

PRODUCT

catalogue



experienced
team



proprietary
product formulas



high
work ethic



40 YEARS IN THE POLYURETHANE BUSINESS

Our history dates back to 1982 when Foreign Polyurethane Company Polychem, a manufacturer of basic polyurethane products first opened in ul. Cieszkowskiego in Swarzędz. Since 1991 as Polychem Systems Sp. z o.o. we have consistently introduced new production technologies which are the foundation polyurethane processing.

Independently from the changing economic trends, we build our strength on the foundation of industry experience, highly qualified team of engineers, a modern research laboratory and production based on proprietary product formulas. Thanks to that, we ensure that our products are optimal for the needs of our Customers and meet high market requirements.

We are a leading producer of polyurethanes in Poland. We are a professional manufacturer for both industrial and individual customers.

Advantages of polyurethanes

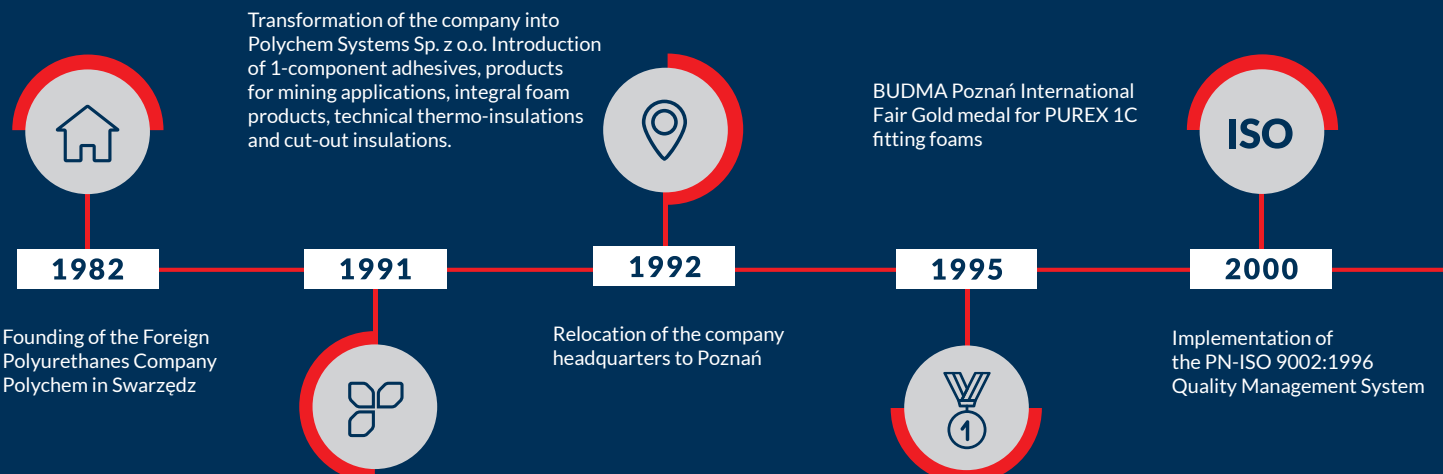
Polyurethane is formed as a result of reaction of isocyanates with polyols. The versatility of this material allows for it to be used in many industries, including the automotive, construction, mining, furniture, and footwear. The diversity of polyurethanes offers almost unlimited processing possibilities.

We develop our **products** on the basis of individual **customer requirements**

1982 - First office in Swarzędz



From 1992 - Head office in Poznań



QUALITY ASSURANCE AND ENVIRONMENTAL PROTECTION

40 years of history, over 70 awards



ISO 9001 and 14001 CERTIFICATES

Integrated Quality and Environmental Management System in accordance with ISO 9001 and ISO 14001 is a confirmation that our company applies the standards of development, production and sales of polyurethane products and additives for their processing, while respecting the natural balance and sustainability of basic natural processes.



NATIONAL INSTITUTE OF HYGIENE ATTESTATIONS

Our products are certified by the National Institute of Public Health, attesting that they are safe for human health and the environment.



ENVIRONMENTALLY FRIENDLY

Our products do not contain substances that deplete the ozone layer.

