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RÖCHLING

Industrial Plastics
Engineering Plastics
High Performance Plastics



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About the Group

The Röchling Group, which is headquartered in Mannheim, includes 77 companies with a workforce of 8,400 employees in 22 locations on a global scale.

Our three company divisions, Industrial, Automotive and Medical, generate billions in sales every year on the European, American and Asian continents.

Strong growth and the swift pace of innovation characterize the market environment in which the Röchling Group does business. Few industries can compare with the plastics industry's potential. We have contributed significantly to the advancement of plastics in recent decades from Greenland to South Africa, from Columbia to Australia, and will continue to do this in the future.



The Americas

Industrial
 Orangeville, ON/CA
 Cleveland, OH/US
 Dallas, NC/US
 Gastonia, NC/US
 Kimberly, WI/US
 Mount Pleasant, PA/US
 Ontario, CA/US
 Litupeva, BR

Automotive
 Akron, OH/US
 Duncan, SC/US
 Troy, MI/US*
 Silao, MX
 Litupeva, BR

Medical
 Rochester, NY/US

Europe

Headquarter
 Mannheim, DE

Industrial
 Bad Gronenbach-Thal, DE
 Haren, DE
 Lahnstein, DE
 Lutzen, DE
 Nentershausen, DE
 Roding, DE
 Ruppertsweiler, DE
 Troisdorf, DE
 Oepping, AT
 Blassano, IT
 Gozzano, IT
 Venegono Inferiore, IT
 Gloucester, GB
 High Peak, GB
 Hitchin, GB
 Decines, FR

Maxeville, FR
 Bocarent, ES
 Rusko, FI
 Virserum, SE
 Allingabro, DK
 Liepaja, LV
 Saint Petersburg, RU
 Plana nad Luznici, CZ

Automotive
 Gernsbach, DE
 Ingoistadt, DE
 Koln, DE
 Mainburg, DE
 Munich, DE
 Peine, DE
 Russelsheim, DE
 Stuttgart, DE
 Wackersdorf, DE
 Weidenberg, DE

Wolfsburg, DE
 Worms, DE*
 Abbiategrasso, IT
 Laives, IT*
 Trento, IT
 Volpiano, IT
 Birmingham, GB
 Gijzegem, BE
 Paris, FR
 Araia, ES
 Teruel, ES
 Goteborg, SE
 Kraslice, CZ
 Ostrava, CA
 Pitesti, RO

Medical
 Brensbach, DE
 Neuhaus am Rennweg, DE

Asia

Industrial
 Kunshan, CN
 Shanghai, CN
 Suzhou, CN
 Mumbai, IN
 Vadodara, IN
 Singapore, SG
 Yokohama, JP

Automotive
 Changchun, CN
 Chengdu, CN
 Kunshan, CN*
 Shenyang, CN
 Suzhou, CN
 Osaka, JP

SALES BY INDUSTRY AND MARKET



Röchling=Coal



Röchling=Steel



Conglomerate



Röchling=Plastics



Markets (Sales by Region)



Customers (Sales by Region)





Röchling Engineering Plastics (Suzhou) Co., Ltd



Röchling Engineering Plastics Pte Ltd



Röchling Engineering Plastics Japan Co., Ltd



Röchling Engineering Plastics (India) Pvt. Ltd.





Competence, Quality, Innovation

Today, many internationally active enterprises require their suppliers to be present around the world. They should swiftly respond to demands from customers while simultaneously adhere to uniform standards worldwide. In most cases, neither large enterprises nor small companies can fulfill both requirements. However, Röchling accomplishes this with ease.

Our customers are endowed with benefits of fast implementation and flexible order processing. Moreover, we have a strong team with mutual support and influence.

With decades of technological expertise, high-quality and uniform standards, as well as recognized innovation, the Röchling Group is impressive on all fronts to customers.

Our unique and innovation products and state-of-the-art plastics processing technologies, plus, high-quality standards make us easily deal with various problems no matter when occur. This is what the name "Röchling" and the Röchling logo represent.

INDUSTRY OVERVIEW



Chemical engineering and environment

- Tank Building
- Ventilation industry
- Electroplating



Water treatment

- Lining
- Desalination of sea water
- Chemical water treatment
- Small scale sewage plants



Materials handling industry

- Beverage and food packaging industry
- Mech. Engineering
- Automation
- Internal logistics
- Bottling



Food processing industry

- Cutting boards for machines of food processing



Transportation

- Railway
- Bus
- Temporary Roads



Aerospace

- Aircraft interior design



Lining technology

- Lining of: Truck-beds, ships, wagons, silos
- Funnel
- Storeroom



Medical engineering

- Surgical instruments
- Pharmacy & Biotechnology
- Radiodiagnostics
- Orthopedics



Electronics & solar power

- Components for electronic devices
- Photovoltaic systems
- Laboratory equipment



Sports and leisure industry

- Playground Equipment
- Swimming pool manufacturing
- Sports facility construction
- Boat building



Oil and gas industry

- Seal and valve technology
- Pipelines
- Lifting technology
- Compressor technology



Wind power

- Components for the construction of wind power plants



Semicon

- Wafer - production
- Test socket

PRODUCT SERIES

Thermoplastics
Brand names

High-Performance Plastics

SUSTAPEI
SUSTASON PPSU
SUSTASON PES
SUSTASON PSU

SUSTAPEEK
SUSTARON PPS
Vitrite®HTS
SUSTAECTFE
SUSTAPVDF
POLYSTONE®PVDF

150°C

Engineering Plastics

SUSTAPE
SUSTANAT PC

SUSTADUR PBT
SUSTADUR PET
SUSTARIN
SUSTAVACU
SUSTAGLIDE
SUSTAMID
SUSTAKON
Matrox®

100°C

Industrial Plastics

SUSTAABS
MAYWO(ABS)
MAYWO(PS)
Formaterm®
Rimito®
Trovidur®
Trovice®

TroBloc®
Astrawood®Cool

POLYSTONE®P Foamlite®
POLYSTONE®M LubX®
POLYSTONE®D Polystone®Play Tec
POLYSTONE®G Polystone®Marine-Tec
POLYSTONE®E Polystone®Safe Tec

amorphous

semi-crystalline

Materials

Polystone® P

PP-H – Polypropylene (homopolymer)

Polystone® P homopolymer materials are extremely strong and highly resistant to chemicals, corrosion and heat.

Polystone® P Homopolymer PP-H

• Type of product 产品类型

- Compression moulded sheets, extruded sheets, round rods, welding rods, square tubes, U profiles, coils

• Properties 性能特点

- High rigidity
- Very high heat resistance
- Excellent weldability properties
- High chemical and corrosion resistance

• Colours 颜色

- Natural, grey, white, white 9010, special colour

• Typical areas of application 应用领域

- Electroplating technology
- Ventilation and equipment manufacturing
- Laboratory technology
- Pump engineering



Polystone® P Homopolymer Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	0.91
Water absorption	DIN EN ISO 62	%	<0,1
Flammability(Thickness 3 mm/ 6 mm)	UL 94		HB
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	32
Elongation at break	DIN EN ISO 527	%	>50
Tensile modulus of elasticity	DIN EN ISO 527	MPa	1500
Notched impact strength	DIN EN ISO 179	kJ/m ²	5
Shore hardness	DIN EN ISO 868	scale D	72
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	162-167
Thermal conductivity	DIN 52612-1	W/(m*k)	0,20
Thermal capacity	DIN 52612	kJ/(kg*k)	1,70
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁴ K	120-190
Service temperature,long term	Average	°C	0-100
Service temperature,short term(max.)	Average	°C	150
Vicat softening temperature	DIN EN ISO 306,Vicat B	°C	90
Electrical properties			
Dielectric constant	IEC 60250		2,4
Dielectric dissipation factor(10 ⁴ HZ)	IEC 60250		0,00019
Volume resistivity	IEC 60093	Ω *cm	> 10 ¹⁴
Surface resistivity	IEC 60093	Ω	> 10 ¹⁴
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	45

The data mentioned in this brochure are average values ascertained by current statistical returns and tests. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.

