

Product overview ROBALON plastics



05/2018

Industrial wear parts
for different applications

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Röchling

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Röchling Competence in Plastics

The Röchling Group is a global operating group focused on plastics. With about 10,000 employees at 90 locations in 25 countries, Röchling is one of the world's leading companies manufacturing plastics.

With its three divisions Industrial, Automotive and Medical, the Group generates annual sales of about 1.9 billion Euros on the European, American and Asian continents.

www.roechling.com

Röchling Industrial

Within the Röchling Group, the Industrial Division covers technical plastics and high-performance plastics. With global subsidiaries, including Röchling Leripa Papertech, and sales offices, the Röchling Industrial business unit has a leading international position in manufacturing and machining of thermoplastics and duroplastics for several industries.

Röchling LERIPA Papertech

The company, headquartered in Oepping in Upper Austria, is a leading manufacturer and processor of plastics. We are experts in the manufacture of innovative wear solutions for the general engineering and plant engineering, the paper industry and agricultural industry. We are also your point of contact for semi-finished products, parts from drawings and bespoke solutions from technical plastics.

Top quality and a spirit of innovation have been traditional at Röchling LERIPA Papertech for over 300 years and from our position as a regional leader in the leather tanning industry, we have now developed to a global player.

www.leripa.com



ROBALON

An overview of material modifications

ROBALON is a sintered plastic consisting of ultra-high molecular weight polyethylene (UHMW-PE). It is alloyed with molybdenum sulphide, crosslinkers and UV stabilizers. Röchling LERIPA started manufacturing ROBALON plastic more than 50 years ago. Nowadays, eight different ROBALON modifications are produced - we can therefore offer the right material for every customer requirement.

All materials are produced in a special long-term sinter pressing process, with very long pressing cycles. Our sintering presses facilitate the production of 12 m long panels. This process has numerous advantages compared to conventional extrusion, injection moulding or standard sintering processes.

Standard types

ROBALON-S
The classic
- Alloyed with molybdenum sulphide, crosslinkers and UV stabilisers

Ideal for **semi-finished products and pre-assembled components** where **extraordinary slide and wear characteristics are required**.

For universal use



ROBALON-W
- Without molybdenum sulphide and crosslinkers
- Physiologically safe
- Very good electrical insulation value

Excellently suited for the **electrical industry**.

Colour white



ROBALON-Z
- With reinforced molybdenum sulphide alloy
- Particularly low-friction

For strongly adhesive viscid material with a high degree of humidity.



ROBALON-FG
- Suitable for contact with food
- Comply with EU regulations 10/2011/EG

Optimal slide and wear material for the entire **food industry**

Colour white



Special types

ROBALON-E
- Electrically-conducting
- No static charging

Ideal for the **electronic and semi-conductor industry** and in **explosion-protected areas in mining and industry**.



ROBALON-GL
- Molybdenum sulphide alloy
- Addition of microglass balls

Increased rigidity.



ROBALON-R
- Reclaim produced entirely from UHMW-PE qualities (ROBALON)
- Only pure UHMW-PE recycled material

Alternative material to ROBALON-S with slightly reduced characteristics.



ROBALON-C
- Worldwide unique ceramic-plastics-hybrid-material
- High wear resistance

For **extreme** wear applications.



Flexible, powerful, precise

Our processing methods at a glance

We have invested in state-of-the-art technology, deliver top quality and have a modern and efficient CNC machining center. Large-format CNC milling machines offer the possibility of manufacturing products of the largest dimensions with tight tolerances.

Planing

Surface planner
 Length: max. 12 000 mm
 Width: max. 1 300 mm



Sawing/Cutting

- Panel saws
- Band saw for rods and hollow rods
- Round saws



Milling

Length: 1-14 000 mm
 Width: 1- 2 500 mm
 Thickness: 1- 730 mm

Turned parts

Ø max. 3 500 mm
 Larger dimensions on demand



Turning

Ø 2-2 000 mm

Large turned parts

Ø max. 2 000 mm
 Length: max. 800 mm

Pipes

Ø max. 750 mm
 Length: max. 2 300 mm



Profiling

Length: max. 12 000 mm
 Width: max. 235 mm
 Thickness: max. 165 mm



Assembly

Globally active, professional assembly team



3D printing

Length: max. 180 mm
 Width: max. 230 mm
 Thickness: max. 310 mm

Material: PA12



Screw conveyor production

Length: max. 10 000 mm
 Thickness: max. 15 mm
 Ø 145-1 500 mm



Thermoforming

Length: max. 2 900 mm
 Width: max. 1 900 mm
 Panel thickness: max. 25 mm



Welding

- Extrusion welding
- Friction welding



Further methods:

Sinter pressing | Drilling | Bevelling | Surface refinement | Cutting | Assemblies

Semi-finished parts / Finished parts



From the simple panel to the complex 5-axis milling part

We live in the plastic age. Plastics are tailor-made and have property profiles that often outperform traditional materials such as steel, wood or concrete and are therefore increasingly replacing them. Today, there is almost no industrial product left that has not come into direct contact with components made of plastic in its production process or contains such itself.

