



GLOBAL PROVIDER OF RUBBER PRODUCTS



## SANOK RUBBER COMPANY SA

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We are a company with 90-year tradition and experience in the production of rubber and metal-rubber elements as well as rubber compounds. Our products are used in many industries, including the automotive, construction, pharmaceutical, and household appliances industries.

Global expansion is possible due to advanced solutions, development investments and constant attention to the highest quality. This combination ensures a leading position and the trust of Customers.

Meeting the highest standards also applies to the values. We are a socially responsible business supporting local initiatives. Our company has also adopted an effective pro-ecological policy reducing energy and water consumption in the production process as well as the amount of industrial pollution.





Highest quality, competitiveness, and a well-thought-out global development strategy - due to these three aspects, we are present and recognisable on international markets.

Sanok Rubber Group comprises thirteen subsidiaries: in Poland, Germany, France, Russia, Ukraine, Belarus, Mexico, and China.





## AUTOMOTIVE

Advanced technological capabilities allow us to meet the Customers' requirements. We apply innovative solutions at every stage of the technological process - from product design, through production, test phase, to serial production.

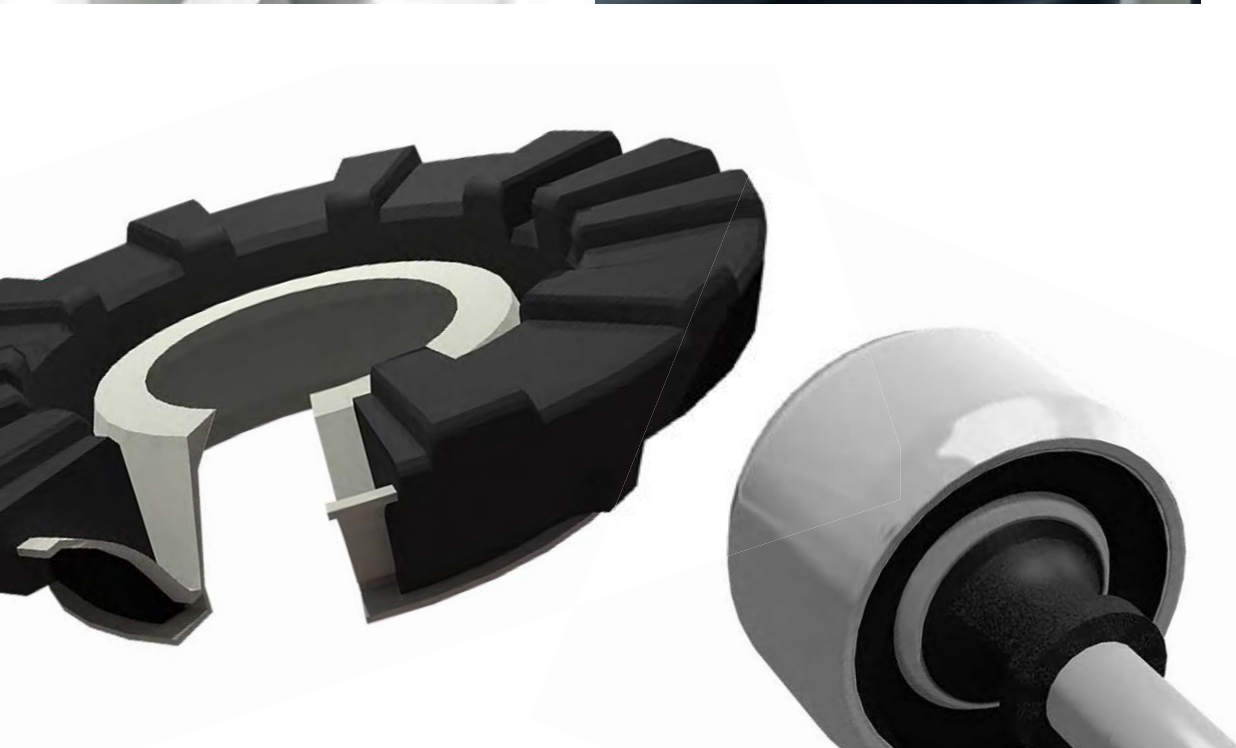
Components and systems produced by Sanok Rubber Company are used by world leaders in the automotive industry. In essence, this is mainly what our Customers appreciate.

- **Car body sealing systems**

Our company provides a wide range of reliable sealing systems for car bodies, Cabrio door, and sunroofs (extruded from EPDM and TPE).

