile Strength	Break, 23°C	ISO 527	MPa	160
	Break, -55°C			170
	Break, 125°C			115
	Break, 175°C			70
	Break, 225°C			50
	Break, 275°C			40
Tensile Elongation	Break, 23°C	ISO 527	%	2.4
Tensile Modulus	23°C	ISO 527	GPa	9.0
Flexural Strength	23°C	ISO 178	MPa	250
	-55°C			270
	125°C			190
	175°C			100
	275°C			60
Flexural Modulus	23°C	ISO 178	GPa	8.5
Compressive Strength	23°C	ISO 604	MPa	250
	120°C			160
	200°C			60
Charpy Impact Strength	Notched, 23°C	ISO 179/1eA	kJ m ⁻²	6.0
	Unnotched, 23°C	ISO 179/1U		35
Izod Impact Strength	Notched, 23°C	ISO 180/A	kJ m ⁻²	7.5
	Unnotched, 23°C	ISO 180/U		35

Właściwości elektryczne

ELECTRICAL			
Volume Resistivity	>1.E+15	Ω.cm	ASTM D257
Dielectric Strength, in air, 3.2 mm	19	kV/mm	ASTM D149
Dielectric Strength, in oil, 1.6 mm	24	kV/mm	ASTM D149
Relative Permittivity, 100 Hz	3.8	-	ASTM D150
Relative Permittivity, 1 MHz	3.7	-	ASTM D150
Dissipation Factor, 100 Hz	0.002	-	ASTM D150
Dissipation Factor, 1 MHz	0.02	-	ASTM D150
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Dielectric Strength, in oil, 0.8 mm	23	kV/mm	IEC 60243-1

Właściwości cieplne

THERMAL

Thermal Conductivity	0.2	W/m-°C	ISO 8302
CTE, -40°C to 40°C, flow	8.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	132	°C	ISO 306
Vicat Softening Temp, Rate B/120	134	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	128	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	108	°C	ISO 75/Ae
Relative Temp Index, Elec	105	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	105	°C	UL 746B

Właściwości optyczne

PMMA
Heat Resistant Grade

IH830HR

Description

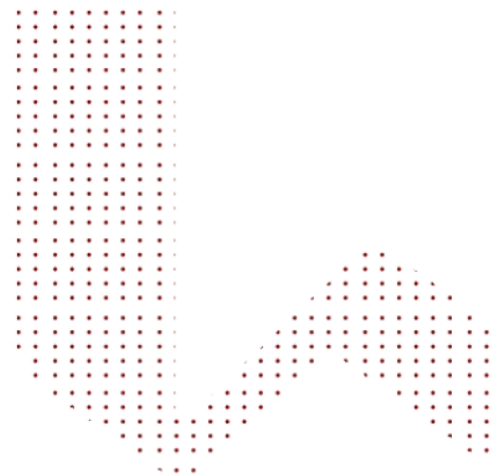
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Table

PROPERTY	CONDITION	UNIT	METHOD	VALUE
OPTICAL PROPERTIES				
Refractive Index	nd	-	ISO 489	1.49
Light Transmittance	3mm	%	ISO 13468-1	92
Haze	3mm	%	ISO 14782	<0.5



Palność

Flexural Modulus	2mm/min	ISO 178	MPa	9500	
Flexural Strength	2mm/min	ISO 178	MPa	207	
Charpy Impact Strength	+23°C	ISO 179/1eU	kJ/m ²	40	45
Charpy Notched Impact Strength	+23°C	ISO 179/1eA	kJ/m ²	8	11

THERMAL PROPERTIES

Melting Temperature	10°C/min	ISO 11357-1/-3	°C	260	
Heat Deflection Temperature	1.80 MPa	ISO 75/2Af	°C	225	
Vicat Softening Temperature	50°C/h 50N	ISO 306	°C	240	
Ball Pressure Hardness		IEC 60695-10-2	°C	≥185	

FLAMMABILITY PROPERTIES

Flammability	0.8mm	UL 94	class	V-0	
Glow Wire Flammability Index	1mm	IEC 60695-2-12	°C	960	
Glow Wire Flammability Index	2mm	IEC 60695-2-12	°C	960	
Glow Wire Ignition Temperature	1mm	IEC 60695-2-13	°C	850	
Glow Wire Ignition Temperature	2mm	IEC 60695-2-13	°C	850	
Automotive Interior Flammability	3mm	ISO 3795	mm/min	0	