CE MARKING CONSTRUCTION INDUSTRY MARK



All our products are marketed pursuant to the applicable Polish and European law.



Our products intended for the construction industry have a CE marking or a national declaration of performance (B).



Our factory production control system underwent multiple audits by such institutions as:

- Instytut Techniki Budowlanej (Building Research Institute),
- Instytut Budowy Dróg i Mostów (Research Institute of Roads and Bridges),
- Główny Instytut Górnictwa (Central Mining Institute),
- Bureau Veritas.



STRENGTHS

- Experienced team
- Proprietary product formulas
- Professional technological background
- Modern research and development laboratory
- Product parameters confirmed by external testing
- Systematically expanded production park
- Proven financial sustainability
- Trainings for employees and customers
- High work ethic



2009

Introduction of PUREX NG 0810 NF, the first Polish open-cell foam, as well as adhesives for filters

Introduction of surface adhesives

2010



2012

Organization of the first spray insulation training course

Extension of company premises

2017



2020

Implementation of the integrated PN-EN ISO 9001:2015 and PN-EN ISO 14001:2015 Management System

PRODUCT CATALOGUE



Polyurethane adhesives



Adhesive-sealant compounds



Rigid foam systems



Flexible foam systems



Coating systems



1-component foams

Research for our customers

All our products undergo detailed parameter control, and product properties are confirmed by records in the certificate of analysis. We also perform quality control of all raw materials that are used in production.

We perform tests at the customers' order.

In our laboratory, we test parameters such as thermal conductivity coefficient (λ), dimensional stability, tensile strength, compression strength and others, as required by the customer.

Well-equipped laboratory and experienced team allow for ensuring high quality of our products.

Wide range of packaging sizes tailored to order requirements





1-component adhesives - EKO, DEKO

Roofing adhesives

1-component and solvent-free DEKO adhesives are products cured by moisture in the air or in the materials the adhesives are applied to. Thanks to their properties, they are ideal for bonding insulation materials, renovation, and thermal improvement of roofs. They are also used for bonding polystyrene, mineral wool, polyurethane foam and other porous and fibrous materials with sheet metal, roofing felt, concrete and wood as well as wood-based materials.



PVC Adhesives

Adhesives designed for bonding of polyvinyl chloride sheets with polystyrene, extruded polystyrene and polyurethane foam. They are used in the manufacture of PVC doors. Adhesives of this type form a strong and flexible joint while retaining their properties even at sub-zero temperatures.

Rebound foam adhesives

Adhesives that are used in the recycling of flexible polyurethane foam. With the use of these adhesives, pieces of foam are formed into blocks, which are then cut to form mattress elements and fillings for upholstered furniture.

Kitchen sponges and scrubbers adhesives

Adhesives for bonding flexible polyurethane and cellulose foams with non-woven fabrics for the production of bath sponges, kitchen scourers and mattresses. These adhesives form a very soft and elastic bond that is practically imperceptible to the touch.

Galvanized sheets adhesives

Adhesives with excellent adhesion for bonding galvanized sheeting with insulating materials such as polystyrene, mineral wool, PUR foam and cellular cardboard. These adhesives are perfect, among others, for the manufacture of steel doors.

Wood adhesives

Adhesives designed for bonding dry and wet wood. They form an extremely strong and water-resistant bond. They are used primarily in the manufacture of wooden components for outdoor use, fences, pergolas, garden furniture.

Insulating materials adhesives

Adhesives used for bonding insulating materials such as polystyrene, XPS, polyurethane foam, mineral wool, etc., with various types of cladding - sheet metal, roofing felt, laminates, plasterboard, and wood-based panels.



Rubber granules- adhesives

Adhesives for bonding SBR and EPDM rubber granules. They are used in the moulding finished parts from the granules, e.g. slabs, cubes, kerbs, traffic barriers and traffic sign bases. This product group also includes adhesives for the in-situ application of sports and safety playground surfaces.