- **Anti-vibration parts for the suspension system**

Caring about quality, we also think about comfort. Our suspension bushings, top mounts, spring isolators, bump stops and mass dampers reduce noise and vibration generated by drive systems and adverse road conditions.



## INFRASTRUCTURE

With experience gained over the years, many investments in product development, and the implementation of a diversification strategy, we are present in many industrial sectors, such as the construction and household appliances industries.

The product portfolio, among others, includes:

- **window gaskets (PVC, aluminium, other),**
- **gaskets for building infrastructure elements,**
- **membranes for water tanks and bladders and membranes for hydraulic accumulators and others,**
- **rubber products for household appliances.**







## TRANSMISSION SYSTEMS

We are a leading supplier of transmission systems, particularly appreciated in agriculture. In our extensive portfolio, you can find:

**Sanok Rubber belts** – a universal line of belts for agricultural and industrial applications.

**Harvest Belts®** – agricultural belts, intended mainly for harvesters and forage harvesters.

**Garden Belts™** – belts used in garden equipment such as mowers, tractors and riders.

**OptimumPRO** – belts designed for heavy-duty transmissions and difficult belt tension adjustment.

**Vege Belts™** – belts intended for carrot harvesters.

**DURO™** belts – used in potentially explosive zones (mines, mills, fuel handling stations).

## PRODUCTS FOR MEDICINE

At Sanok Rubber Company, we also focus on solutions for the pharmaceutical industry. In our laboratory, we perform several kinds of research and tests, due to which we constantly broaden our product portfolio.

Polish and foreign companies use our:

- **plugs for closing, among others, antibiotics, infusion fluids, and lyophilisate preparations,**
- **plungers for disposable syringes, cartridges, and injectors.**







## RUBBER COMPOUNDS

What makes Sanok Rubber Company one of the best manufacturing companies in the country which provides proven rubber compounds?

- **More than 40 years of experience in the production of top quality compounds for the industry.**
- **Almost 1000 different compounds, of which more than 450 in continuous production.**
- **Production management and process tracking systems (SAP ERP 6.0).**
- **5 mixing lines of mixers with full production capacity.**
- **A professional team of engineers involved at every stage of the compound development.**

In addition to the finished products, we provide customised rubber compounds. The process consists of creating a formula and providing finished compounds tailored to Customers' requirements.



## R&D

We are one step ahead of the competitors. This is due to the team of engineers involved in research and development. Our experts work closely with academic and R&D centres. The results of the R&D activities are innovative products.

The market advantage is based on a professional approach, a forward-looking attitude, and an emphasis on four key elements. These include:

### **MATERIALS**

Our company looks for materials with unique properties, developing our own base of rubber compounds. Our list currently includes over 1000 unique formulas.

### **PROCESSES**

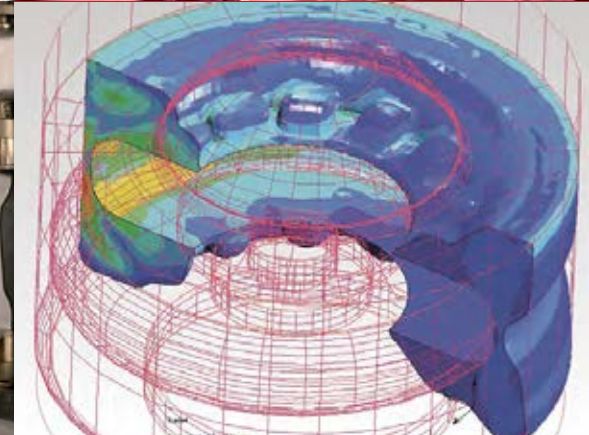
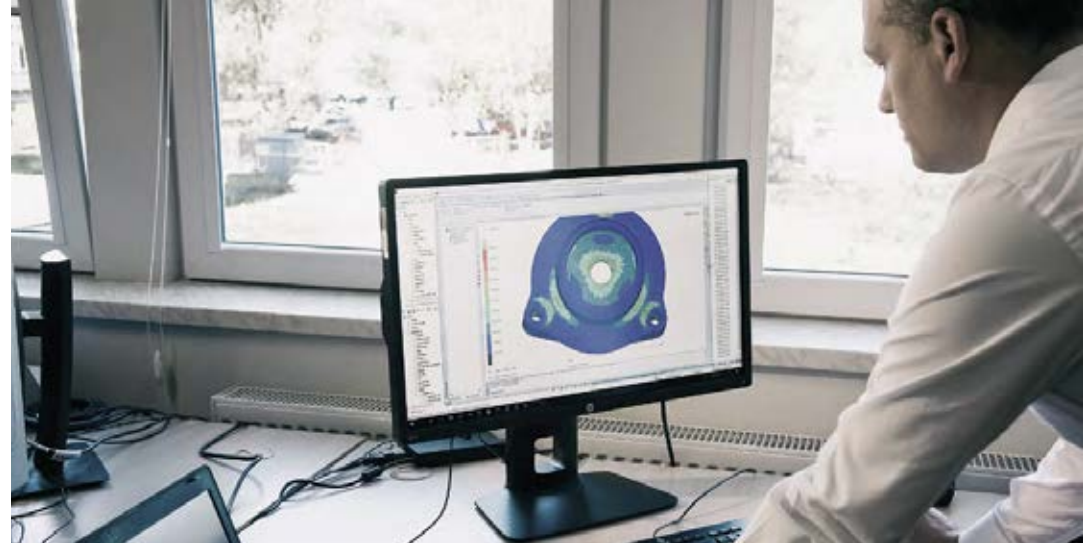
We focus on new production technologies and invest in machinery stock. The attention is also put on process automation and robotisation.

