Elastomer Systems

PURIN®

About Us

- Prioritizing science
- Adopting an innovative approach
- Adopting agile management
- Solution-oriented
- Team with a leader spirit
- High motivation at work
- Globalization
- Caring about sustainability

PURIN®

Our Understanding Of Work

- To prioritize the scientific approach in studies,
- To ensure continuity in innovative products,
- To be an excellent team with high communication power,
- To provide values that will make a difference to the sector,
- To be focused on continuous learning and continuous improvement.

Our Mission

To increase our product range in this field by focusing on innovative and environmentally friendly product designs and to leave a better world to future generations while making our living spaces more comfortable.

About Us

PURIN is a brand that responds quickly to the requests of its customers, offers direct technical support with its experience and expertise, and has a "win to win" relationship with all its partners.

Our Vision

For any environment that affects human life, we work with you and for you to prepare a bright future for generations to come by offering innovative, environmentally friendly, and safe products manu-factured with utmost attention and care by Purin working relentlessly.

+20 Export to Country

+50.000 tons/year Production Capacity

+20 Large Scale Project

Engineering and Equipment Services

PURINELAS®

Elastomers are engineering materials that can exhibit different behaviours compared to plastics and metals, do not deform in events such as compression or buckling, and can return to their original state by eliminating the force that causes deformation. In addition, it provides low permeability to air, gases, water and steam, provides electrical and thermal insulation, and has good mechanical properties, adhesion to various fibres, metals and hard plastics.

PURINAqua® PURINATE®

PURINCOAT® PURINADHE® PURINSEAL® PURINELAS®

Elastomer Systems

Elastomers are special components that have an important place among engineering materials and find a wide range of applications in various industrial fields. With their flexibility, durability and various properties, elastomers offer ideal solutions for many applications.

Elastomers have the ability to bounce back even when they are subjected to deformations such as compression or buckling. They also provide low permeability to substances such as air, gases, water and steam and can provide electrical and thermal insulation. The properties of elastomers vary depending on the composition of their polymers and their hardness is measured with a Shore meter.

PURINELAS

Automotive Industry

Elastomers are used in many automotive applications such as tires, gasket and seal materials, suspension parts.

Construction Industry

Elastomers are used in construction applications such as insulation materials, waterproofing materials, vibration absorbing materials and structural sealing elements.

Consumer Products

Many consumer products contain elastomers, such as shoe soles, rubber bracelets, elastic fabrics, rubber parts of various consumer electronic devices.

Medical Industry

Elastomers are used in many medical applications such as medical devices, surgical gloves, rubber bands, medical gasket and seal materials.

Electrical and Electronics Industry

Elastomers are used in many electrical and electronic applications such as cable insulations, gaskets, seals, rubber components of electronic devices and vibration absorbing materials.

Cold Cast Elastomers

Cold cast polyurethane elastomers are used in a wide range of applications from flexible polyurethane resins to very rigid plastics. These elastomer systems can be applied at room temperature and do not require any heat to cure. This feature enables simple and fast handling of the products.

Cold cast elastomers are usually two-component systems and product design can be realized in accordance with the desired pot time. They are compatible with both low- and high-pressure mixing equipment, providing flexibility in various application areas.

These elastomers are typically used in concrete molds, architectural shapers, filtration units and many more. With their flexibility, durability and various application advantages, elastomers play an important role in industrial and architectural fields.

Cold Cast Elastomers

Elastomers are versatile materials that stand out in the engineering world for their various advantages. Unlike plastics and metals, the most prominent feature of elastomers is their ability to return to almost their original shape after deformation. This occurs after the elimination of forces such as tension, compression or bending.

Cold Elastomer Table

Product	Viscosity (23oC)	Hardener	Solid Content (%)	Mixing Rate (w/w)	Pot Life (min)	Shore (A/D)	Application Temperature	Curing (h)	Final Curing (days)
PURINELAS CT 1065A	7000 ± 500	PURINELAS CT 1101	100	100/6,50 (P/H)		65A	10oC - 30 oC	42	7 - 10
PURINELAS CT 1075A	6000 ± 500	PURINELAS CT 1101	100	100/10 (P/H)	8	75A	10oC - 30 oC	8	7 - 10
PURINELAS CT 1080A	5000 ± 500	PURINELAS CT 1101	100	100/11 (P/H)	7	80A	10oC - 30 oC	8	7 - 10
PURINELAS CT 1085A	4000 ± 500	PURINELAS CT 1101	100	100/12,30 (P/H)	7	85A	10oC - 30 oC	8	7 - 10
PURINELAS CT 1040D	3000 ± 500	PURINELAS CT 1101	100	100/26,70 (P/H)	6	40D	10oC - 30 oC	8	7 - 10
PURINELAS CM 1070A	300 ± 500	PURINELAS CM 1070B	100	100/110 (P/H)	45	70A	10oC - 30 oC	8	7 - 10