We, Röchling LERIPA, are not only concerned with the production of panels, round rods and profiles, but also with the specific requirements of the industries we supply. We know which material modification suits best to your application or requirement.



Protective component for autonomous transport systems

Individual solutions

Our strength is the construction and development of ready-for production solutions in consultation with you

On request, we support you in the designing of your plastic components. We know what plastics can do and what is technically feasible. Thus, from the selection of materials to the design with state-of-the-art CAD systems right up to the exact machining and assembly, we deliver a component that works optimally in your application.

Our experts are available to help and advise you. We are happy to visit you and deal intensively with your challenging task on site.



Individual parts according to drawing?
No problem - we gladly develop **individual solutions or finished parts with you according to drawings!**



Alpine industry

Spare parts for snow groomers / tracked chassis

Spare parts for cableways / ground funiculars / lift equipment

References

Extreme temperatures, heavy loads and numerous of operating hours require reliable products. Rely on ROBALON. The high performance Yplastic with special additives ensures an excellent service life.

Spare parts for snow groomers / tracked chassis

Drive sprockets

- No sticking / no chain leaping
- Gentle to the track guide
- Long lifetime
- Many variants and types available

Customer statement of Hochficht skiing area (AT)

„We were operating our Ratrak 260 with a ROBALON drive sprocket for 13 years. Material breakage simply wasn't an issue.“

- Martin Lauß, Operations director

The oldest ROBALON drive sprocket was in operation for 13 years and over 7 000 hours. Our ROBALON drive sprockets are in use on 30 different types of piste equipment worldwide.

Mudguards and overthrow protection

- No splits or breaks
- No freezing
- Special versions possible



Chain deflectors

- Extremely wear resistant compared to injection molding
- All common types
- Special versions possible



Floor protection for garages

- Protects floor of the garage and chain
- Easy to assemble
- Very long lifetime



Track guides

- No damage to the thread in the track
- Gentle to the drive sprocket
- No chain leaping

Up to double service life compared to injection molding



Spare parts for cableways / ground funiculars / lift equipment



Grinding blocks



Bar for cable lift



Ski holders



Tappets



Inclined rollers



Holder for bicycles

References



We support you in planning and implementing your ideas. Do not hesitate contacting us:
E-mail: alpin@leripa.com

Ask for your alpine folder!

Agriculture industry

Cultivation

Grassland

Harvesting technology

Farming and feeding technology

Biogas plants

References



Röchling Leripa is a pioneer in plastic wear parts for the agriculture industry. Renowned engineers confirm the success.

Cultivation

Packer rolls



- **Modular construction:** Construction kit includes customized packer elements and distance rings (trapeze, triangle, round, ...)
- **Low weight**
- **Self-cleaning:** Soil does not stick

Additional products: ROBALON scrapers for packer rolls, covers, linings



Moldboards and skimmers

- **Enormous weight reduction** of the plough (about 200 kg for a 4-blade plough)
- **Pull effort reduction:** -20 % sticky soils
- **Saves fuel:** Increase in efficiency (hectare)
- **Longer lifetime** than steel in sandy conditions

Grassland

Pick-up bends



- **Gentle to the tines:** Less wear; no breaking of tines
- **Noise reduction:** Silent run
- **No splits or breaks** on contact with foreign bodies
- Thermoformed and straight versions can be realized

Further applications: skid plates, screws, linings, covers, guides, machined or thermoformed molded parts

Harvesting technology

Skid plates

- **Excellent gliding properties:** Less friction
- **Long lifetime** due to excellent wear resistance
- **More than -60 % weight reduction** compared to steel plates
- Thermoformed version possible



Screw conveyors

- **Crope gentle:** Less crope damage
- Highly wear resistant | Resistant to acids
- Enormous weight reduction compared to steel
- Smooth running



Farming and feeding technology

Container for mixing plants

- **Easy to clean:** No sticking of food residues
- Excellent acid and alkali resistance
- Low weight
- As a lining system of entire plastic solution



Feeding screw conveyors

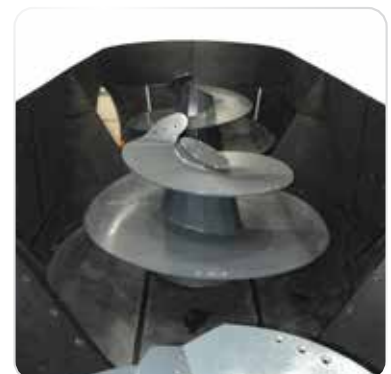
- Full hybrid plastic screws
- **Low risk of injury:** No sharp edges
- Special spiral shapes possible



Biogas plants

Lining systems or conveying screws

- **100 % resistance to bio-acids** (acetic acid, lactic acid, butyric acid, ...)
- High resistance to mechanical abrasion
- **Self-cleaning:** No sticking of biogenic substances
- Impact resistant at low temperatures
- UV and weather resistant



References



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E-mail: agrar@leripa.com

Ask for your
agriculture folder!