### **PRODUCTS**

Our product portfolio is being continuously expanded. New functionalities are already implemented at the design stage.

### **INFRASTRUCTURE**

Our domain is advanced material research. Functional tests of products performed under various conditions are also a crucial stage.





## QUALITY AND LABORATORY

Our products are manufactured based on the highest quality and safety standards. All processes - design, production, and delivery - are based on the Integrated Management System, which meets the following requirements:

- ISO 9001,
- IATF 16949,
- ISO 14001,
- ISO 45001,
- TISAX

We use the latest technologies to protect the environment, but also to take care of safety. A team of engineers from our Research and Control Laboratory is engaged in testing raw materials, compounds, and finished products as well as complete systems.





## SOCIAL RESPONSIBILITY

The pro-ecological approach is reflected in each of our business areas, which ensures sustainable development. In order to reduce the emission of pollutants, we improve technological processes and take measures to reduce the consumption of energy and raw materials.

We are a socially responsible company. Our company is involved in the cultural and social life of the region. Therefore we support local foundations, cultural and sports initiatives, as well as those related to health care and assistance for the disabled and poor.

We must take care of the future today!



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Foto: Tomasz Sowa





**Sanok Rubber Company SA**

38-500 Sanok, ul. Przemyska 24

tel. +48 13 46 54 444

fax +48 13 46 54 455

e-mail: [kontakt@sanokrubber.pl](mailto:kontakt@sanokrubber.pl)

[www.sanokrubber.pl](http://www.sanokrubber.pl)

## AUTOMOTIVE

We are a leading manufacturer of comprehensive solutions for the demanding automotive industry. The key to success is maintaining the highest quality and safety standards.

Rubber, rubber-metal, rubber-plastic, and TPE products are used, among others, in body sealing systems, car suspension, and exhaust system suspension. The components manufactured by Sanok Rubber Company SA are widely used by global automotive corporations.

The correctness of the processes being implemented by Sanok RC SA ensures: Quality Management System, Environmental Management System, Occupational Health and Safety Management System compliant with IATF 16949 specification and ISO 9001, ISO 14001, ISO 45001 and TISAX requirements.