2-component adhesives - DiPUR

Aluminium joinery adhesive

Adhesive for bonding corners of aluminium windows and doors. It can also be used for pressure-sensitive bonding of all types of insulation materials. The product is available in two versions with different bonding times, and in three colour variants - beige, anthracite and white. The adhesive is packaged in a double cartridge.

Filter adhesives

Adhesives designed for bonding automotive filter elements (oil filters, LPG filters, air filters), HEPA filters and various types of industrial filters. These adhesives have low sensitivity to moisture occurring in the production process and on the materials to be bonded, and very good adhesion to different filter materials. The various types of DiPUR F adhesives make it possible to produce filters with a wide range of applications for various working environments.

Car body and sandwich panels adhesives

Solid adhesives designed for manual or machine bonding of polystyrene foam, extruded polystyrene (XPS), plastic claddings, roofing felt, PUR foam, wood, cardboard, and other materials. Adhesives can be used to produce fittings, filling of joints, etc. The available versions differ in application times from 10 min. to 3 h.

Artificial turf adhesive

Adhesive designed for bonding artificial turf mats on textile tape. Suitable for indoor and outdoor use. Can be used in harsh weather conditions. After curing, it forms an elastic joint resistant to changing weather conditions.

Sandwich panel adhesives

Expansive adhesives for the machine manufacture of glued sandwich panels. They are characterised by low combustion heat value, which makes it possible to achieve European flammability class A2 or A1. A wide range of adhesives allow for the adjustment of the product to the parameters of a given production line and the dosage method.

Accessories - Guns

We offer various accessories for the application of our products, including air- and hand-guns.

DiPUR
2C adhesives



Adhesive-sealant compounds

FLEXPUR

1-component, polyurethane-based adhesive-sealant compound designed for bonding and sealing structural elements in order to absorb vibrations and oscillations and to neutralize any stresses caused by different thermal expansion properties of the bonded elements. The compound remains permanently flexible and can be painted over once dry. It is perfect for sealing seams, joints, and connections in industrial, road, residential (floors and foundations) as well as refrigeration and automotive constructions.

PURprimer M

1-component polyurethane resin designed for Priming concrete expansion joints before applying FLEXPUR. The primer can be applied to treat dry and mature concrete substrates with low internal moisture.

Accessories - Guns

We offer both hand-held and air guns for cartridges and aluminium sleeves that allow for efficient use of our products.





Spray systems

PUREX NG - open-cell

2-component, open-cell, semi-rigid polyurethane foams, produced by spraying with the use of dedicated spraying units, designed for thermal and acoustic insulation of buildings. They have very low specific weight, good insulating properties, high vapour-permeability and good resistance to fungi and mould. They form a tight insulation layer eliminating thermal bridges. Used mainly as internal insulation for walls and attics.

Spray systems

PUREX NG - closed-cell

2-component closed-cell rigid polyurethane foams, produced by spraying with the use of dedicated spraying units, designed for thermal insulation of buildings. They have very good insulating properties and low specific weight while maintaining good mechanical properties. These foams are used for both interior and exterior insulation of buildings.

Pouring systems

PUREX WG - open-cell

2-component, open-cell pouring systems for the manufacture of rigid and semi-rigid polyurethane foam, which can be processed either manually or with dedicated units. A wide range of foam densities (from 10 to 25 kg/m³) allows for the use of these foams as thermal insulation for building fittings (e.g. boilers) as well as for industrial installations (light insulation lagging). The material is also suitable as filling in the production of packaging materials.

Pouring systems

PUREX WG - closed-cell

2-component, closed-cell pouring systems for the manufacture of rigid and semi-rigid polyurethane foam, which can be processed either manually or with dedicated units. A wide range of foam densities from 25 to 600 kg/m³ allows for the use of these foams as thermal insulation for building fittings, industrial system components, cargo ship loading spaces, and for the production of moulded elements (wood-like products, beehives, interior decorations, panels etc.).

PUREX BOX

This portable spray kit for two-component polyurethane foam enables quick and effective insulation without other specialist equipment. It consists of two pressure cylinders fitted with a spray gun that acts as an applicator. The foam applied in this way has parameters similar to closed-cell foam produced using professional equipment. The foam has excellent adhesion to such materials as concrete, plaster, brick, wood, metal, and most plastics. The system is designed for small-scale investment projects and specialised applications.