Specification

Extruded sheet	s 1...50mm	2.000 × 1.000mm	3.000 × 1.500mm
		2.440 × 1.220mm	4.000 × 2.000mm
Compression moulded sheet	s 8...200mm 2.000 × 1.000mm	s 8...100mm	s 8...180mm
		4.000 × 2.000mm	6.000 × 1.000mm
		6.000 × 2.500mm	6.000 × 2.000mm
		3.000 × 1.250mm	
Round rod	11.000mm 12.000mm	Φ 6...300mm	
Welding rod			

s Thickness, Φ Diameter, † Length

Materials

Polystone® P

PP-C – Polypropylene (copolymer)

Polystone® P Copolymer materials are outstanding for their toughness at temperatures down to -30°C , as well as their high strength and high chemical and corrosion resistance. Standard: block copolymer, random copolymer on request.

Polystone® P Copolymer PP-C

• Type of product 产品类型

- Compression moulded sheets, extruded sheets, round rods, square tubes, U profiles, welding rods

• Properties 性能特点

- High rigidity
- High heat resistance
- Excellent weldability
- High chemical and corrosion resistance

• Colours 颜色

- Natural, grey, white, white 9010, special colours

• Typical areas of application 应用领域

- Electroplating
- Ventilation and equipment manufacturing
- Laboratory technology
- Boat building



Polystone® P Copolymer Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	0,91
Water absorption	DIN EN ISO 62	%	<0,1
Flammability(Thickness 3 mm/ 6 mm)	UL 94		HB
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	23
Elongation at break	DIN EN ISO 527	%	>50
Tensile modulus of elasticity	DIN EN ISO 527	MPa	1100
Notched impact strength	DIN EN ISO 179	kJ/m ²	40
Shore hardness	DIN EN ISO 868	scale D	69
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	152-165
Thermal conductivity	DIN 52612-1	W/(m*k)	0,20
Thermal capacity	DIN 52612	kJ/(kg*k)	1,70
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ /K	120-190
Service temperature, long term	Average	°C	-30-100
Service temperature, short term(max.)	Average	°C	150
Vicat softening temperature	DIN EN ISO 306, Vicat B	°C	85
Electrical properties			
Dielectric constant	IEC 60250		2,5
Dielectric dissipation factor(10 ⁶ Hz)	IEC 60250		0,00019
Volume resistivity	IEC 60093	$\Omega \cdot \text{cm}$	$> 10^{14}$
Surface resistivity	IEC 60093	Ω	$> 10^{13}$
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	45

The data mentioned in this brochure are average values ascertained by current statistical returns and tests. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.

Specification

Extruded sheet	s 1...50mm	3.000 × 1.500mm	
	2.440 × 1.220mm	4.000 × 2.000mm	
Compression moulded sheet	s 8...200mm	3.000 × 1.250mm	s 8...180mm
	2.000 × 1.000mm	4.000 × 2.000mm	6.000 × 1.000mm
		6.000 × 2.500mm	6.000 × 2.000mm
Round rod	11.000mm	Φ 8...300mm	
	12.000mm		
Welding rod			

s Thickness, Φ Diameter, † Length

Polystone® P SK

P-SK – Polypropylene – backing on one side with polyester stretch

A **Polystone® P** material can be bonded with other materials thanks to a backing on one side. The material used for the backing is either a polyester stretch (SK) or, in the case of strongly diffusing chemicals and/or high temperature fluctuations, knitted glass fibre (GK).

Polystone® P SK

• Type of product 产品类型

- Coils
- Extruded sheets

• Properties 性能特点

- Very good welding and processing properties
- High adhesion in a composite system
- High chemical and corrosion resistance
- Very high heat resistance

• Colours 颜色

- Grey, natural, special colours

• Typical areas of application 应用领域

- Chemical engineering and tank building
- Electroplating technology
- Rehabilitation

Polystone® P SK Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	0.91
Water absorption	DIN EN ISO 62	%	<0,1
Flammability(Thickness 3 mm/ 6 mm)	UL 94		HB
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	23
Elongation at break	DIN EN ISO 527	%	>50
Tensile modulus of elasticity	DIN EN ISO 527	MPa	1100
Notched impact strength	DIN EN ISO 179	kJ/m ²	40
Shore hardness	DIN EN ISO 868	scale D	69
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	162–165
Thermal conductivity	DIN 52612-1	W/(m*k)	0,20
Thermal capacity	DIN 52612	kJ/(kg*k)	1,70
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁵ /K	120–190
Service temperature, long term	Average	°C	-30 – 100
Service temperature, short term(max.)	Average	°C	150
Vicat softening temperature	DIN EN ISO 306, Vicat B	°C	85
Electrical properties			
Dielectric constant	IEC 60250		2,5
Dielectric dissipation factor(10 ³ Hz)	IEC 60250		0,00019
Volume resistivity	IEC 60093	Ω*cm	> 10 ¹⁴
Surface resistivity	IEC 60093	Ω	> 10 ¹³
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	45

The data mentioned in this brochure are average values ascertained by current statistical returns and tests. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.

Specification

Extruded sheet	s 2...10mm	2.000 × 1.000mm	3.000 × 1.500mm
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s Thickness, φ Diameter, l Length

Materials

Polystone® PVDF

PVDF - Polyvinylidene fluoride

Polystone® PVDF is a vinylidene-fluoride-based polymerisate outstanding for its excellent chemical resistance, excellent machinability and universal applicability. Because of its special properties Polystone® PVDF is especially suited for applications in the chemical industry, its high purity makes it the ideal material for the semiconductor industry.

Polystone® PVDF PVDF

• Type of product 产品类型

- Compression moulded sheets, extruded sheets, round rods, square tubes, U profiles, welding rods, coils

• Properties 性能特点

- High temperature resistance
- Outstanding chemical resistance
- Low coefficient of friction
- Excellent ageing properties
- Good electrical properties
- Almost no moisture absorption
- Excellent weldability

• Colours 颜色

- Natural

• Typical areas of application 应用领域

- Clean room technology
- Semiconductor industry
- Chemical engineering
- Tank building



Polystone® PVDF Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	1,78
Water absorption	DIN EN ISO 62	%	<0,4
Flammability(Thickness 3 mm/ 6 mm)	UL 94		V0
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	55
Elongation at break	DIN EN ISO 527	%	>30
Tensile modulus of elasticity	DIN EN ISO 527	MPa	2200
Notched impact strength	DIN EN ISO 179	kJ/m ²	15
Shore hardness	DIN EN ISO 868	scale D	77
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	172-175
Thermal conductivity	DIN 52612-1	W/(m*k)	0,19
Thermal capacity	DIN 52612	kJ/(kg*k)	1,20
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ K	100-140
Service temperature, long term	Average	°C	0-140
Service temperature, short term(max.)	Average	°C	150
Vicat softening temperature	DIN EN ISO 306, Vicat B	°C	140
Electrical properties			
Dielectric constant	IEC 60250		8,0
Dielectric dissipation factor(10 ⁶ Hz)	IEC 60250		0,02
Volume resistivity	IEC 60093	Ω*cm	>10 ¹⁴
Surface resistivity	IEC 60093	Ω	<10 ¹⁴
Comparative tracking index	IEC 60112		630
Dielectric strength	IEC 60243	kV/mm	20

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Specification

Extruded sheet	s 1...15mm*	2.000 × 1.000mm 3.000 × 1.500mm
Compression moulded sheet	s 8...100mm 2.000 × 1.000mm	s 8...50mm 4.000 × 2.000mm 6.000 × 2.000mm
Round rod	11.000mm 12.000mm	φ 8...300mm
Welding rod		

s Thickness, φ Diameter, l Length

Materials

Polystone® PVDF SK

PVDF – polyvinylidene fluoride – one side with polyester stretch

Polystone® PVDF SK/GK sheets are backed on one side to enable them to be bonded with other materials. The material used for the coating is either a polyester stretch (SK) or, in the case of strongly diffusing chemicals and/or high temperature fluctuations, knitted glass fibre (GK).