TDI Elastomers

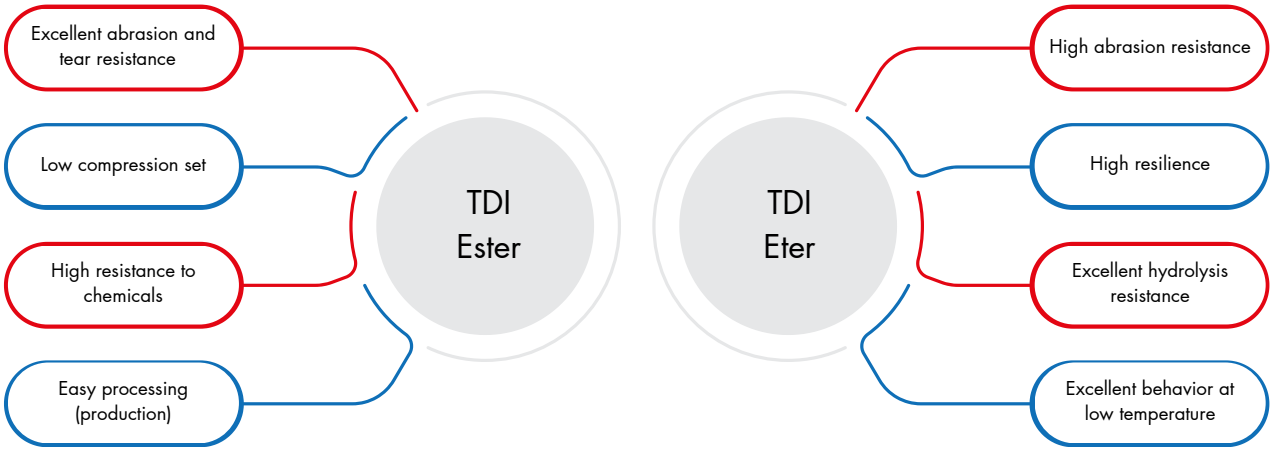
TDI Elastomers, a hot cast polyurethane prepolymer, are used in the most demanding applications where high performance is required. This type of elastomers are obtained by using TDI based prepolymers and amines or mixtures to be used in equivalent ratio with 12-24 hours of waiting time at temperatures between 100-150oC. Polyester/TDI and Polyether/TDI are generally used in their formulations. Raw material selection and hardness selection should be made according to the application area.

TDI Elastomer Features

- Not sensitive to moisture
- Easy to mix
- Manufacturing is not so critical
- Up to 85D Shore hardness
- Short reaction time (cure)
- Not very sensitive to Cure parameters
- Pot life and demoulding time difficult to adjust
- Mixture viscosity increases slowly

TDI Elastomers

TDI Elastomers are generally in frozen form due to their structure. Prepolymers need to be melted before application to make them liquid. They have good mechanical properties such as superior abrasion resistance, high flexibility, high load carrying capacity, shear, tear resistance, chemical resistance and hydrolysis resistance. Industrially, these products are widely used in mining, industrial tires, pallet truck wheels, coatings, printing rolls and metal production markets.