Florist foam systems

Open-cell, rigid polyurethane foams. Due to their characteristics, these systems are used in the florist industry as a basis for artificial flower compositions. The foam is perfect both for continuous production lines, as well as for cyclic pouring production. Density and colour variants are customized to customer needs.

Technical rigid foam insulation - covers, boards, fittings.

Rigid polyurethane foam, offered in the form of elements cut out of blocks according to customer specifications. Wide range of density of the foam (33 - 200 kg/m³) allows for it to be used for both thermal insulation of building fittings and industrial installations (mainly in the form of panels and coverings), as well as in the form of structural and decorative elements.

We were **The First** in Poland to create and apply the award-winning open-cell foam!





Flexible foam systems

Elastomeric footwear systems

A product group comprising polyurethane plastics based on polyether or polyester polyols, used mainly in the footwear industry. These foams are characterised by high mechanical strength (tensile and bending strength, as well as abrasion resistance) over a wide range of hardness and density of the final product. The products we manufacture range from lightweight shoe insoles with density from ~150 kg/m³ up to heavy shoe soles of ~600 kg/m³. They are used in the moulding industry, e.g. for orthopaedic applications.

Elastomeric filter systems

In this product group, there is a very wide range of polyurethane systems used in the production of seals for various types of filters (mainly air filters). The reactivity and characteristics of these systems (filled or unfilled) are closely dependent on the final application of the product, as well as on the characteristics of the production line. Seal hardness is in the 18 - 40°ShA range.

Elastomeric integral moulded parts systems

Polyurethane systems suitable for applications wherever a rubber-like skin is required on the surface of the workpiece. In such applications, a product with a surface structure similar to that of solid plastic and a core of hard or flexible foam is manufactured during a single process. These systems are ideal for the production of components for the automotive, furniture, transport, sports and leisure, and other industries.

Elastomeric cushion foam systems

Polyurethane systems of this type are used to produce foam inserts with density ranging from 50 to 120 kg/m³. High Resilience (HR) foams are available in versions suitable for machine application or manual pouring. In order to comply with more stringent non-flammability requirements, the base system can be supplemented with a flame retardant package. The final products are used in such industries as furniture, automotive and railway

Elastomeric gasket systems

Polyurethane systems for the direct application of polyurethane gaskets onto workpieces (FIPFG – Formed In Place Foam Gasket). They can be dispensed into moulding grooves of components (liquid systems) or on flat surfaces (thixotropic systems). Gaskets made using this method are characterised by a low level of permanent deformation during use, are resistant to hydrolysis and have a wide thermal resistance range.

Elastomeric solid moulded parts systems

Purex EPI LE are elastomeric systems for the casting of Cold-cure solid elastomeric parts for the production of elements with increased mechanical requirements, such as bumpers, fenders or mouldings. The products are available in a range of hardness from 30-95°ShA. Products made from this type of system have very good mechanical properties and excellent resistance to hydrolysis.

Other products

We have the machine park and experience necessary to produce finished polyurethane elements using our systems.

Integral fittings and foams (microporous)

We offer a comprehensive service of implementation and start-up for the production of technical fittings based on the supplied samples or technical documentation, as well as consulting in the field of material selection, mould construction and selection of appropriate technological solutions that are best for a given production

Foam and sleeve pistons

We also manufacture pistons designed for cleaning of pipelines, removal of water, condensates and impurities, separation of pumped media, introduction of detergents and calibration of the initial flow analysis. The pistons are designed for effective cleaning and high reliability and durability, while keeping the entire process simple.





Polyurea systems

PUREX AM

An aromatic polyurea system for general applications. Its notable features include excellent mechanical properties such as abrasiveness, elongation, and maximum stress. The coating is ready for use just a few hours after application. It is an ideal option for waterproofing or protecting concrete from chemical and physical agents.

PUREX ASP

An aliphatic polyurea system designed for manual application. In comparison to the aromatic system, it allows for obtaining a harder and more aesthetically pleasing coating. It is characterised by excellent weather resistance and colour stability. It can be used as a protective layer for PUREX AM and PUREX HB systems or as a stand-alone coating.