## AUTOMOTIVE

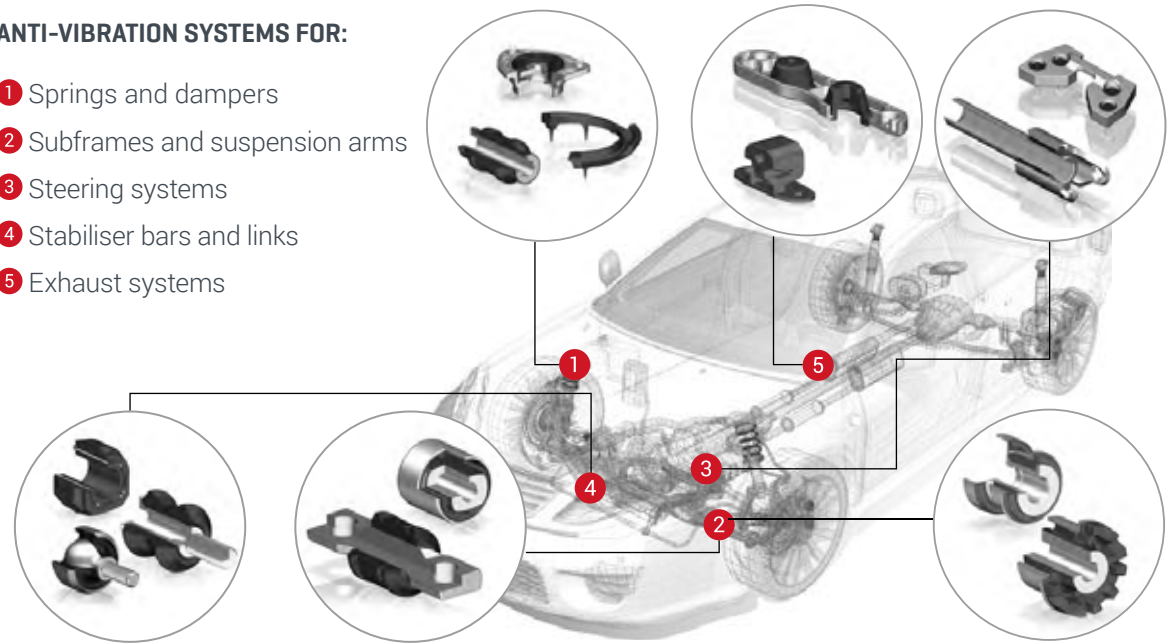
### PROCESSES SUPPORTED

Several dozen years of experience and appropriate know-how combined with modern laboratories and carefully selected raw materials allow us to meet the expectations and requirements of our Customers. This is also influenced by advanced processes, which we are still improving:

- multi-nozzle extrusion of multi-compound profiles,
- on-line and off-line lacquering and flocking,
- application of double-sided adhesive tapes in line and on dedicated stations,
- joining with PE, TPE and EPDM tapes and liquid EPDM,
- precise cutting and progressive punching of multi-component profiles with joining,
- multi-nozzle and two-stage moulding,
- real-time control of product surface geometry and quality,
- two-zone calibration on automatic calibration lines equipped with 100% control systems,
- automated part preparation process including degreasing and phosphating,
- robotised systems for coating parts with adhesives.

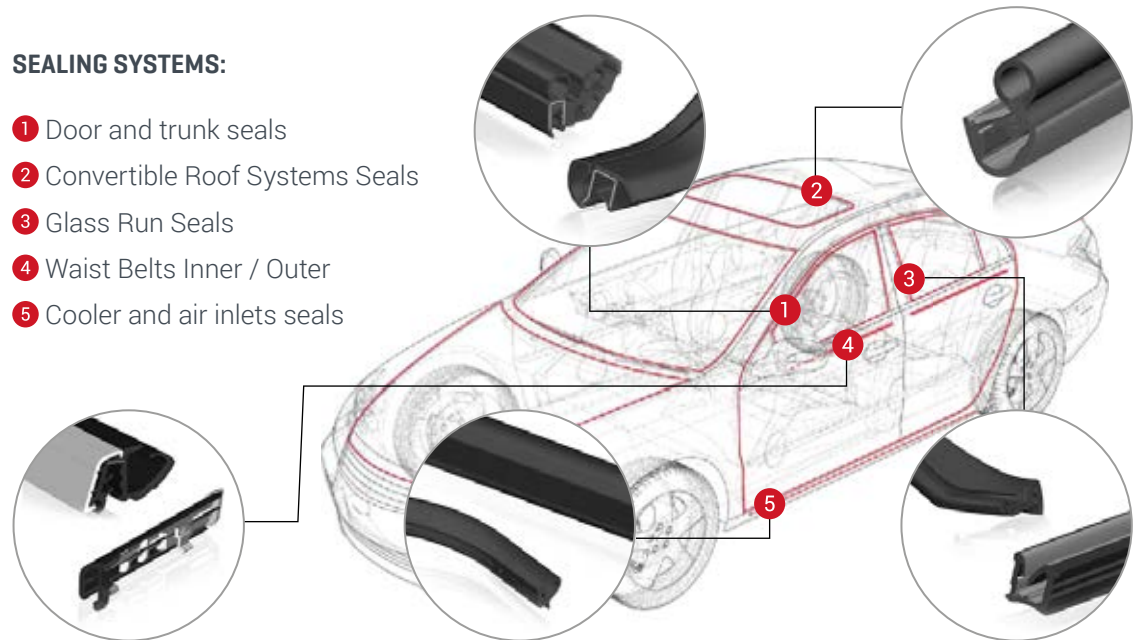
### ANTI-VIBRATION SYSTEMS FOR:

- 1 Springs and dampers
- 2 Subframes and suspension arms
- 3 Steering systems
- 4 Stabiliser bars and links
- 5 Exhaust systems



### SEALING SYSTEMS:

- 1 Door and trunk seals
- 2 Convertible Roof Systems Seals
- 3 Glass Run Seals
- 4 Waist Belts Inner / Outer
- 5 Cooler and air inlets seals





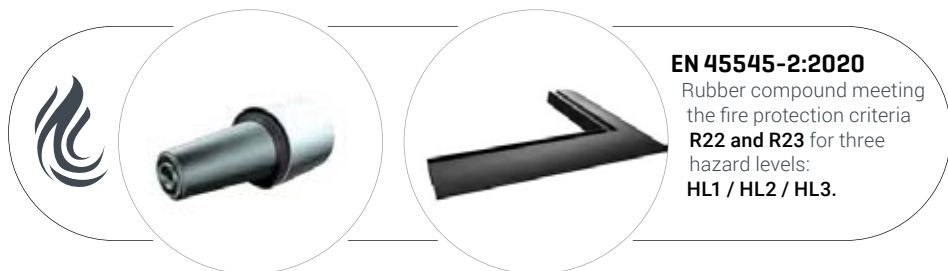
## NON AUTOMOTIVE

Thanks to the forward-thinking approach and courage, we design, test and manufacture products intended not only for the automotive industry, but also for the non-automotive market.

Our solutions are used, among others, in agricultural machines, rail vehicles, and snow removers.



## NON AUTOMOTIVE



### RAILROADING:

Train bogie AVS elements

#### EN 45545-2:2020

Rubber compound meeting the fire protection criteria **R22 and R23** for three hazard levels: **HL1 / HL2 / HL3.**



### TRACTORS:

Interior AVS elements  
Cabin seal systems



### ROADSIDE ASSISTANCE & OTHER UTILITY VEHICLES:

Rubber Wedges



### SNOWPLOWS:

Snowplow blades



### BUILD-ON PLATFORMS SYSTEM SEALS:

Isotherm door seal system



### AGRICULTURE EQUIPMENT / MACHINERY:

Agricultural equipment AVS elements



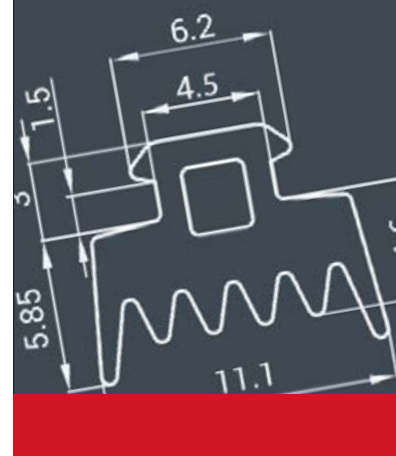
### CAMPING CARAVAN:

Trailer body seal system

## INFRASTRUCTURE

Control over every stage of the manufacturing process from A to Z gives us great independence. All products are made of rubber compounds developed and produced in our modern plant. Designers and technologists take care of meeting the requirements set by the Customers. In such conditions, we produce seals, which are then used by Polish and international companies for years.

Gaskets designated by Sanok Rubber Company brand are characterised by very good permanent deformation and high resistance to weather conditions. This is due to the use of EPDM. We guarantee a long and trouble-free service life.





## INFRASTRUCTURE

### PROCESSES AT SANOK RUBBER COMPANY

**Siliconising or talcing** – Extruded gaskets are covered with a thin layer of silicone or talc, which facilitates their installation in the profile.

**Cutting** – Profiles used in aluminium joinery may have notches that make laying the profiles in corners easier.

**Flocking** – This method involves the electrostatic application of polyamide or polyester fibre. The applied flock is resistant to abrasion, water, and antistatic. It has excellent thermal insulation and filtering properties for dust and smoke.

**Joining corners** – The process consists of joining rubber profiles during the injection process in specially adapted moulds.

#### Ways of packing gaskets for joinery:

- on cardboard reels and in cardboard boxes (sections 20-600 m),
- other packaging methods tailored to individual Customer's needs.