Water and environmental technology

Lifting screws in water sewage plants

Water works equipment

References

ROBALON wear parts for water and wastewater technology are particularly resistant to abrasion and corrosion. The excellent anti-adhesive sliding properties ensure an energy saving, low-maintenance and low-noise movement sequence in the machines and systems.

Lifting screws in water sewage plants



With ROBALON lifting screws an efficiency improvement and energy saving of up to 30 % can be achieved compared to steel screws.

- **More efficient lifting process**
- **No lubrication necessary**
- **No corrosion and impact resistant**
- **Dimensional stability under heat and resistant to low temperatures**
- **Abrasion-resistant and good sliding properties**
- **Non sticking**

Up to 60 % weight saving possible!

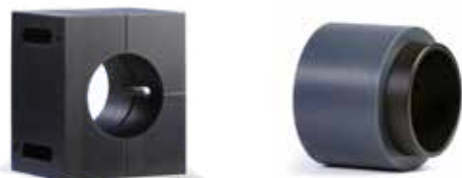
Versions:

Single, double or triple threaded versions are possible

Linings for concrete and steel troughs



Lubrication free bearing type



Water works equipment

Fish lift

- **Fish friendly:** Gentle, rounded edges
- **Easy to assemble:** Low weight
- **Corrosion resistant:** No rusting
- **Resistant to low temperatures:** No ice or snow accumulation in winter



Linings

of lining channels, troughs, guide elements, ...



Raking systems

Chain wheels, bearing bushes, rollers,
Cleaning strips for rakes, chain guides, ...



Wear parts for flood gates

Guide rails, slide strips, ...



Turbines

Rotary shaft seals and labyrinth seals made of rubber graphite

Hydropower screws

Solid plastic screws, wear and edge protection,
transition members, ...

References



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E-mail: wasser@leripa.com

General engineering and plant engineering

Wear parts for cranes and trucks

Timber industry

Guiding profiles

References



Even under heavy load and after countless hours of operation, machines and systems must run reliably. With the advantages of ROBALON you can improve the performance of your system.

- **Good sliding friction reduces energy consumption of your machines**
- **High process reliability**
- **Stick-slip-effects are avoided**
- **Longer maintenance intervals**
- **Consistent quality of your products**

Wear parts for cranes and trucks

Supporting discs for cranes



- **Lubricant resistant**
- **Impact-resistant:** No splits or breaks
- **UV and weather resistant**
- **Light-weight**
- **No water absorption**

Ask for our
price list!

Further applications

From fenders over specially adapted form works to alternative, heat insulating materials. Ask directly for your application!



Castors



Wearing plates
for vibrators and rammers

Timber industry

Drive connectors, sliders and slide bushings

- **Wear resistant**
- **Good gliding properties**
- **UV and weather resistant**
- **No splits or breaks**

Delivery program:

All common manufacturers and types | Special types on demand



Guiding profiles

For **more information** on our guiding profiles, please refer to the overview of transport and conveying industry on page 17 or ask directly for our comprehensive offer in our price list.



With ROBALON we offer high-performance and, above all, sophisticated plastic solutions. The excellent sliding and wear properties are tested and confirmed by countless components.

Whether for wood, construction or any kind of industry, with ROBALON, the impact-resistant material that guarantees no splitting and breaking, you are always well advised. Whether low temperatures (below -40 °C) or in the sun - due to the very good weather resistance, ROBALON can be installed in any area.



References



Internorm

MONTECH



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Food and beverage industry

Plastics made for contact with food

Plastics for meat, fish and meat poultry processing

Applications

References

We offer field-tested slide and wear parts that you can rely on. Bet on ROBALON and you will be convinced.

Plastics made for contact with food

Röchling has numerous plastics for direct contact with food, especially for the food and beverage industry. They are used in machines for the industrial processing of food and as cutting surfaces and boards.

We ensure that our plastic products, which are suitable for contact with food, comply with the requirements of the framework regulation 1935/2004/EC, 10/2011/EU and 2023/2006/EC. The tests were carried out on our products with all necessary simulants under the harshest test conditions in terms of temperature and test duration.

You can be sure that the tested plastics according to our declarations of conformity are considered to be suitable for contact with all types of food.

Of course, our manufacturing processes are subject to the philosophy of „Good Manufacturing Practice“ (2023/2006/EC).

Ask for our special brochure on plastics for contact with food!