Polystone® PVDF SK

• Type of product 产品类型

- Coils
- Extruded sheets

• Colours 颜色

- Natural

• Properties 性能特点

- Very good welding and processing properties
- Especially firm adhesion in the composite system and therefore especially suitable for container and plant construction
- Especially high resistance to acids
- Very high heat resistance
- Very good ageing resistance

• Typical areas of application 应用领域

- Chemical engineering and tank building
- Electroplating technology
- Corrosion protection

Specification

Extruded sheet	s 2...10mm 3.000 × 1.500mm	s 3mm 20.000 × 1.500mm
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s Thickness, Ø Diameter, † Length

Materials

Polystone® PVDF GK

PVDF – polyvinylidene fluoride – one side with knitted glass fiber

Polystone® PVDF SK/GK sheets are backed on one side to enable them to be bonded with other materials. The material used for the coating is either a polyester stretch (SK) or, in the case of strongly diffusing chemicals and/or high temperature fluctuations, knitted glass fibre (GK).

Polystone® PVDF GK

• Type of product 产品类型

- Coils
- Extruded sheets

• Colours 颜色

- Natural

• Properties 性能特点

- Very good welding and processing properties
- Especially high resistance to acids
- Very high heat resistance
- Very good ageing resistance

• Typical areas of application 应用领域

- Chemical engineering and tank building
- Electroplating technology
- Corrosion protection

Specification

Extruded sheet	s 2...10mm	3.000 × 1.500mm
----------------	------------	-----------------

s Thickness, Ø Diameter, † Length

Materials

Polystone® M

PE – UHMW / PE 1000 – Ultra High Molecular Polyethylene

PE –UHMW / PE1000 – Ultra High Molecular Polyethylene can be applied to resolve friction, abrasion, materials flow occurred in wide range of industries. This material is widely used in various technologies thanks to its excellent sliding behaviour, high abrasion resistance, high impact strength and good chemical resistance.

Polystone® M

• Type of product 产品类型

- Compression moulded sheets, pressed sheets, skived sheets, round rods, square tubes, U profiles

• Properties 性能特点

- High abrasion and wear resistance
- Low coefficient of friction
- High impact strength
- High resistance to corrosion and chemicals
- Self-lubricating properties
- No water absorption
- Excellent performance capability when used at temperatures down to -200 ° C
- Resists high dynamic stresses
- Excellent resistance to stress cracks

• Colours 颜色

- Natural, black, green, special colours

• Typical areas of application 应用领域

- Chemical engineering
- General conveyor technology
- Chain and cam guidance
- General engineering
- Beverage and food industry
- Packing industry



Polystone® M Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	0,93
Water absorption	DIN EN ISO 62	%	<0,01
Flammability(Thickness 3 mm/ 6 mm)	UL 94		HB
Mechanical properties			
Yield stress	DIN EN ISO 527	N/mm ²	20
Elongation at break	DIN EN ISO 527	%	>200
Tensile modulus of elasticity	DIN EN ISO 527	MPa	630
Impact strength	DIN EN ISO 527	%	no break
Shore hardness	DIN EN ISO 868	scale D	63
Wear resistance	Sand-slurry		80
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	135
Thermal conductivity	DIN 52612-1	W/(m*k)	0,40
Thermal capacity	DIN 52612	kJ/(kg*k)	1,90
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ K ⁻¹	150-230
Service temperature,long term	Average	°C	-250...80
Service temperature,short term(max.)	Average	°C	130
Vicat softening temperature	DIN EN ISO 306,Vicat B	°C	80
Electrical properties			
Dielectric constant	IEC 60250		2,3
Dielectric dissipation factor(10 ⁶ HZ)	IEC 60250		0,0001
Volume resistivity	IEC 60093	Ω*cm	> 10 ¹⁴
Surface resistivity	IEC 60093	Ω	> 10 ¹⁴
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	45

The data mentioned in this brochure are average values ascertained by current statistical returns and tests. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.

Specification

Extruded sheet	s 1...8mm	2.000 × 1.000mm	
Compression moulded sheet	s 8...200mm 2.000 × 1.000mm	s 8...100mm	s 8...180mm
		3.000 × 1.250mm	6.000 × 1.000mm
		4.000 × 2.000mm	6.000 × 2.000mm
Round rod	11.000mm	φ 8...260mm	
	12.000mm		

s Thickness, φ Diameter, † Length

Materials

Polystone® G

PE – HD, PE300 – High Density Polyethylene

Polystone® G is a high density polyethylene (PE-HD/PE 300). It is an easily processed material for numerous applications, particularly in chemical equipment and tank building.

Polystone® G

• Type of product 产品类型

- Coils
- Compression moulded sheets
- Extruded sheets
- Round rods
- Square tubes
- U profiles
- Welding wire

• Properties 性能特点

- Very good welding and processing properties
- Good chemical resistance
- High adhesion in a composite system and so highly suitable for tank building
- Low weight

• Colours 颜色

- Black, natural

• Typical areas of application 应用领域

- Chemical engineering and tank building
- Corrosion protection



Polystone® G Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	0,95
Water absorption	DIN EN ISO 62	%	<0,01
Flammability(Thickness 3 mm/ 6 mm)	UL 94		HB
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	22
Elongation at break	DIN EN ISO 527	%	>50
Tensile modulus of elasticity	DIN EN ISO 527	MPa	800
Notched impact strength	DIN EN ISO 179	kJ/m ²	12
Shore hardness	DIN EN ISO 868	scale D	63
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	135
Thermal conductivity	DIN 52612-1	W/(m*k)	0,40
Thermal capacity	DIN 52612	kJ/(kg*k)	1,90
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ /K	150-230
Service temperature, long term	Average	°C	-50--80
Service temperature, short term(max.)	Average	°C	100
Vicat softening temperature	DIN EN ISO 306, Vicat B	°C	67
Electrical properties			
Dielectric constant	IEC 60250		2,4
Dielectric dissipation factor(10 ⁶ Hz)	IEC 60250		0,0004
Volume resistivity	IEC 60093	Ω *cm	> 10 ¹⁴
Surface resistivity	IEC 60093	Ω	> 10 ¹⁴
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	45

The data mentioned in this brochure are average values ascertained by current statistical returns and tests. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.