#### Ways of packing gaskets with adhesive tape:

- jumbo rolls,
- on reels,
- in cardboard boxes,
- in coils,
- other packaging methods tailored to individual Customer's needs.



Profiles for aluminium windows



Profiles for PVC windows



Profiles for other applications

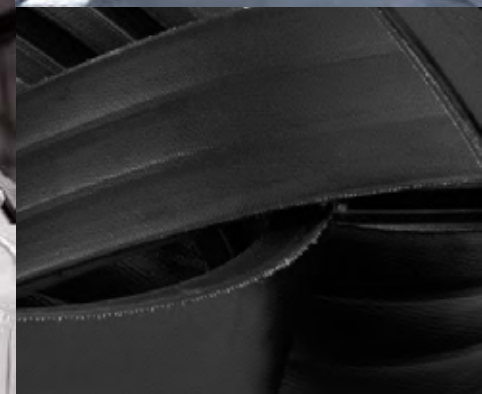
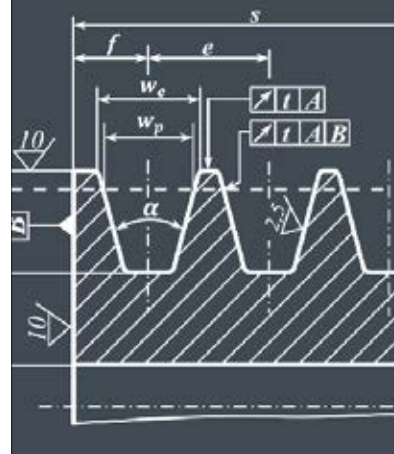


Seals with self-adhesive tape

## TRANSMISSION SYSTEMS

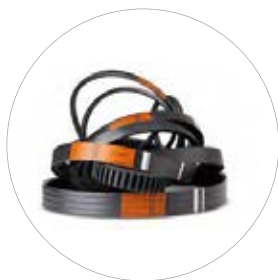
V-belts manufactured by **Sanok Rubber Company** meet the highest quality standards. We conquer the market by offering a range of long life v-belts. For the production process, we use only raw and certified materials. Our laboratory, where we check rubber compounds, fabrics, cords, and belt strength, plays an important role. We constantly monitor products from serial production.

The advantage of belts made of chloroprene rubbers is their durability and resistance to temperature and weather conditions. We also use a rubber-textile filling, which additionally increases the resistance to deformation. Some belt models are made on aramid cord warp, which guarantees tensile, breaking, and bending strength. All these technologies extend service life.



## TRANSMISSION SYSTEMS

### WHAT V-BELTS DO WE PROVIDE?



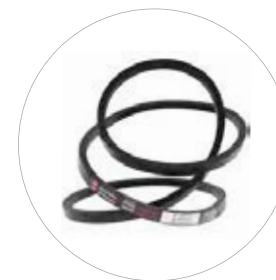
**Harvest Belts®** - intended for harvesters and forage harvesters.



**Garden Belts™** - belts used for garden equipment.



**DURO™** belts - used in potentially explosive zones.



**OptimumPRO** - maintenance-free narrow-profile belts for heavy-duty industrial equipment.



For other applications we recommend **Sanok Rubber** belts in three design versions: **Solid**, **Super** and **Super K**.



## PRODUCTS FOR MEDICINE

If we did not think out of the box, the development of the company would be impossible. Therefore, our product portfolio is being constantly expanded by new and competitive solutions. These are also appreciated by the pharmaceutical and medical industry, which uses our plugs to close antibiotics and infusion fluids, lyophilisate preparations, as well as purges for syringes and insulin cartridges. Meeting strict standards and introducing innovative methods from the beginning to the end of the technological process is a golden standard for us.

Production is based on raw materials that comply with the requirements of the REACH regulation, issued by the European Parliament and the EU Council. This ensures, among others, a high level of health and environmental protection.



## PRODUCTS FOR MEDICINE

### COMPOUND COMPOSITION

- Rubber compounds are mainly made of the following types of rubber: bromobutyl, chlorobutyl, isoprene, acrylonitrile butadiene (NBR), and ethylene propylene diene monomer (EPDM).
- The products do not contain natural rubber (Latex Free) and substances included in the "Substances of Very High Concern" (SVHC) list.
- Vulcanisation is done by injection moulding.

### WASHING AND PACKING

The washing process takes place automatically and all parameters are continuously monitored. Packing takes place in cubicles with laminar air flow from  $0.32 \div 0.48$  m/s (class C - 10 000 – working position).