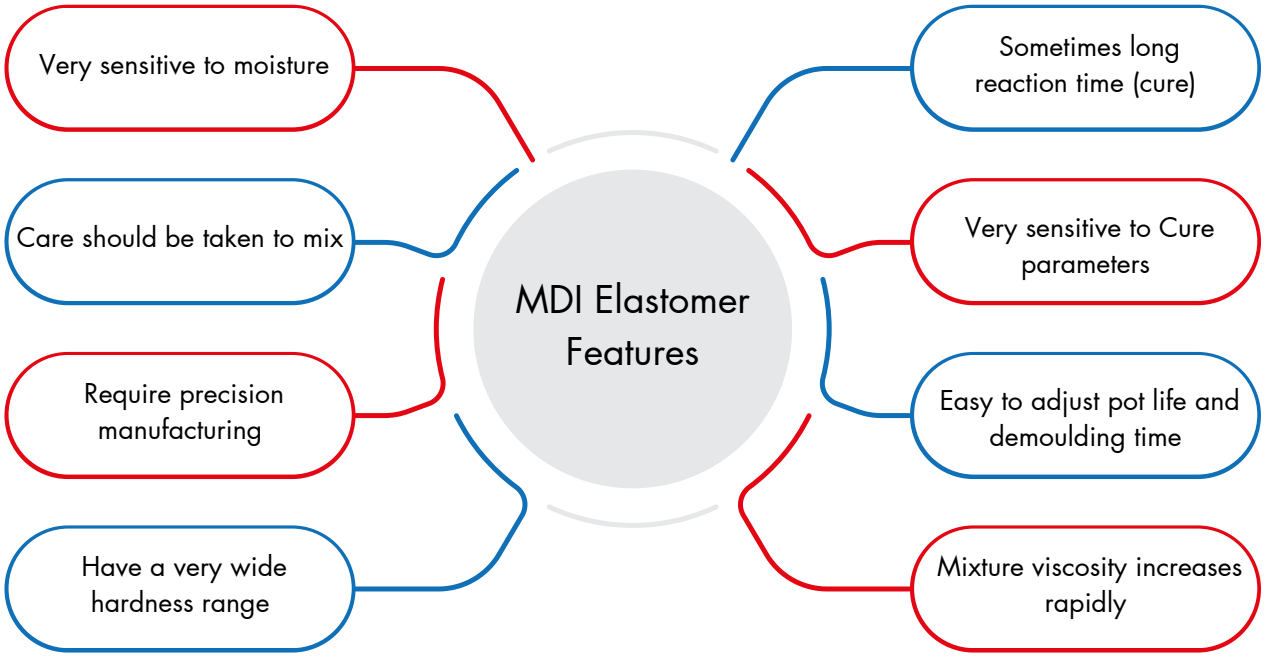


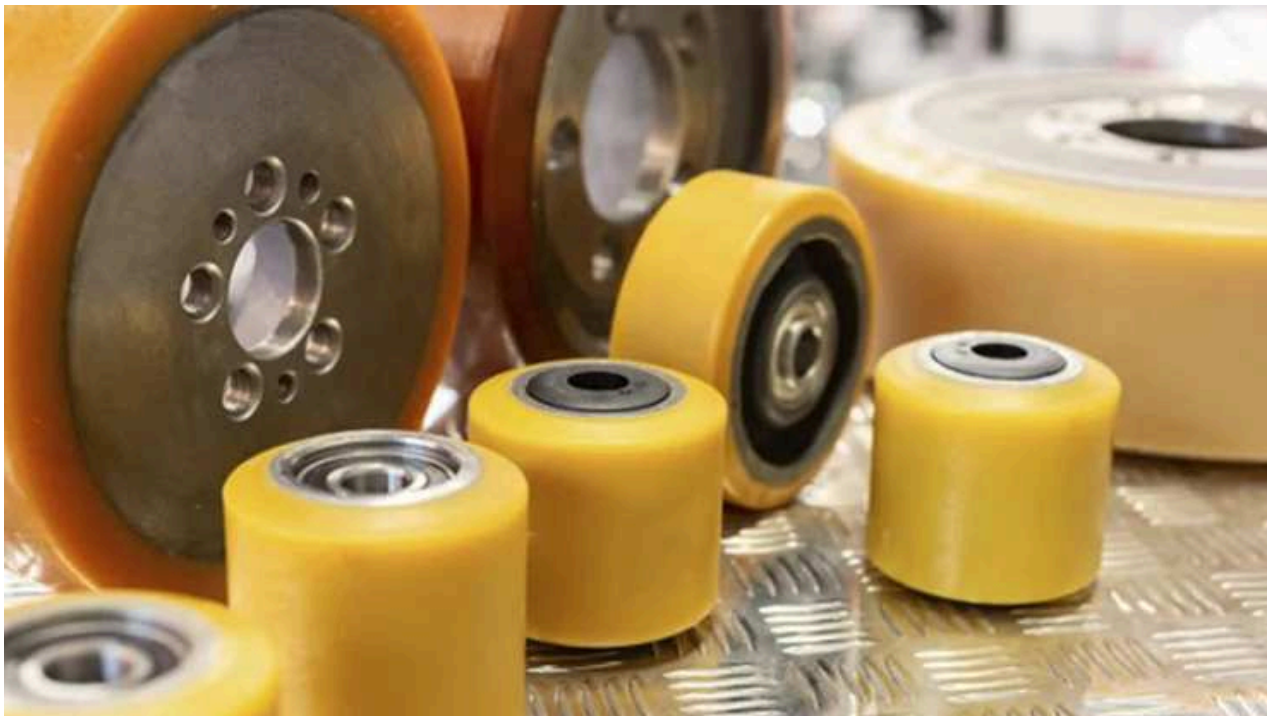
PTMEG /TDI Product Table										
Product	% NCO	Viscosity (100oC)	Curative	Pot Life (min)	Shore (A/D)	%100 Modulus	Abrasion Loss (mm3)	Tensile (Mpa)	Elongation (%)	Tear (KN/m)
PURINELAS HT 2083A	3,00 ± 0,20	1.200 ± 100	MOCA	15	83A	5,00	42	35	500	95
PURINELAS HT 2090A	4,20 ± 0,20	900 ± 100	MOCA	10	90A	8,00	42	38	440	110
PURINELAS HT 2095A	4,75 ± 0,20	600 ± 100	MOCA	5	95A	12,00	38	45	370	120