Specification

Extruded sheet	s 1...50mm	2.000 × 1.000mm 2.440 × 1.220mm	3.000 × 1.500mm 4.000 × 2.000mm
Compression moulded sheet	s 8...200mm 2.000 × 1.000mm	s 8...100mm 3.000 × 1.250mm 4.000 × 2.000mm 6.000 × 2.500mm	s 8...180mm 6.000 × 1.000mm 6.000 × 2.000mm
Round rod	11.000mm 12.000mm	φ 8...300mm	
Welding rod	†		

s Thickness, φ Diameter, † Length

SUSTARIN® C

POM – C polyformaldehyde (Copolymer)
Semi-crystalline thermoplastic

SUSTARIN® C

• Properties 性能特点

- Good chemical resistance
- High dimensional stability
- Low moisture absorption
- Very good sliding properties
- High abrasion resistance
- Ideal combination of tensile strength, stiffness and impact strength
- Low creep tendency
- Good machinability
- Favourable electric and dielectric behaviour

• Typical areas of application 应用领域

- Mechanical engineering
- Electrical industry
- Medical engineering
- Electronic industry
- Automotive industry
- Textile industry
- Food processing industry

SUSTARIN® C ESD 90

• Properties 性能特点

- Antistatic
- No carbon black
- Good sliding behaviour
- Low moisture absorption
- Good combination of mechanical strength, stiffness and impact strength
- Low creep tendency

• Typical areas of application 应用领域

- Clean room and semi conductor industry
- Explosion protection
- Packaging industry
- Mechanical engineering
- Automotive industry
- Textile industry
- Electrical industry
- Electronic industry
- Paint industry



SUSTARIN® C Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	1,41
Water absorption	DIN EN ISO 62	%	0,2
Flammability(Thickness 3 mm/ 6 mm)	UL 94		HB/HB
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	67
Elongation at break	DIN EN ISO 527	%	30
Tensile modulus of elasticity	DIN EN ISO 527	MPa	2300
Notched impact strength(charpy)	DIN EN ISO 179	kJ/m ²	6,0
Ball indentation hardness	DIN EN ISO 2039-1	MPa	150
Shore hardness	DIN EN ISO 868	scale D	81
Thermal properties			
Melting temperature	ISO 11357-3	°C	165
Thermal conductivity	DIN 52612-1	W/(m*k)	0,31
Thermal capacity	DIN 52612	kJ/(kg*k)	1,5
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ K ⁻¹	110
Service temperature,long term	Average	°C	-50...100
Service temperature,short term(max.)	Average	°C	140
Heat deflection temperature	DIN EN ISO 75,method A	°C	110
Electrical properties			
Dielectric constant	IEC 60250		3,8
Dielectric dissipation factor(50HZ)	IEC 60250		0,002
Volume resistivity	IEC 60093	Ω *cm	10 ¹³
Surface resistivity	IEC 60093	Ω	10 ¹³
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	40

The data mentioned in this brochure are average values ascertained by current statistical returns and tests. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.

Specification

Sheets	≤ 6...150mm		
	1.000 × 620mm	≤ 10...100mm	≤ 16...60mm
	2.000 × 620mm	2.000 × 1.000mm	2.500 × 1.250mm
	3.000 × 620mm		
Sheets calendered	≤ 1...10mm	1000 × 2000mm	Upon request,depending on the material dimensions
Round rods	11.000mm/2.000mm/3.000mm		
	Φ 5...400mm		
Tubes	11.000mm/2.000mm/3.000mm		
	OD 20...520mm ID 10...345mm		

≤ Thickness, Φ Diameter, l Length

Materials

SUSTAPEEK®

PEEK – Polyetheretherketone
Semi – crystalline thermoplastic

SUSTAPEEK®

● Properties 性能特点

- Excellent dimensional stability
- Flame retardant and self-extinguishing
- Very high resistance to high-energy radiation
- Very good sliding properties
- High abrasion resistance
- Optimised balance of stiffness, tensile strength and impact strength
- Low creep tendency
- Good machinability
- Good thermoformability
- Good adhesive properties
- Good weldability
- High dimensional stability under heat
- Very high continuous service temperature
- Low coefficient of thermal expansion
- Good electrical insulating properties over a broad temperature range

● Typical areas of application 应用领域

- Components need to be exposed under high temperature, mechanical load, X-ray or gamma ray.
- Antenna electronics, transportation, medical technology, aviation and chemical engineering, such as electrical insulators and housing, electric wire and cable insulator, rotor spider, friction disc and sealing parts, shock absorber, analytical equipment components, dialysis equipment components, valve lining, water pump impeller.



SUSTAPEEK® Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	1,31
Water absorption	DIN EN ISO 62	%	0,2
Flammability(Thickness 3 mm/ 6 mm)	UL 94		V0/V0
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	110
Elongation at break	DIN EN ISO 527	%	20
Tensile modulus of elasticity	DIN EN ISO 527	MPa	4000
Shore hardness	DIN EN ISO 868	scale D	83
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	343
Thermal conductivity	DIN 52612-1	W/(m*k)	0,25
Thermal capacity	DIN 52612	kJ/(kg*k)	1,34
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ /K	50
Service temperature, long term	Average	°C	-60 -- 250
Service temperature, short term(max.)	Average	°C	310
Heat deflection temperature	DIN EN ISO 75, Verf. A,HDT	°C	152
Electrical properties			
Dielectric constant	IEC 60250		3,2
Dielectric dissipation factor(50HZ)	IEC 60250		0,001
Volume resistivity	IEC 60093	Ω *cm	4,9*10 ¹⁶
Surface resistivity	IEC 60093	Ω	10 ¹⁸
Dielectric strength	IEC 60243	kV/mm	20

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Specification

Sheets	≤ 5...100mm 1.000 × 620mm	2.000 × 620mm 3.000 × 620mm
Sheets calendered	≤ 1...10mm Upon request, depending on the material dimensions	1000 × 2000mm
Round rods	‡ 1.000mm/2.000mm/3.000mm Φ 5...200mm	
Welding rods	‡ 1.000mm/2.000mm/3.000mm	OD 16...250mm ID 10...220mm

‡ Thickness, Φ Diameter, ‡ Length

Materials

SUSTAMID® 6

PA6 – Polyamide

Semi-crystalline thermoplastic

SUSTAMID® 6

• Properties 性能特点

- Good toughness
- Very good noise and vibration absorption
- Very good sliding properties
- High absorption of moisture of up to 3 % in standard atmosphere
- High abrasion resistance
- High mechanical strength coupled with high impact strength
- Excellent machinability
- Good adhesive properties
- Good weldability

• Typical areas of application 应用领域

- Mechanical engineering
- Aircraft construction
- Food processing industry
- Offshore
- Vehicle construction



SUSTAMID® 6 Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	1,14
Water absorption	DIN EN ISO 62	%	3,0
Flammability(Thickness 3 mm/ 6 mm)	UL 94		HB/HB
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	80
Elongation at break	DIN EN ISO 527	%	≥50
Tensile modulus of elasticity	DIN EN ISO 527	MPa	3200
Notched impact strength(charpy)	DIN EN ISO 179	kJ/m ²	≥3,0
Ball indentation hardness	DIN EN ISO 2039-1	MPa	170
Shore hardness	DIN EN ISO 868	scale D	82
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	220
Thermal conductivity	DIN 52612-1	W/(m*k)	0,23
Thermal capacity	DIN 52612	kJ/(kg*k)	1,7
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ /K	90
Service temperature,long term	Average	°C	-40--85
Service temperature,short term(max.)	Average	°C	180
Heat deflection temperature	DIN EN ISO 75,method A		75
Electrical properties			
Dielectric constant	IEC 60250		3,9
Dielectric dissipation factor(50HZ)	IEC 60250		0,002
Volume resistivity	IEC 60093	Ω *cm	10 ¹⁵
Surface resistivity	IEC 60093	Ω	10 ¹⁵
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	20

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Specification

Sheets	s 6...100mm 1.000 × 620mm	2.000 × 620mm 3.000 × 620mm	s 10...100mm 2.000 × 1.000mm
Sheets calendered	s 0.5...12mm 2.000 × 1.000mm		
Films calendered	s 0.2...1.5mm	Breite 1.000mm	
Round Rods	1.000mm/2.000mm/3.000mm Φ 2...200mm		
Tubes	1.000mm/2.000mm/3.000mm	OD 16...520mm ID 10...345mm	

s Thickness, Φ Diameter, l Length

Materials

SUSTAMID® 66

PA66 – Polyamide

Semi-crystalline thermoplastic

SUSTAMID® 66

• Properties 性能特点

- Good dimensional stability
- Very good sliding properties
- High abrasion resistance
- High absorption of moisture of up to 2.7 % in standard atmosphere
- Exceptionally high tensile strength and hardness over a broad temperature range
- Excellent machinability
- Good adhesive properties
- Good weldability
- High continuous service temperature