### LABORATORY

The laboratory with cutting-edge equipment and the team of experienced engineers guarantee, that the measurements and tests of physical and chemical as well as biological properties of the products are performed in a professional manner with attention to detail.

As part of tests on biological properties, among others, microbiological purity, cell cytotoxicity (in vitro) are verified. We perform a LAL test to detect the presence of bacterial endotoxins. The working environment is being constantly monitored in terms of microbiology - class C (10 000).

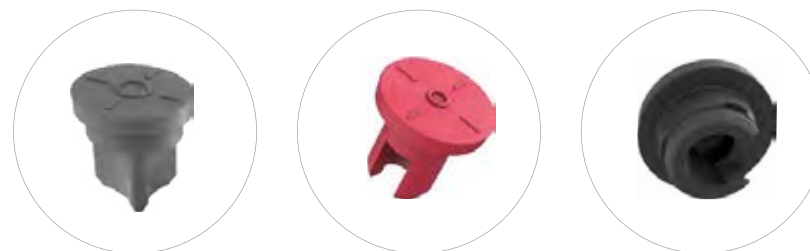
We check the physical and chemical properties in accordance with the strict standards set by: European Pharmacopoeia - Type I (Chapter 3.2.9), USP (Chapter 381) and ISO 8871 (Part 1.3.5).



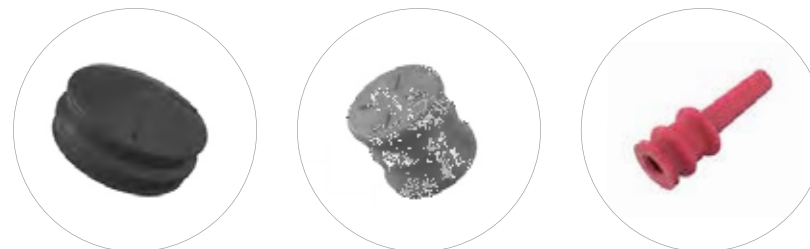
**Infusion stoppers:** Standard sizes 28, 29, 32 and 34 mm



**Antibiotics stoppers:** Standard sizes 13 and 20 mm



**Lyophilization stoppers:** Standard sizes 13 and 20 mm



**Plungers for disposable syringes and insulin cartridges**



## HOUSEHOLD APPLIANCES

Poland has been a leader in the production of household appliances in the European Union for years. In 2019, domestic factories produced 23.5 million units of equipment - according to the report of APPLiA Poland, an organisation representing producers and importers of household appliances. Poland's share in the EU production of washing machines, dryers, and dishwashers has already exceeded 50%.





## COMPONENTS FOR INDUSTRY

We are proud to contribute to these successes by supplying rubber components to reputable companies in the household appliances industry, producing, among others, washing machines, dryers, vacuum cleaners, and other so-called small household appliances.

We use the injection and extrusion method. The high level is ensured by proven materials and rigorous tests performed at each stage.

Sanok Rubber Company is also a leading manufacturer of diaphragms for hydraulic accumulators and membranes for heating systems.