ELECTRICAL PROPERTIES

Volume Resistivity	500V	IEC 62631-3-1	Ohm*m	1E13	1E11
Surface Resistivity	500V	IEC 62631-3-2	Ohm	1E12	1E10
Comparative Tracking Index	Sol.A	IEC 60112	V	350	

*: DAM = Dry As Moulded state according to ISO 16396-2, **: Cond = Conditioned state similar to ISO 1110

1: Melt Temperature [°C] / Mold Temperature [°C] / Cavity Pressure [MPa]

Suszenie i przetwórstwo

SolutionPartner



HI121H

Description

HI121H is a widely used ABS product for injection molding, designed to have impact resistance and bright white color.

Key Features

Bright White, Impact Resistance, General Purpose

Application

Electrical/Electronic Products, Miscellaneous Goods

Processing Guide (Injection Molding)

Processing Parameters	Unit	Value
Drying Temperature	°C	70 ~ 80
Drying Time	hrs	3 ~ 4
Injection Temperature	°C	200 ~ 250
Mold Temperature	°C	40 ~ 80
Screw Speed	rpm	30 ~ 60

Note

Injection Temperature & Screw Speed are only mentioned as general guidelines.

These may not apply or need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding.

Rozbieżności

Brak przepisów normujących
– dowolność w treści i układzie

Język karty

Regionalizacja

ISO czy ASTM?

Regionalizacja

CYCOLOY™ RESIN C1200HF

REGION EUROPE

DESCRIPTION

PC+ABS, excellent flow/impact/high heat resistance. Low temperature ductility.

TYPICAL PROPERTY VALUES

Revision 20170913

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	63	mg/1000cy	SABIC method
Tensile Stress, yield, 5 mm/min	55	MPa	ISO 527
Tensile Stress, break, 5 mm/min	45	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5	%	ISO 527
Tensile Strain, break, 5 mm/min	100	%	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	>50	%	ISO 527
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527

ISO

LEXAN™ RESIN HF1 1 10R

REGION EUROPE

DESCRIPTION

LEXAN™ HF1110R resin is a 25 MFR polycarbonate, MVR of 26. Mold release. UL94 V2 rated.

TYPICAL PROPERTY VALUES

Revision 20220720

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	10	mg/1000cy	SABIC method
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	70	%	ISO 527
Tensile Modulus, 1 mm/min	2350	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
Ball Indentation Hardness, H358/30	95	MPa	ISO 2039-1

ASTM

LEXAN™ RESIN HF1 1 10R

REGION AMERICAS

DESCRIPTION

LEXAN™ HF1 1 10R resin is a 25 MFR polycarbonate, MVR of 26. Mold release. UL94 V2 rated.

TYPICAL PROPERTY VALUES

Revision 20220720

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	65	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	120	%	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	93	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2300	MPa	ASTM D790

Przykłady – wskaźnik szybkości płynięcia

Norma: PN-EN ISO 1133:2002

MVR objętościowy wskaźnik szybkości płynięcia
cm³/10 min

MFR masowy wskaźnik szybkości płynięcia
g/10 min = dg/min = 10 x g/min

$$5 \text{ g/10 min} = 5 \text{ dg/min} = 0,5 \text{ g/min}$$

Przykłady – wskaźnik szybkości płynięcia

 **Mitsubishi Engineering-Plastics Corp.**

Iupilon™ S-3000UR

Mitsubishi Engineering-Plastics Corp - Polycarbonate

Saturday, September 23, 2023

General Information

Product Description

High Flow, UV stabilized, Mold release improved

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Regarding available country, please inquire via our website.			
Additive	• UV Stabilizer		
Features	• Good Mold Release • Good Weather Resistance	• High Flow • Light Stabilized	• Low Viscosity • UV Stabilized
Uses	• General Purpose		
Automotive Specifications	• GM GMP.PC.008		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	14	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method

Przykłady – wskaźnik szybkości płynięcia

SABIC[®] HDPE F04660

HIGH DENSITY POLYETHYLENE

DESCRIPTION

SABIC[®] HDPE F04660 is a homopolymer film grade with a broad processing window and high stiffness. It has good moisture barrier properties and can be blended with LDPE and LLDPE to improve film strength and rigidity.