• Typical areas of application 应用领域

- Mechanical engineering
- Aircraft construction
- Electrical industry
- Automotive industry
- Apparatus construction



SUSTAMID® 66 Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	1,15
Water absorption	DIN EN ISO 62	%	28
Flammability(Thickness 3 mm/ 6 mm)	UL 94		HB/V2
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	85
Elongation at break	DIN EN ISO 527	%	50
Tensile modulus of elasticity	DIN EN ISO 527	MPa	3300
Notched impact strength(charpy)	DIN EN ISO 179	kJ/m ²	≥3,0
Ball indentation hardness	DIN EN ISO 2039-1	MPa	180
Shore hardness	DIN EN ISO 868	scale D	83
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	250
Thermal conductivity	DIN 52612-1	W/(m*k)	0,23
Thermal capacity	DIN 52612	kJ/(kg*k)	1,7
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ K ⁻¹	80
Service temperature,long term	Average	°C	-30--95
Service temperature,short term(max.)	Average	°C	170
Heat deflection temperature	DIN EN ISO 75,method A	°C	100
Electrical properties			
Dielectric constant	IEC 60250		3,8
Dielectric dissipation factor(50HZ)	IEC 60250		0,015
Volume resistivity	IEC 60093	Ω*cm	10 ¹⁵
Surface resistivity	IEC 60093	Ω	10 ¹³
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	25

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Specification

Extruded sheet	s 6...100mm 1.000 × 620mm	2.000 × 620mm 3.000 × 620mm
Sheets calendered	s 0.5...12mm 2.000 × 1.000mm	s 1...12mm 2.500 × 1.250mm
Films calendered	s 0.5...1.5mm	Breite 1.000mm
Round rods	1.000mm/2.000mm/3.000mm Φ 5...200mm	
Tubes	1.000mm/2.000mm/3.000mm	OD 16...450mm ID 10...410mm

s Thickness, Φ Diameter, l Length

Materials

SUSTAMID® 6G

PA6G – Polyamide

High-molecular and semi-crystalline thermoplastic
Form-polymerised Polyamide 6

SUSTAMID® 6G

• Properties性能特点

- Good toughness
- Very good sliding properties
- Very high abrasion resistance
- High absorption of moisture of up to 3 % in standard atmosphere
- High mechanical strength coupled with high impact strength
- Excellent machinability
- Good weldability
- Good adhesive properties

• Typical areas of application应用领域

- Mechanical engineering
- Materials handling industry
- Construction industry
- Offshore
- Food processing industry



SUSTAMID® 6G Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	1,15
Water absorption	DIN EN ISO 62	%	25
Flammability(Thickness 3 mm/ 6 mm)	UL 94		HB/V2
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	75
Elongation at break	DIN EN ISO 527	%	≥45
Tensile modulus of elasticity	DIN EN ISO 527	MPa	3400
Notched impact strength(charpy)	DIN EN ISO 179	kJ/m ²	≥3,0
Ball indentation hardness	DIN EN ISO 2039-1	MPa	180
Shore hardness	DIN EN ISO 868	scale D	83
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	216
Thermal conductivity	DIN 52612-1	W/(m*k)	0,25
Thermal capacity	DIN 52612	kJ/(kg*k)	1,7
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ K ⁻¹	80
Service temperature,long term	Average	°C	-40...110
Service temperature,short term(max.)	Average	°C	170
Heat deflection temperature	DIN EN ISO 75,method A	°C	95
Electrical properties			
Dielectric constant	IEC 60250		3,7
Dielectric dissipation factor(50HZ)	IEC 60250		0,02
Volume resistivity	IEC 60093	Ω*cm	10 ¹⁵
Surface resistivity	IEC 60093	Ω	10 ¹³
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	20

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Specification

Sheets	s 6...150mm	2.000 × 1.000mm 2.500 × 1.250mm	
Round rods	↓ 1.000/3.000mm Φ 50...610mm	↓ 250...1.250mm Φ 625...1.250mm	↓ 250...400mm Φ 1.300...2.000mm
Blocks	s 50...500mm	1.000 × 600mm 1.000 × 1.000mm	
Tubes	↓ 400/1.000/1.250/2.000/3.000mm	ID 30...1.900mm OD 50...2.000mm	

s Thickness, Φ Diameter, ↓ Length

Materials

SUSTAMID® 6 FR

PA6 FR flame – resistant extruded polyamide 6 semi-crystalline thermoplastic

With SUSTAMID 6 FR Röchling offers a semi-finished extruded products made of flame-retardant polyamide 6 (PA 6). This material, which meets the relevant requirements of the new European Rail Vehicle Standard DIN EN 45545-2:2013, facilitates production of large-sized machined components and component parts in small piece numbers.

With 40 percent, SUSTAMID 6 FR stands out through a very high oxygen index (LOI - Limiting Oxygen Index), and is phosphorus and halogen-free. Fire behaviour is classified in accordance with UL 94 with V0. Compared to conventional materials, such as steel (7.85 g/cm³), the low density of SUSTAMID 6 FR (1.17 g/cm³) offers unequivocal benefits regarding weight and thus construction. At the same time, the material possesses a high degree of stiffness, tensile strength as well as good sliding and wear properties with simultaneously outstanding corrosion and chemical resistance.

SUSTAMID® 6 FR

• Properties 性能特点

- Free of halogen and phosphorus
- Flame retardant and self-extinguishing
- High hardness and rigidity
- Good slide and wear behavior
- Good machinability
- Meets the relevant requirements of the new European Rail Vehicle Standard DIN EN 45545-2:2013
- High dimensional stability

• Typical areas of application 应用领域

- Rail vehicle construction
- Aviation industry
- Ship building
- Mining
- Electrical industry



SUSTAMID® 6 FR Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	1,17
Water absorption	DIN EN ISO 62	%	3,0
Flammability(Thickness 3 mm/ 6 mm)	UL 94		V0/V0
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	82
Elongation at break	DIN EN ISO 527	%	3
Tensile modulus of elasticity	DIN EN ISO 527	MPa	3300
Shore hardness	DIN EN ISO 868	scale D	83
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	222
Thermal capacity	DIN 52612	kJ/(kg*K)	1,70
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ K	90
Service temperature, long term	Average	°C	-20 ~ 85
Service temperature, short term(max.)	Average	°C	150
Heat deflection temperature	DIN EN ISO 75, Verf. A, HDT	°C	65
Electrical properties			
Volume resistivity	IEC 60093	Ω *cm	10 ¹³
Surface resistivity	IEC 60093	Ω	10 ¹⁶

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Specification

Extruded sheet	s 8...60mm	2.000 × 620mm
	1.000 × 620mm	3.000 × 620mm
Round rods	1.000mm/2.000mm/3.000mm	
	Φ 10...100mm	

s Thickness, Φ Diameter, † Length

Materials

SUSTAPEI®

PEI – Polyetherimide

Amorphous thermoplastic transparent with trace of brown

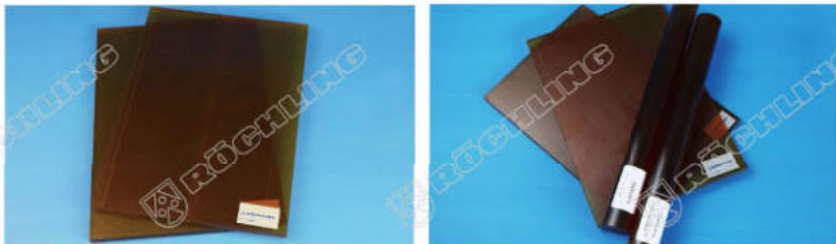
SUSTAPEI®

• Properties 性能特点

- Extremely high flame resistance
- Very low smoke development
- Very high stiffness, tensile strength and hardness over a broad temperature range
- Good machinability
- Good thermoformability
- Good adhesive properties
- Good weldability
- Low thermal coefficient of expansion
- High dimensional stability under heat
- Very high continuous service temperature
- High electric / dielectric strength virtually unchanging in a broad temperature and electrical frequency range