### INDUSTRY PRODUCTS:



Accumulator bladders



Rubber-metal rings



Expansion and pressure vessels

### VACUUM CLEANER PRODUCTS:



Shock absorbers for motors and fans



Bumpers and rubber stops



Profiles to seal covers

### PRODUCTS FOR WASHING MACHINES, DISHWASHERS AND DRYERS:



Sealing profiles



Simple and shaped water hoses



Door gaskets



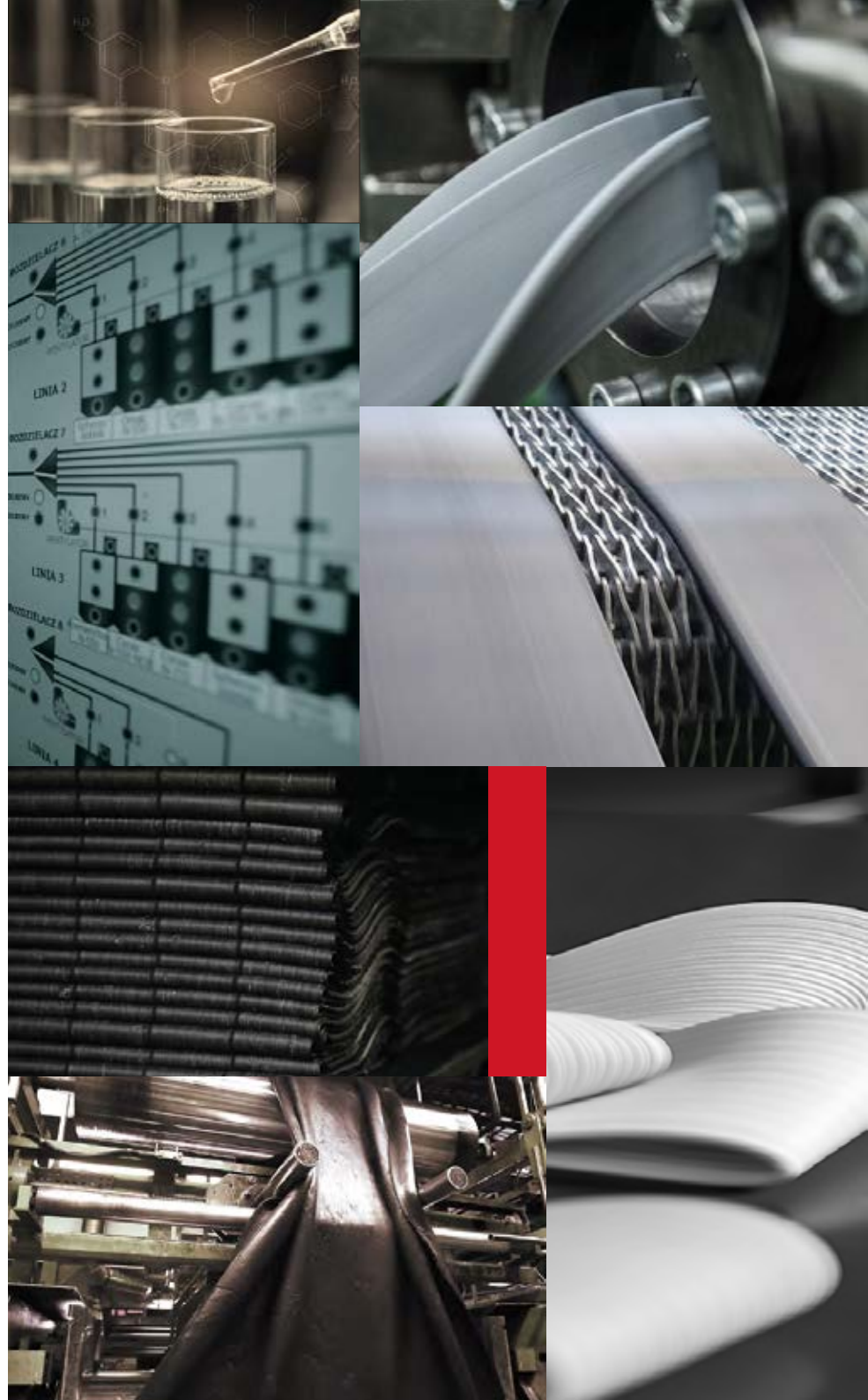
Hoses





## RUBBER COMPOUNDS

More than 40 years of experience in manufacturing of the highest quality compounds for industry gives us a competitive advantage. Our list of formulas includes almost 1000 different compounds, of which more than 450 are in continuous production. We keep creating new ones.



## RUBBER COMPOUNDS

### COMPOUND DEVELOPMENT PROCESS IN 7 STEPS:

- Creating rubber compound formulas.
- Development of rubber compounds production technology.
- Drawing up a production documents.
- Testing and implementing new raw materials.
- Development of safety data sheets for compounds.
- Implementing rubber compounds for new applications.
- Continuous improvement of mixing processes.

We produce rubber compounds mainly for the following markets:

- automotive,
- construction,
- industry.

### PRZEBIEG PROCESU:

**1. WEIGHING.** Preparation of raw materials for production in a semi-automatic weighing and formula control system (linked to the formula database). All production lines are equipped with SCADA - SSM -Skamer/ Poland control system.

**2. MIXING.** Dosing raw materials into mixers. Materials weighed on automatic scales integrated into the mixing line control system. We have 5 INTERMIX mixers: four for black compounds and one for colour ones.

**3. ROLLING.** Automation of the process for its strict repeatability.

**4. FILTERING.** Compounds subject to special requirements are subjected to a filtering process (the smallest mesh size: 0.16 mm)

**5. CUTTING and PACKING** are tailored to Customer needs and requirements.