PES /TDI Product Table										
Product	% NCO	Viscosity (100oC)	Curative	Pot Life (min)	Shore (A/D)	%100 Modulus	Abrasion Loss (mm3)	Tensile (Mpa)	Elongation (%)	Tear (KN/m)
PURINELAS HT 3083A	3,20 ± 0,20	1500 ± 100	MOCA	14	83A	5,00	42	42	680	82
PURINELAS HT 3090A	4,25 ± 0,20	1200 ± 100	MOCA	6	90A	9,00	42	60	500	107
PURINELAS HT 3095A	4,75 ± 0,20	900 ± 100	MOCA	3	95A	9,20	38	63	460	126

MDI Elastomers

MDI elastomers are designed as two-component or three-component. These components can be MDI-based prepolymer and short-chain polyol components, and sometimes prepolymer, short-chain polyol and long-chain polyol mixtures. Raw material selection and appropriate hardness are determined according to the desired performance for the application area. For this, a prepolymer with a suitable polyol system and polyol blends are determined. Suitable blended systems are designed with short chain polyols.





MDI Elastomers

As with TDI systems, these applications are usually carried out at high temperatures. The most important difference is that TDI prepolymers and the amine derivatives used are more harmful than MDI systems.

MDI Ester

- Excellent abrasion and tear resistance
- Good chemical resistance
- Excellent dynamic properties
- Excellent resistance to internal heat build-up

MDI Eter

- High abrasion resistance
- High resilience
- Excellent hydrolysis resistance
- Excellent resistance to microorganisms

Elastomers - Application Areas

PURIN's raw materials and systems are designed to meet requirements of a wide range of demanding applications in many industries such as automotive, mining, oil and gas, and renewable energies. Through in-depth research into elastomer behavior in various environments, our team has developed the most innovative and effective products and solutions.

Sports & Leisure

Elastomers are used in various fields in the world of sports and leisure. From sports equipment to footwear, these flexible materials enhance performance while providing a safe and comfortable environment.

Elastomers - Application Areas

Industrial Sector

Elastomers have a wide range of uses in the industrial sector. In the automotive industry, they are frequently used in tires, gaskets, and insulation materials. They also have important functions such as vibration absorption, shock absorption and sealing in machinery. In the electronics industry, elastomers are also widely used in the protection and insulation of electronic devices. These flexible materials are generally known for their ability to withstand harsh conditions such as high temperature, chemical effects and mechanical stress.