This product is not intended for and must not be used in any pharmaceutical/medical applications.

TYPICAL APPLICATIONS

SABIC[®] HDPE F04660 is typically used for applications where high stiffness is required. It can be used in the middle layer in a coex structure or blended with LDPE and LLDPE to increase stiffness and mechanical properties. It has good water vapor barrier properties required for certain food packaging.

TYPICAL PROPERTY VALUES

Revision 20190403

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate			
at 190 °C and 21.6 kg	46	dg/min	ASTM D1238
at 190 °C and 2.16 kg	0.7	dg/min	ASTM D1238
at 190 °C and 5 kg	3	dg/min	ISO 1133

Przykłady – wskaźnik szybkości płynięcia: PP-SGF30

SABIC® PPCOMPOUND G3230A

PP SHORT GLASS FIBER REINFORCED

DESCRIPTION

SABIC® PPcompound G3230A is a 30% short glass fiber reinforced Polypropylene for under-the-hood and structural applications. The base material is a PP homopolymer and is available in standard black. The glass fibres are chemically coupled to the PP matrix. This material has been designed to combine a good performance profile with fast processing.

SABIC® PPcompound G3230A is a designated automotive grade.

IMDS ID: 109612410

TYPICAL PROPERTY VALUES

Revision 20170914

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate			
at 230 °C and 2.16 kg	11	dg/min	ISO 1133
Density ⁽¹⁾	1130	kg/m ³	ISO 1183
Filler content	30	%	SABIC method

Przykłady – wskaźnik szybkości płynięcia: PP-SGF30 FR V0

SABIC® PPCOMPOUND H1030

FLAME RETARDANT GLASS FIBER REINFORCED POLYPROPYLENE

DESCRIPTION

SABIC®PPcompound H1030 is a good flow, halogen free flame retardant, homopolymer with 30% glass fiber, developed for E&E and automotive injection molded applications. It has a UL94V0@1.5mm and 5VA@3.0mm flame rating. This material has been designed to combine a good performance profile with good processing and FR characteristics.

IMDS ID: 712120555
UL Yellow Card: E111275

TYPICAL PROPERTY VALUES

Revision 20230801

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 230 °C and 2.16 kg	8	dg/min	ISO 1133
Density ⁽¹⁾	1270	kg/m ³	ISO 1183
Filler content	30	%	SABIC method
Mould shrinkage ⁽²⁾			
24 hours after injection moulding	0.75	%	SABIC method
MECHANICAL PROPERTIES ^{(1) (3)}			
Tensile			
Tensile modulus	8500	MPa	ISO 527/1A

Przykłady – wskaźnik szybkości płynięcia: PP-LGF30

STAMAX™ 30YM240

PP LGF REINFORCED

DESCRIPTION

STAMAX™ 30YM240 is a 30% long glass fiber reinforced grade. The glass fibres are chemically coupled to the PP matrix, resulting in high stiffness and strength.

IMDS ID: 16496906

TYPICAL PROPERTY VALUES

Revision 20191025

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Density	1120	kg/m ³	ISO 1183
Glass fibre content	30	%	ISO 3451
MECHANICAL PROPERTIES ⁽¹⁾			
Tensile modulus			
at 23 °C	6600	MPa	ISO 527/1A