• Typical areas of application 应用领域

- Parts that must satisfy special requirements with regard to fire properties and mechanical strength.
- **Electrical and electronic industry**
e.g. high voltage circuit breaker housings, components for microwave ovens, plug connections, terminal strips
- **Medical technology**
e.g. instrument handles, adapters
- **Aircraft construction**
passenger cabin panels



SUSTAPEI® Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	1,27
Water absorption	DIN EN ISO 62	%	0,50
Flammability(Thickness 3 mm/ 6 mm)	UL 94		V0/V0
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	110
Elongation at break	DIN EN ISO 527	%	12
Tensile modulus of elasticity	DIN EN ISO 527	MPa	3100
Notched impact strength(charpy)	DIN EN ISO 179	kJ/m ²	4,0
Ball indentation hardness	DIN EN ISO 2039-1	MPa	220
Shore hardness	DIN EN ISO 868	scale D	86
Thermal properties			
Thermal conductivity	DIN 52612-1	W/(m ² *k)	0,24
Thermal capacity	DIN 52612	kJ/(kg*k)	1,1
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ K ⁻¹	45
Service temperature,long term	Average	°C	-50... 170
Service temperature,short term(max.)	Average	°C	210
Heat deflection temperature	DIN EN ISO 75,method A	°C	200
Electrical properties			
Dielectric constant	IEC 60250		3,2
Dielectric dissipation factor(50Hz)	IEC 60250		0,0015
Volume resistivity	IEC 60093	Ω *cm	10 ¹⁵
Surface resistivity	IEC 60093	Ω	10 ¹⁵
Comparative tracking index	IEC 60112		150
Dielectric strength	IEC 60243	kV/mm	30

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Specification

Extruded sheet	s 6...100mm	2.000 × 620mm
	1.000 × 620mm	3.000 × 620mm
Round rods	1.000mm/2.000mm/3.000mm	
	Φ 6...200mm	

s Thickness, Φ Diameter, ↓ Length

Materials

SUSTADUR® PET

PET – Polyethylene Terephthalate
Semi-crystalline thermoplastic

SUSTADUR® PET

• Properties 性能特点

- Excellent dimensional stability
- Very low moisture absorption
- Excellent creep behaviour
- Good sliding properties
- High wear resistance
- High tensile strength and stiffness
- Good machinability
- Low coefficient of thermal expansion

• Typical areas of application 应用领域

- Mechanical engineering
- Ship building
- Electrical industry
- Electronic industry
- Materials handling industry
- Food processing industry
- Plant engineering



SUSTADUR® PET Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	1,38
Water absorption	DIN EN ISO 62	%	0,3
Flammability(Thickness 3 mm/ 6 mm)	UL 94		HB/HB
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	85
Elongation at break	DIN EN ISO 527	%	15
Tensile modulus of elasticity	DIN EN ISO 527	MPa	3000
Notched impact strength(charpy)	DIN EN ISO 179	kJ/m ²	2,0
Ball indentation hardness	DIN EN ISO 2039-1	MPa	170
Shore hardness	DIN EN ISO 868	scale D	84
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	255
Thermal conductivity	DIN 52612-1	W/(m*k)	0,28
Thermal capacity	DIN 52612	kJ/(kg*k)	1,1
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ K ⁻¹	60
Service temperature,long term	Average	°C	-20...115
Service temperature,short term(max.)	Average	°C	180
Heat deflection temperature	DIN EN ISO 75,method A	°C	80
Electrical properties			
Dielectric constant	IEC 60250		3,4
Dielectric dissipation factor(50HZ)	IEC 60250		0,001
Volume resistivity	IEC 60093	Ω*cm	10 ¹⁸
Surface resistivity	IEC 60093	Ω	10 ¹⁸
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	20

The data mentioned in this brochure are average values ascertained by current statistical returns and tests. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.

Specification

Extruded sheet	s 8...100mm	s 2...12mm
	1.000 × 620mm	2.000 × 1.000mm
	2.000 × 620mm	2.500 × 1.250mm
	3.000 × 620mm	
Round rods	1.000mm/2.000mm/3.000mm	
	Φ 8...200mm	
Welding rods	1.000mm/2.000mm/3.000mm	OD 16...520mm
		ID 10...345mm

s Thickness, Φ Diameter, † Length

Materials

SUSTASON® PSU

PSU – Polysulfone

Amorphous thermoplastic transparent with trace of yellow

SUSTASON® PSU

• Properties 性能特点

- High rigidity at good dimensional stability
- Very high continuous service temperature
- Very good hydrolysis resistance
- Hardly inflammable
- Self-extinguishing
- Very low smoke development
- Good resistance against high energy radiation
- High tensile strength
- High hardness
- Good machinability
- Outstanding thermoformability
- Good adhesive properties
- Very good weldability
- Low coefficient of thermal expansion
- Very good electrical insulation properties
- Exceptionally low radiation absorption in the microwave range

• Typical areas of application 应用领域

- Mechanical, thermal and electrical high-voltage structural components, particularly if transparency is required, or for parts that are frequently sterilised.
- Electrical and electronic industry e.g. coil bodies, switch parts, plug-in connectors, microwave components
- Medical technology e.g. laboratory equipment, medical devices
- Foodstuffs industry e.g. milking machine parts, valves, bottling units



SUSTASON® PSU Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	1,24
Water absorption	DIN EN ISO 62	%	0,2
Flammability(Thickness 3 mm/ 6 mm)	UL 94		HB/V0
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	80
Elongation at break	DIN EN ISO 527	%	15
Tensile modulus of elasticity	DIN EN ISO 527	MPa	2600
Notched impact strength(charpy)	DIN EN ISO 179	kJ/m ²	6,0
Ball indentation hardness	DIN EN ISO 2039-1	MPa	155
Shore hardness	DIN EN ISO 868	scale D	85
Thermal properties			
Thermal conductivity	DIN 52612-1	W/(m*k)	0,26
Thermal capacity	DIN 52612	kJ/(kg*k)	1,1
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ K ⁻¹	55
Service temperature,long term	Average	°C	-50... 160
Service temperature,short term(max.)	Average	°C	190
Heat deflection temperature	DIN EN ISO 75,method A	°C	175
Electrical properties			
Dielectric constant	IEC 60250		3,2
Dielectric dissipation factor(50HZ)	IEC 60250		0,001
Volume resistivity	IEC 60093	Ω*cm	10 ¹⁵
Surface resistivity	IEC 60093	Ω	10 ¹⁴
Comparative tracking index	IEC 60112		125
Dielectric strength	IEC 60243	kV/mm	30

The data mentioned in this brochure are average values ascertained by current statistical returns and tests. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.