Plastics for save and efficient meat, fish and meat poultry processing

Advantages

- **Suitable for contact with food**
(EU regulation 10/2011/EU and FDA)
- **Good sliding properties** support the reduction of energy
- **High stability**
- **Long lifetime:** High wear resistance
- **Suitable for use at low and high temperatures**



Typical applications

- **Fish processing**
- **Meat processing**
- **Poultry processing**
- **Autoclaving**
- **Butchers**
- **Commercial kitchens**

Röchling offers in food and beverage industry

- a wide range of plastics according to the EU regulations 1935/2004/EC, 10/2011/EU und 2023/2006/EC
- without negative impact on the health of the consumers, taste, smell and appearance of the food



Separating screw



Rounding drum



Cutting boards

References



We support you in planning and implementing your ideas. Do not hesitate contacting us:
E-mail: robaproducts@leripa.com

Transport and conveying industry

Screw conveyors

Chain and belt guides

Trough linings

The transport of goods must be fast, reliable and economical. Röchling plastics are used as CNC-machined components, milled and extruded profiles, for example in conveyor and storage systems, chain or roller conveyors, pallet magazines or shelf elements. The special properties of plastics such as low sliding friction, high abrasion resistance, impact resistance or even antistatic adjustment ensure reliable material flow and economical transport processes.

Screw conveyors

Advantages compared to steel screws

- **Outstanding wear resistance**
(mechanical/chemical)
- **Best sliding properties (material to be conveyed/worm screw)**
 - Energy saving up to 30 % less power consumption
 - Practical example (biogas system Lechfeld): current consumption at the drive: instead of 7A with steel only 5.5A with ROBALON
- **Weight saving > 50 % as compared to steel**
- **Self-cleaning, dirt repellent as well as no icing in freezing temperatures**
- **Gentle on sensitive materials being conveyed**
- **Long lifetime**
- **Noise damping**

**SUITABLE FOR NEW
INSTALLATION OR
REPLACEMENT OF CONVEYORS**

Best reproducibility in processing conveyors.
Ask for our screw conveyor folder!

Chain and belt guides

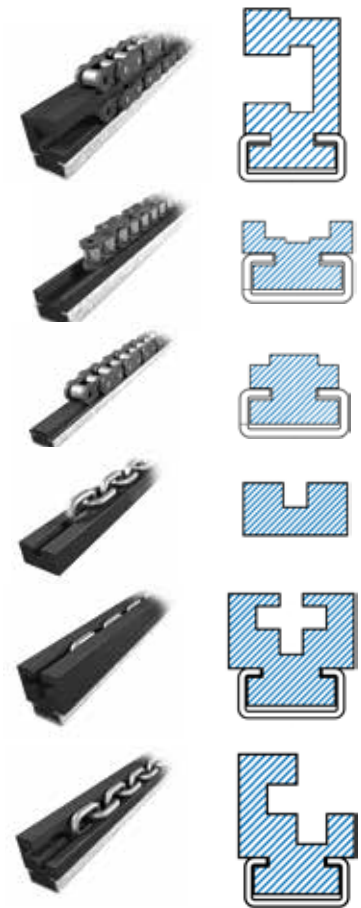
Reducing wear and having good sliding properties are the main tasks of the chain, belt and sliding guides. ROBALON is the perfect material for these applications.

Advantages

- **Low coefficient of friction:** Energy saving due to low drive power
- **Self-lubricating:** No oil lubrication necessary
- **High abrasion resistance**
- **Gentle to the chains:** Increases the lifetime of chains
- **Low noise operation**
- **Hydrolysis resistant**
- **Easy to clean:** Dirt repellent properties

For all common types, whether roll (CE, CU, CT, CTT, ...) or link chains, we have the finished design. Special types on demand.

Request the fitting C-rail!



Trough linings

The highly wear-resistant trough linings made of ROBALON are used in various industries and transport, among others, the following media:

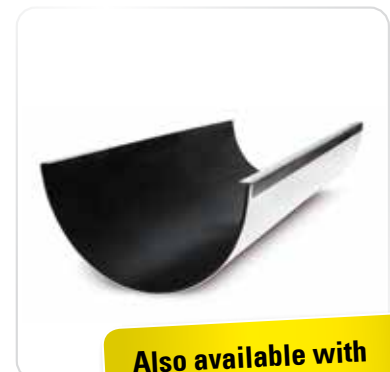
- Cement
- Quartz sand
- Salts
- Sawdust
- Wood chips
- Liquids, and much more

Due to the variety of materials to be transported, ROBALON requires a wide range of properties. In e.g. hazardous areas should be used due to its permanently antistatic property ROBALON-E. And even in extreme weather conditions, outdoor use is no problem for ROBALON. Special rubble may require special linings. We are happy to advise you.

Wear indicator

By the appearance of the indicator, so if the lining gets discolored, it can be recognized when the lining has to be renewed.

- Cost savings through early detection
- Easy control of the existing wear layer
- Lining material and indicator are sintered together (homogeneous component)



Also available with wear indicator!

We support you in planning and implementing your ideas. Do not hesitate contacting us:
E-mail: robaproducts@leripa.com

Innovations at a glance

Robasmart

Thermoformed parts

Reverse Engineering

Finished parts 3D printed

Assembly parts



The close contact of our sales, application and development team with you and your requirements is, in addition to sound knowledge and curiosity, the foundation of every innovation.

Every day, we are involved in many projects, redesigning processes or adapting material recipes in order to find the ideal solution for your application. In addition, our in-house R & D laboratory and technical center also deals with ideas for the products of tomorrow, which may even inform you about state changes before you know it, or even reorder yourself. There are many ideas waiting for your requirements!