Przykłady – wskaźnik szybkości płynięcia



HIGH PERFORMANCE POLYMERS

PRODUCT INFORMATION

radilon®

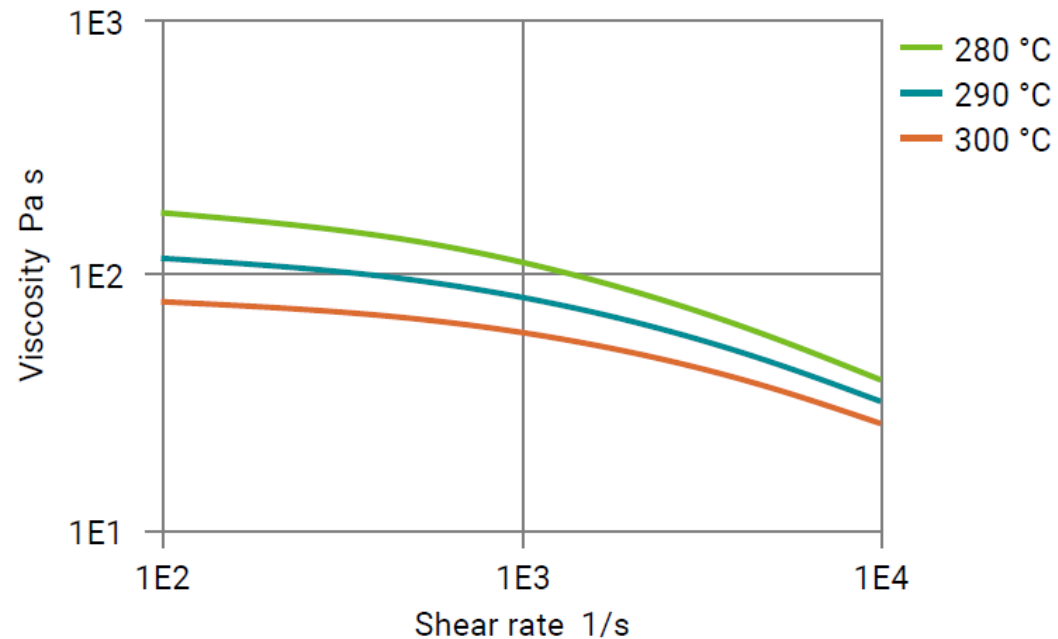
RADILON A HS 164 NT

PROPERTY	STANDARD	UNIT	VALUE	
			DAM*	Cond**
PHYSICAL PROPERTIES				
Density			1140	
Moulding shrinkage - Parallel / Normal	290/70/60 ^[1]	kg/m ³		1.2 / 1.3
Water Absorption, immersion at 23°C	2mm	%		8.9
Moisture Absorption 23°C - 50%RH	2mm	%		2.1
Viscosity Index (Sulfuric Acid)		ml/g		135

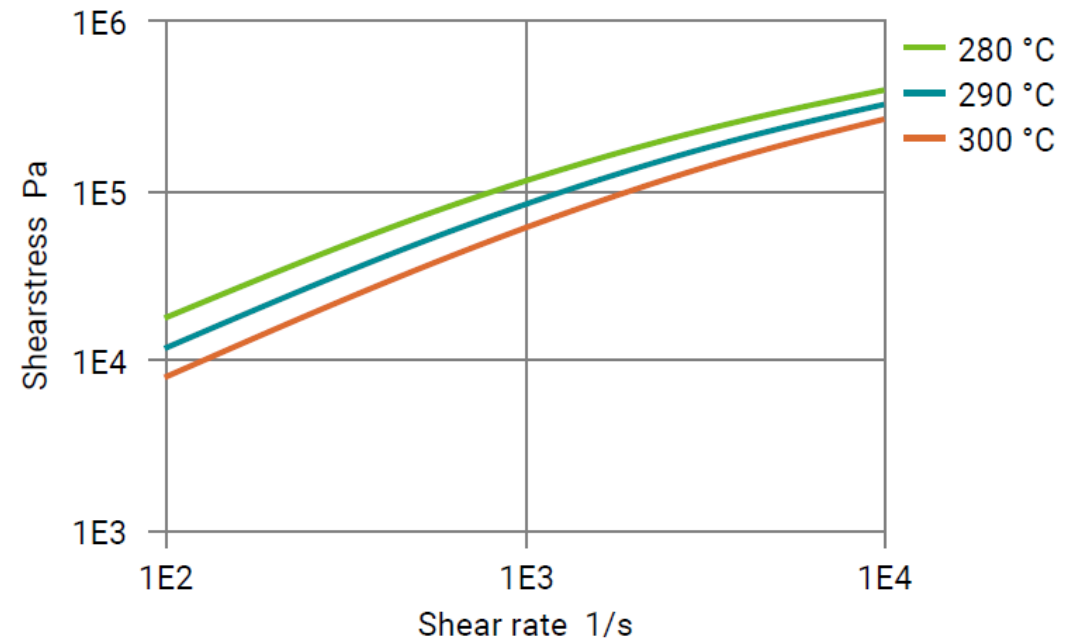
Przykłady – wskaźnik szybkości płynięcia

DIAGRAMS

Viscosity-shear rate



Shearstress-shear rate



We speak your industry

Podsumowanie



We speak your industry

Dziękuję za uwagę!



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