Specification

Extruded sheet	s 6...100mm 1.000 × 620mm	2.000 × 620mm 3.000 × 620mm
Round rods	11.000mm/2.000mm/3.000mm Φ 6..200mm	

s Thickness, Φ Diameter, l Length

Materials

SUSTASON® PPSU

PPSU – Polyphenylensulfon

Amorphous thermoplastic Transparent with trace of yellow

SUSTASON® PPSU

• Properties 性能特点

- Very good sterilisability
- High heat deflection temperature
- High rigidity and stiffness
- Very low smoke development
- Highly resistant to gamma and x-rays
- High tensile strength
- Extremely high impact strength
- Good machinability
- Outstanding thermoformability
- Good adhesive properties
- Very good weldability
- High continuous service temperature
- Very good electrical insulation properties favourable dielectric behaviour

• Typical areas of application 应用领域

- Electrical industry
- Medical engineering
- Rehabilitation

SUSTASON® PPSU Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	1,29
Water absorption	DIN EN ISO 62	%	0,60
Flammability(Thickness 3 mm/ 6 mm)	UL 94		V0/V0
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	77
Elongation at break	DIN EN ISO 527	%	30
Tensile modulus of elasticity	DIN EN ISO 527	MPa	2500
Notched impact strength(charpy)	DIN EN ISO 179	kJ/m ²	10,0
Thermal properties			
Thermal conductivity	DIN 52612-1	W/(m*k)	0,35
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ K ⁻¹	55
Service temperature,long term	Average	°C	-50-- 180
Service temperature,short term(max.)	Average	°C	210
Heat deflection temperature	DIN EN ISO 75,method A	°C	205
Electrical properties			
Dielectric constant	IEC 60250		3,44
Volume resistivity	IEC 60093	Ω*cm	10 ¹⁵
Dielectric strength	IEC 60243	kV/mm	15

The data mentioned in this brochure are average values ascertained by current statistical returns and tests. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.

Specification

Extruded sheet	s 6...80mm	2.000 × 620mm
	1.000 × 620mm	3.000 × 620mm
Round rods	‡ 1.000mm/2.000mm/3.000mm	
	Φ 6...150mm	

s Thickness, Φ Diameter, ‡ Length

Many colors available

Materials

Trovidur® EC-N

Polyvinyl chloride

Trovidur® EC-N is an unplasticised hard PVC with a special surface treatment to ensure outstanding gluability.

Trovidur® EC-N

• Type of product 产品类型

- Extruded sheets
- Compression moulded sheets

• Properties 性能特点

- Fire class B1 (according to DIN4102), thickness up to 4mm
- Good weldability and glueability
- High resistance to acids, lyes and salt solutions
- High UV and weather resistance
- Flame retardant, self-extinguishing after removal of flame

• Colours 颜色

- Grey 7011, Grey 6708, ET transparent, Milky white 1013, Liner Red and all other colour

• Typical areas of application 应用领域

- Chemical engineering and tank building
- Ventilation technology
- Construction industry



TrovidurEC®-N Data Sheet

	Test method	Unit	Value
General properties			
Density	DIN EN ISO 1183-1	g/cm ³	1,44
Water absorption	DIN EN ISO 62	%	≤0,20
Flammability	UL 94		V0 from 1,5mm/ 5V from 3 mm
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	50
Elongation at break	DIN EN ISO 527	%	20
Tensile modulus of elasticity	DIN EN ISO 527	MPa	2700
Notched impact strength	DIN EN ISO 179	kJ/m ²	4
Shore hardness	DIN EN ISO 868	scale D	80
Thermal properties			
Thermal capacity	DIN 52612-1	W/(m ² k)	0,16
Coefficient of linear thermal expansion	DIN 52612	10 ⁻⁶ /K	60-80
Service temperature, long term	Average	°C	-20...60
Vicat softening temperature	DIN EN ISO 306, Vicat B	°C	73
Electrical properties			
Dielectric constant	IEC 60250		3,2
Dielectric dissipation factor (10 ⁵ Hz)	IEC 60250		0,02
Volume resistivity	IEC 60093	Ω*cm	> 10 ¹⁵
Surface resistivity	IEC 60093	Ω	> 10 ¹³

The data mentioned in this brochure are average values ascertained by current statistical returns and tests. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.

Specification

Extruded sheet	≤ 1...50mm	2.440 × 1.220mm
	2.000 × 1.000mm	3.000 × 1.500mm
Compression moulded sheet	≤ 1...100mm	1.000 × 1.000mm
		2.000 × 1.000mm
Round rod	1.000mm	Φ 6...300mm
	12.000mm	
Welding rod		

s Thickness, Φ Diameter, † Length

The new material with built-in fire protection

SUSTAMID® 6 flame-resistant extruded polyamide 6

In areas making high demands on fire behaviour – such as transport and the electrical industry – manufacturers of plant and machinery often had to get along without the unbeatable PA 6 as a machine construction element and so missed out on its outstanding mechanical properties as well.



Cable clamps for rail vehicles made from SUSTAMID 6 FR: the new flame-resistant material allows extruded PA 6 to be used in areas with high demands on flammability.

• New: flame-resistant PA 6

In SUSTAMID 6 FR, Röchling has now developed an extruded flame-retardant polyamide 6. The new material boasts a very high LOI (Limiting Oxygen Index) of 40% and is halogen-free. The fire behavior was classified at V0 according to UL 94. In addition, the low density of SUSTAMID 6 FR (1.17g/cm³) provides significant weight and construction benefits in comparison to conventional materials, like steel (7.85g/ cm³).

• Properties

Very high oxygen index of 40% (LOI – Limiting Oxygen Index)
 Flame-resistant (V0 according to UL 94)
 Halogen-free
 Low density (1.17g/cm³)
 High strength and rigidity
 High dimensional stability
 Good slide and wear behaviour
 Good machinability

• New fields of application

The particular combination of properties makes the new SUSTAMID 6 FR the ideal material for applications in which very high demands are placed on flammability, mechanical properties and weight.

Examples:

Rail vehicle construction
 Aviation industry
 Ship building
 Mining
 Electrical industry

• Production range

You can now order the new material SUSTAMID 6 FR as rods and sheets in natural and black in the following dimensions:

Rods		
Diameter	Length	
10–100mm	3,000mm	

Sheets		
Thickness	Width	Length
8–60mm	620mm	3,000mm

SUSTAMID 6 FR meets a range of requirements such as the new European rail vehicle standard, DIN EN 45545–2:2013.

A wide range of thermoplastics and composites

Lightweight materials for aerospace

Aerospace engineers have to meet the highest requirements: aircraft have to be very light and fuel efficient but at the same time mechanically stable and absolutely safe.

Röchling offers you a wide range of thermoplastics and composites designed for this demanding environment. They support you in the construction of light, safe, and long-lasting aircraft.



• Properties

Lighter than aluminium
 Can be self-lubricating for use in dry operating conditions
 More corrosion resistant than most metals
 Will operate in temperatures from cryogenic to above 450 ° C
 Flame retardant

• Materials

SUSTAPEEK® (PEEK)
 SUSTASON® PPS (PPS)
 SUSTAPEI® (PEI)
 SUSTAMID® (PA)
 SUSTARIN® (POM)
 Fluoropolymers (PVDF and PTFE)
 Durostone® (Composites)

• Airbus approved materials

Our Airbus approved materials include
 SUSTAMID® 6 (PA6)
 SUSTAMID® 66 (PA66)
 SUSTAMID® 66 GF30 (glass filled PA 66)

SUSTAMID 6 FR

Flame retardant PA6 for use in the aerospace industry. It is evaluated to:
 BSS 7239
 FAR 25.853 & FAR 28.855
 UL94 V0 (from 0.4mm)

SUSTAPEEK

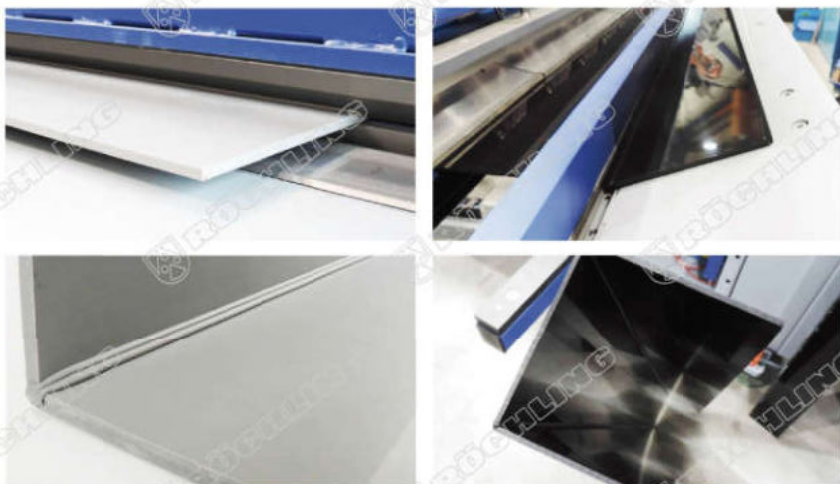
Made of Victrex 450G PEEK, proven material within aerospace. Tested to:
 FAR 25.853 & FAR 28.855
 AITM 3.0005 and AITM 2.0007
 UL94 V0 (from 1.5mm)