ROBASMART - smart wear parts

For more performance and safety

The new „smart“ product family from Röchling Leripa evaluates relevant values such as temperature, wear or noise level from the wear parts equipped with a large number of sensors. Machine settings can then be manually or fully automatically adjusted and optimized by means of ROBASMART.

ROBASMART can be easily retrofitted at any time. Further information at:

www.robasmart.com



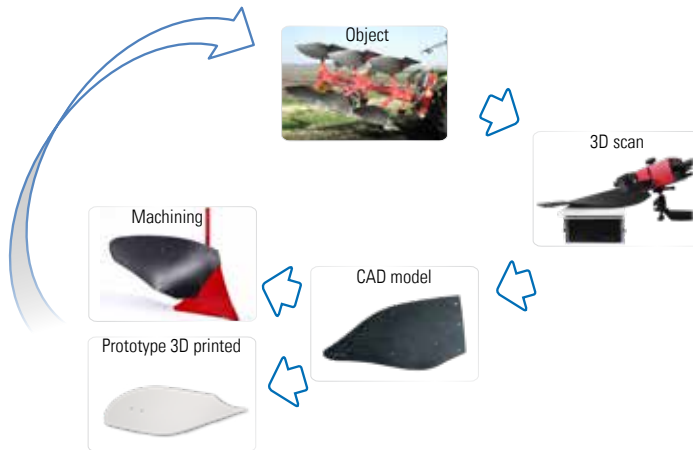
Thermoformed parts

In free-form surfaces such as moldboards in the agriculture industry, mudguards for snow groomers, skid plates for combine harvesters, tire protectors for mining vehicles, ... with machining is fast to the limits of feasibility. For such applications, we can manufacture these and your application in a thermoforming process.

A wear protection of your machine, a coating as a sliding support or an individual application according to your idea. We are happy to advise you and work out the perfect solution for you.

Reverse Engineering

Would you like to digitize any object three-dimensionally, in addition there is no 3D data available? Reverse Engineering at Röchling Leripa enables the digitization of difficult to detect, large or small objects. The data model can be used for prototypes from the 3D printer or for machining production.



Step 1

Components of which there are no digital data are optically measured with a 3D scanner. All visible surfaces are recorded.

Step 2

3D scanning creates a 3D point cloud of the component with countless points. The point cloud is then networked.

Step 3

A parametric CAD model with all design elements is being rebuilt. The CAD model can then be used for all manufacturing processes.

Step 4

The object can be reproduced as a 3D printed prototype or a machined part.

Finished parts 3D printed

From the 3D model to the finished component

Today, industrial 3D printing is making an entirely new kind of designing possible. Completely new objects, that were not possible with the earlier traditional technologies, are now being created. Together, we bring your new and innovative ideas to life in 3D printing. As technology leader in plastic processing, Röchling Leripa was quick to deal with additive layer manufacturing, which produces 3D parts in one processing step. Röchling Leripa uses the so-called selective laser sintering (SLS). In this 3D process, spatial structures can be produced from raw material in the form of powder, using laser rays.

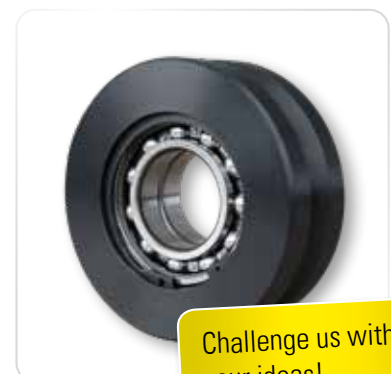
In our competence center for 3D printing in Oepping, we can offer you the production of small batches of complex components, which can be manufactured in a relatively short time (Rapid Manufacturing). In addition, we make prototypes that make it possible to visualize parts that have never been manufactured before, in the literal meaning of the word. Within just a short period, you will get a usable model based on your specifications.



Assembly parts

Whether pre-mounting a screw, positioning a pin, connecting individual components or assembling entire assemblies. We gladly support you. The welding of ROBALON, organization of different components (screws, folded sheet metal, ...) as well as the support in the preparation, with you receive everything from one hand.

With our numerous partners we also find the optimal solution for you.



Challenge us with your ideas!

Material characteristics

Technical data

	ROBALON-S	ROBALON-W	ROBALON-Z	ROBALON-E	ROBALON-GL	ROBALON-R	ROBALON-FG	ROBALON-C
Colour	black	white	grey	black	black	black with white inlays	white	black
Wear resistance								
Low-friction								
UV, light and weather resistant								
AST (anti-static characteristics)								
Electrically insulating								
Food grade	-	-	-	-	-	-		-