Polyurea hybrid systems

PUREX HB

An aromatic system combining the characteristics of polyurea and polyurethane. Featuring excellent mechanical properties, it is flexible and can also bridge cracks. It can be used effectively with foam spraying equipment. Ideally suited for protecting roofs and concrete structures. It serves as an alternative to the PUREX AM system.

Proper preparation
of the substrate is **the key**

Polyurethane coating systems

PUREX PR

A solvent-free, 2-component coating system based on aromatic polyurethane. The finished coating has outstanding mechanical properties and adhesion, while being harder and cheaper compared to polyurea. The product can be used in foam spraying units with a mixing ratio of 3:1 and 1:1. We also offer a repair system for manual application.

Primers

PURprimer C

A 2-component polyurethane primer with a weight mixing ratio of 1:1. Suitable for application on concrete and other substrates, e.g. mineral substrates, polyurethane foam, roofing felt and wood, it can also be used as a bonding coat for polyurea. The low viscosity enables easier penetration of the substrate. PURprimer C facilitates the application of polyurea coating systems by reinforcing the substrate and preventing moisture from reaching it. The primer can be applied by brush or roller.

PRIMER ZN

A 2-component epoxy primer with a weight mixing ratio of 6:1. The primer improves the adhesion of polyurea to substrates (e.g. steel, galvanised steel sheets or ceramic tiles) and can be applied by brush, roller or spraying units. It also provides additional protection against corrosion. The primer can be used before applying PUREX AM or PUREX HB system coating.

VISIT!
our website



www.polychem-systems.com.pl



1-component foams

Fitting foams

PROFI

Professional, 1-component, low pressure, polyurethane fitting foam with a wide range of applications. It is ideal for fixing door and window frames, filling gaps and insulating plumbing and heating system elements, etc. The foam's quick drying time enables rapid application. It cures when exposed to moisture in the air or the substrate to which it is applied. Available in gun spray and hose spray versions.

PUROTAN 60L

1-component polyurethane fitting foam with improved performance. Distinguished by increased expansion, high performance, low water absorption, as well as a compact and uniform microcellular structure, the foam offers high dimensional stability and excellent adhesion to standard building materials. It cures when exposed to moisture from the atmosphere or from the substrate to which it is applied. Available in gun spray and hose spray versions.

Pursan AE500

Multi-purpose agent for dissolving uncured polyurethane foam. Indispensable for cleaning spray guns and other tools used for application of 1-component polyurethane foams and adhesives

Adhesives

STYRPUR

Polyurethane adhesive for polystyrene foam and thermal insulation systems suitable for a wide range of applications. An ideal choice for fitting polystyrene panels when insulating external building walls installing windowsills, as well as filling gaps in thermal insulation. It exhibits excellent adhesion to materials such as concrete, plaster, brick, wood, metal, polystyrene, and extruded polystyrene (XPS). It is available in both gun spray and hose spray versions.

STYRPUR FAST

Multi-purpose polyurethane adhesive in aerosol form. Excellent for repairs, DIY projects and fixing of non-structural and decorative elements. Thanks to its good adhesion properties, it can easily bond materials such as concrete, plaster, brick, wood, metal, polystyrene, OSB panels, plasterboards, and mineral wool.

Accessories - Spray gun

We offer guns than can be used for the application of our 1-component foams.



Reduce your energy costs and protect the environment

Right insulation material makes it possible to significantly reduce energy consumption, which in turn, affects heating costs. Such solutions also help reduce the impact on the environment.


We are a leading manufacturer of polyurethane insulation, which, when used in buildings and technical installations, limits the heat loss and thus reduces the need for fossil fuels.

The coating systems are used in technical buildings, e.g. in settling tanks in wastewater treatment plants.

Polyurethane for bees and other pollinators

Our polyurethane systems are also used in the production of beehives. Polyurethane hives are highly resistant to adverse weather conditions. Thanks to its properties, polyurethane guarantees the insects have optimum conditions all year round.





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