Polystone® PPs grey & Polystone® PPs EL black

Flame retardant polypropylene for ventilation systems

The importance of the education of polluted air from buildings and chemical plants is matched by the quality and reliability demanded of the materials used. Designers make particular requirements on the design of ventilation systems such as fans, ventilation ducts and enclosures for component parts, such as their resistance to chemicals, flame retardance and electrical conductivity. With Polystone® PPs grey from Röchling, you have a flame retardant polypropylene whose high resistance to chemicals and flame retardance have led it to be used in ventilation systems right across the world. If electrical conductivity is also required, we recommend using Polystone® PPs EL black.

** Polystone PPs is also widely used in wet processing equipment for electroplating, semiconductor, etc



Customers confirm Polystone® PPs is very easy to weld by bending using a heated tool

• Properties

Highly chemical – resistant

Excellent welding and processing properties

High rigidity

Electrical conductive (Polystone® PPs EL black)

Fire behaviour	DIN4102	UL94
Polystone® PPs grey	B1	V2
Polystone® PPs EL black	B2	V0

Polystone® PPs grey	Polystone® PPs EL black
Sheets in dimensions: 2.000 x 1.000 x 3 20mm 3.000 x 1.500 x 2 20mm Other dimensions on request	Sheets in dimensions: 3.000 x 1.500 x 4 – 10mm Other dimensions on request
Welding wire	Welding wire
Colour: Grey (RAL 7037)	Colour: Black
Special colours on request	

Medical Grade Materials

High performance plastics for medical grade

The biggest plastic semi-finished products with biocompatibility warehouse in Europe make sure we can supply customers anytime.

We've been achieving great success in medical field thanks to this material, which is essence of combination of our expertise and professional experiences.



• Absolutely safe

Röchling MG plastics meet the biocompatibility criterion regulated by DIN EN ISO 10993-5 as well as USP Class VI. Certificates and declarations can be provided if need.

• The biggest semi products warehouse in Europe

Röchling owns the biggest plastic semi-finished products with biocompatibility warehouse in Europe to make sure fast delivery. Products in stock:
Sheets: max. thickness 60mm
Round rods: max. diameter 90mm
Up to 10 colors

• Application

our products are applied in numerous medical products and components, such as dentistry, surgery, radiology, therapy system, pharmaceuticals and biotechnology.

• Cost-saving

We pay very much attention on perfect combination of material properties and application during research and development process to make sure simplify permit application procedure of medical products, as well as save costs.

Röchling Medical grade materials

Polystone® P MG (PP) · SUSTAPEEK® MG (PEEK)

SUSTASON® PPSU MG (PPSU) · SUSTARIN® C MG (POM)

Biocompatibility

All semi-finished products in standard color comply with ISO 10993-5 test, and reached USP Class VI.

Disinfection

Our products can stand different disinfection treatment based on different materials.

Raw material

All raw materials we used are coming from high-end class of well-known brands.

Traceability

Röchling implement all-round traceable standard on medical lineup ranging from raw materials to semi-finished products.

Chemical stability

This kind of MG products possess much better chemical stability compared with most frequently-used disinfectant and detergent.

FDA Standard

Röchling reassure our customers that chemical composition used in raw materials comply with FDA regulation.

Röchling offers a wide range of ESD materials

Plastics ensure safety

Uncontrolled discharges can cause costly damages, particularly in microelectronics and potentially explosive atmospheres, which is why electrostatic discharges must be prevented. This requires the use of electrically conductive or antistatic materials. These materials dissipate electrostatic charges permanently in a controlled way.

Extensive product range

Röchling offers a large selection of plastics for applications that place high demands on electrical conductivity. They have defined electrical properties ranging from antistatic to conductive. They also stand out for their classic properties such as good chemical resistance, sliding properties and high thermal stability.



• Applications of use

Semiconductors Conveyor technology
Oil & gas Explosion protection
Mining Electronics

• Typical components

Transport trays Inspection equipment
Pick and place tools Transport boxes
Jigs & fixtures Rollers

ESD materials	Spec. surface resistance (Ω)	Maximum continuous operation temperature (°C)	Linear thermal expansion coefficient (10 ⁻⁶ K ⁻¹)
PA	SUSTAMID® 6G ESD 90	10 ⁶ -10 ⁹	110
	SUSTAMID 6G ESD 60	< 10 ⁶	110
POM C	SUSTARIN® C ESD 60	10 ² -10 ⁵	100
	SUSTARIN® C ESD 90	10 ² -10 ¹¹	85
	SUSTAPEEK MOD ESD 90	10 ⁶ -10 ⁹	250
PEEK	SUSTAPEEK CF 30	< 10 ⁴	25
	SUSTAPEEK CM CF 30	< 10 ⁸	25
PEI	SUSTAPEI CM ESD 90	10 ⁶ -10 ¹⁰	170

ESD 60 - electrostatically conductive / ESD 90 - electrostatically dissipative / Further ESD materials on request

SUSTAPEEK sheets now in 3, 4 & 5 mm thickness

How you can save time and material

We are the first manufacturer in the world to offer calendared sheets made from high-performance material PEEK with the brandname SUSTAPEEK in thickness of 1-10 mm (from stock: 3-5mm). The new thicknesses enable you to realize time and cost savings in the production of your systems and components. At the same time, that also open up completely new design possibilities.



Reduce material waste cost

Example: A 6mm sheet has to be planed down to 2mm

Material wasted = 66%
+ machining costs

= cost savings > 66%
with 2mm SUSTAPEEK

• Your advantages

Previously, thicker sheets had to be milled or machined down to obtain thinner sheets - a time-consuming process. Our new thicknesses eliminate the need for these cutting operations. It means you save time and material and reduce the manufacturing costs of your products.

• Production range

Thickness: from 1-10mm
Size: up to 1,500 x 3,000mm

From stock

Thickness: 3, 4, 5mm
Size: up to 1,000 x 2,000mm

• Properties

High heat resistance
Excellent resistance to high-energy radiation such as gamma and x-rays
Outstanding dimensional stability
Flame-retardant (UL 94/ V0)
Very low smoke density
Meets FDA food conformity requirements

• Areas of application

Electrical industry
Semiconductor industry
Aviation and aerospace industry
Medical technology
Food processing industry

Serve globally Delight the world with strength and credibility

The logistics center of industrial division carry out a rational use of space by adopting the most advanced technology, implementing the newest safety standard, combining narrow channel technique and four-way pallet piler. This center is one of the biggest complexes in Europe which is used for storing semi-finished thermoplastics products. Our modernized order picking technology and rich stocks make sure that products can be provided timely. Our delivery team is responsible for the delivery in a professional and safe way.

Separate management of warehouse realized credibility and flexibility. In addition to that, the use of order picking facilities and radio terminals guarantee all operations carried out smoothly. Professionals see to the whole chain, which ensure proper handling of materials on the basis of "Faster, Better, More efficient" principle.

No matter now or in future, we will successfully overcome various logistics challenges, maintain the status of one-stop professional partner and provide reliable service for customers around the world.

As the product lineup expands, we are going to continue to invest in upgrading our warehouse capabilities. Therefore, all products in the future can enjoy a very short delivery time, which will satisfy or even exceed customer expectations.