low high

Measuring proc.	ROBALON-S	ROBALON-W	ROBALON-Z	ROBALON-E	ROBALON-GL	ROBALON-R	ROBALON-FG	ROBALON-C
Density - g/cm ³	DIN EN ISO 1183	0,93	0,93	0,93	0,94	0,97	0,93	1,00
Average molar mass - g/mol	Viscometrically determined	9.2 million - arithmetically determined in accordance with the Margolies equation						
Yield stress at 50 % elongation - MPa	DIN EN ISO 527-1	18	17	18	16	19	16	17
Breaking elongation - %	DIN EN ISO 527-1	200	300	280	270	370	200	300
Traction E module - MPa	DIN EN ISO 527-1	550	470	580	600	670	550	470
Notched impact strength (Charpy 23°C) - kJ/m	DIN EN ISO 179-2	140	160	160	110	-	-	160
Shore hardness - scale D	DIN EN ISO 868, 15s	63	63	63	63	64	63	63
Melting temperature DSC, 10 K/min - °C	DIN EN ISO 3146	130-135						
Therm. length elongation coefficient - 10 ⁻⁶ K ⁻¹	DIN 53752	200	200	200	200	200	200	200
Application temperature - °C	constant	-200 to 80	-200 to 80	-200 to 80	-200 to 80	-200 to 80	-200 to 80	-200 to 80
Water absorption - %	-	0,01	0,01	0,01	0,01	0,01	0,01	0,01
Specif. surface resistance - Ω	DIN IEC 60093	10 ¹⁰	10 ¹²	10 ¹⁰	10 ⁷	10 ¹⁰	10 ¹⁰	10 ¹²
Specif. contact resistance - Ωm	DIN IEC 60093	10 ¹⁰	10 ¹²	10 ¹⁰	10 ⁴	10 ¹⁰	10 ¹⁰	10 ¹²
Pressure creep test	Stress 2N/mm ² , 1 hr. -> compression approx. 2% at 23°C Stress 10N/mm ² , 56 hr. -> compression approx. 20% at 80°C							

Please note that all data reflects our experience, subject to further technical investigations, and no liability can be accepted for the results (due to different cases of application).

Chemical resistance

Due to its unpolar structure, ROBALON demonstrates unusually high resistance to chemicals and other media. It is resistant to watery solutions of salts, acids and alkalis. ROBALON is resistant to strong oxidants such as nitric acid, ozone, oleum, hydrogen peroxide or halogens to a limited extent.

	Temperature		
	20°C	50°C	80°C
Acetone	Y	Y	-
Aluminium chloride	Y	Y	Y
Formic/methanoic acid	Y	Y	-
Beer	Y	Y	Y
Petrol	Y	L	-
Benzene	L	L	-
Butyric acid	Y	Y	-
Butyl alcohol	Y	Y	Y
Diesel fuel	Y	Y	L
Acetic acid 10 %	Y	Y	Y
Acetic acid 99%	Y	Y	L
Ethanol, alcohols	Y	Y	-
Ethylene glycol	Y	Y	Y
Hydrofluoric acid	Y	N	N
Fruit juices	Y	Y	Y
Glycerine	Y	Y	Y
Heating oil	Y	L	-
Hydraulic fluid	Y	L	-
Potassium hydroxide solution	Y	Y	Y
Cooking salt, saturated solution	Y	Y	Y
Carbonic acid	Y	Y	Y
Milk	Y	Y	Y
Lactic milk	Y	Y	-

	Temperature		
	20°C	50°C	80°C
Sea water	Y	Y	Y
Engine oil	Y	Y	L
Sodium chloride	Y	Y	Y
Sodium hydroxide solution	Y	Y	Y
Olive oil	Y	Y	Y
Ozone	L	N	-
Oleic acid	Y	Y	L
Petroleum 100 %	Y	L	-
Phosphoric acid 85 %	Y	Y	Y
Nitric acid 20 %	Y	Y	L
Nitric acid 50 %	L	N	N
Conc. nitric acid	N	N	N
Hydrochloric acid	Y	Y	Y
Sulphuric acid	Y	Y	Y
Sulphuric acid 50 %	Y	Y	Y
Sulphuric acid 75 %	Y	L	L
Conc. sulphuric acid	Y	N	N
Soda, sodium carbonate	Y	Y	Y
Wine	Y	Y	Y
Detergent in watery solution	Y	Y	Y
Distilled water	Y	Y	Y
Zinc chloride	Y	Y	Y
Citric acid	Y	Y	Y

Y

Yes resistant

Swelling < 3 % or weight loss < 0.5 %.
Breaking elongation not significantly reduced.

L

Resistant to a limited extent

Swelling of 3 % to 8% or weight loss of 0.5 % to 5 % and/or breaking elongation reduced by 50 %.
Tensile strength and tearing strength reduced by less than 20 %.

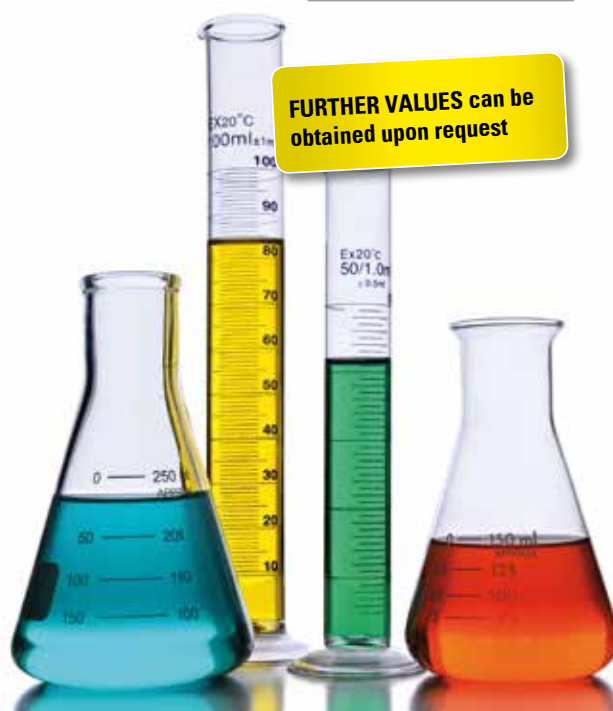
N

Non-resistant

Swelling > 8 % or weight loss > 5 % and/or breaking elongation reduced by > 50 %.
Tensile strength and tearing strength reduced by more than 20 %.

-

No test results are available here

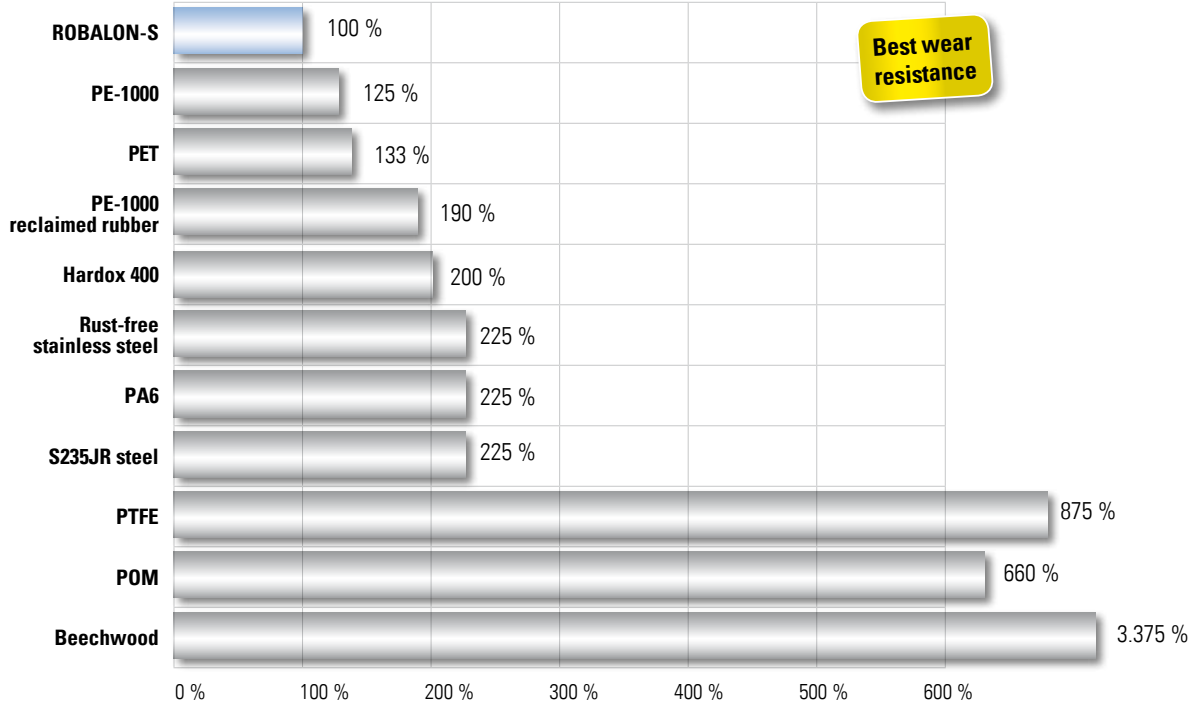


Test results

Wear resistance*

in accordance with Sand-Slurry process (ROBALON-S = 100 %)

Product comparison

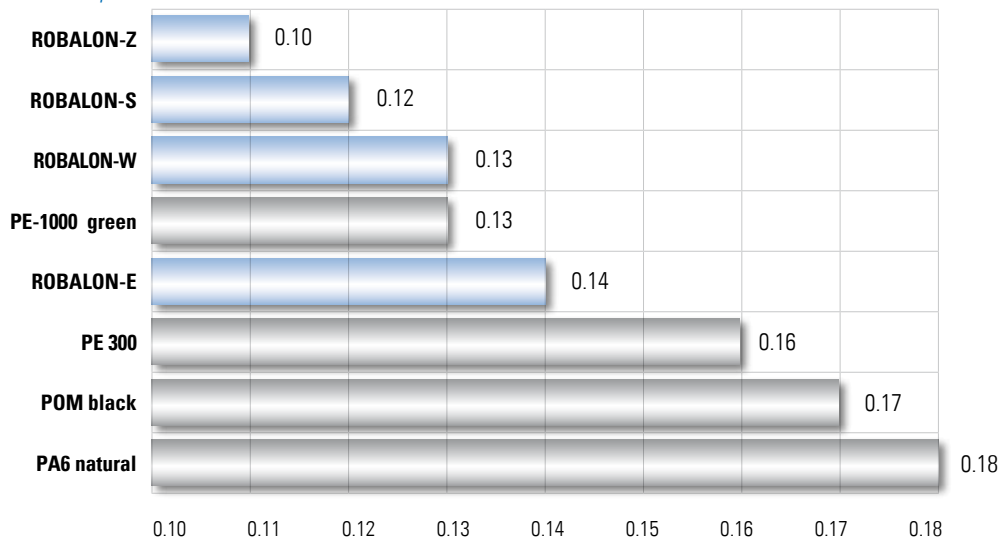


Volumetric wear value in %

*Test pieces (101.6 x 25.4 x 6.35 mm) are rotated in a water-sand container for 24 hours at 1500 revolutions/min. Afterwards weight loss is measured in %. ROBALON-S = 100 %

Slide characteristics*

Product comparison



Coefficient of friction

*Tested on the Röchling LERIPA Papertech wear simulation machine.
Adjustment parameters: test pieces with a locating surface of 40 x 25 mm (strength 10 mm) were tested in dry running against sheer sheet steel (S235JR) with a contact pressure of 1N/mm² and a speed of 2 m/sec. on a slide friction facility. The average value of the dynamic friction values was then measured and depicted in the table.

Delivery program of ROBALON

Panels Normal format

Thickness, length and width available in mm increments
Thickness tolerance: +/- 0.2 mm

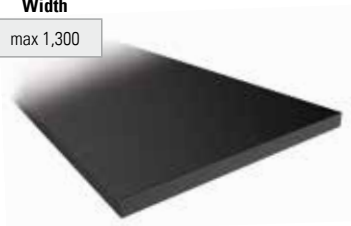
Thickness	Length	Width
8 - 160	max 10,000	max 1,000
8 - 160	max 12,000	max 1,000



Panels Wide format

Thickness, length and width available in mm increments
Thickness tolerance: +/- 0.3 mm

Thickness	Length	Width
15 bis 130	max 8,000	max 1,300



Thin panels

Thickness, length and width available in mm increments
Thickness tolerance: +/- 0.2 mm

Thickness	Length	Width
2	max 5,000	max 600
3	max 5,000	max 600
4	max 5,000	max 600
5	max 5,000	max 1,000
6	max 5,000	max 1,000
7	max 5,000	max 1,000



Round rods

Concentricity tolerance: +/- 5 %

Diameter	Standard length	Special length	Diameter tolerance
ø 8	1,000	max 10,000	+ 1.3 / + 0.7
ø 10	1,000	max 10,000	+ 1.3 / + 0.7
ø 12	1,000	max 10,000	+ 1.3 / + 0.7
ø 15	1,000	max 10,000	+ 1.3 / + 0.7
ø 20	1,000	max 10,000	+ 1.3 / + 0.7
ø 25	1,000	max 10,000	+ 1.3 / + 0.7
ø 30	1,000	max 10,000	+ 1.3 / + 0.7
ø 35	1,000	max 10,000	+ 1.3 / + 0.7
ø 40	1,000	max 10,000	+ 1.3 / + 0.7
ø 50	1,000	max 10,000	+ 1.3 / + 0.7
ø 60	1,000	max 10,000	+ 1.3 / + 0.7
ø 70	1,000	-	+ 1.5 / + 0.5
ø 80	1,000	-	+ 1.5 / + 0.5
ø 90	1,000	-	+ 1.5 / + 0.5
ø 100	1,000	-	+ 1.5 / + 0.5
ø 110	1,000	-	+ 1.5 / + 0.5
ø 120	1,000	-	+ 1.5 / + 0.5
ø 130	1,000	-	+ 1.5 / + 0.5
ø 140	1,000	-	+ 1.5 / + 0.5
ø 150	1,000	-	+ 1.5 / + 0.5



Round discs

Diameter and thickness available in mm increments
Thickness tolerance: +/- 0.3 mm

Thickness	Diameter
15 to 120	max 1,300



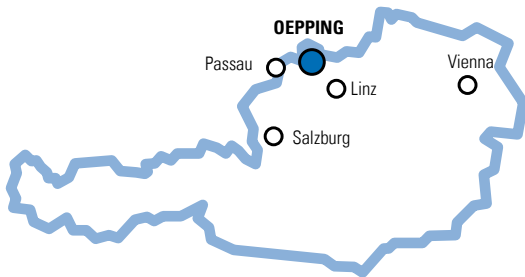
Röchling LERIPA Papertech GmbH & Co. KG

Röchlingstraße 1, 4151 Oepping, Austria

Tel.: +43 (0) 7289 4611-0, Fax: +43 (0) 7289 4611-9900

E-mail: robaproducts@leripa.com

www.leripa.com



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