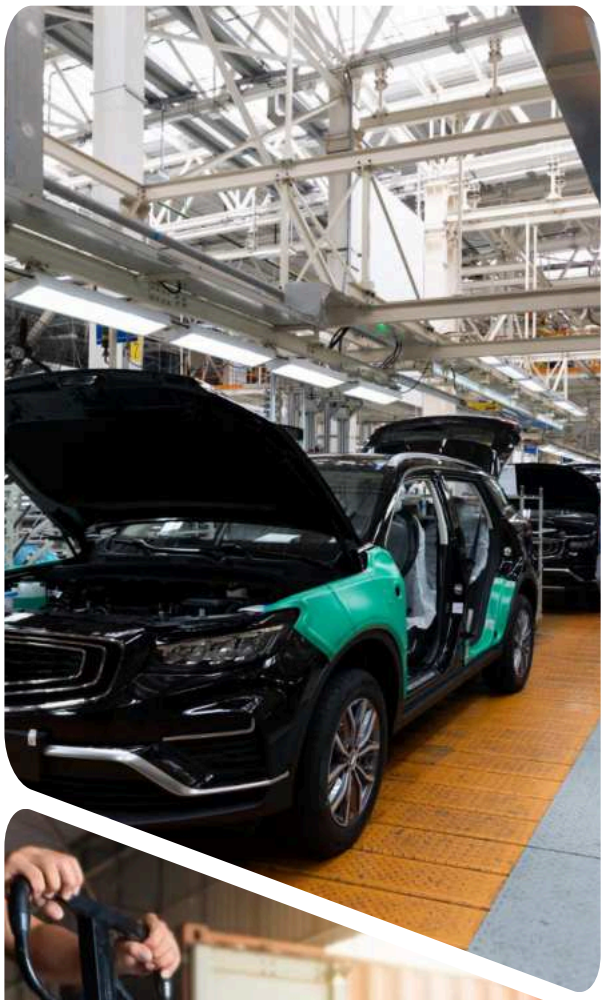
Oil & Gas

Elastomers are used in various fields such as sealing, pipelines and insulation in the oil and gas industry. Their ability to withstand high pressures, chemical influences and wide temperature ranges make elastomers the preferred choice. They are also frequently used in subsea pipelines and offshore platforms.

Elastomers - Application Areas

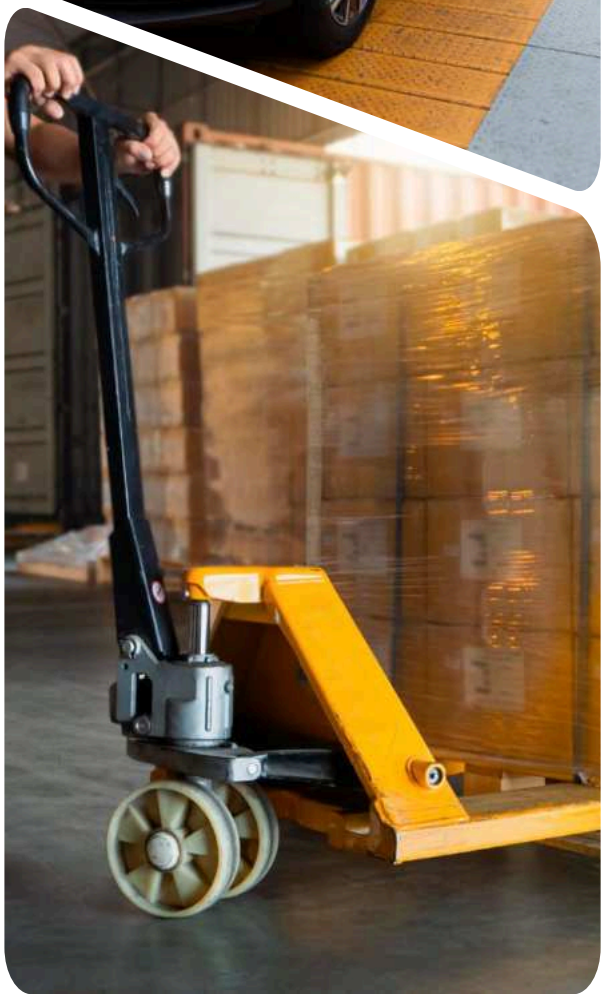
Automotive

Elastomers have a wide range of uses in the automotive industry. They are widely used in tires, suspension systems and sealing parts. Their flexibility and durability provide a reliable seal between components while improving driving comfort.



Material Handling

Elastomers are widely used in material handling equipment. In conveyor belts and conveyor systems, they help materials move easily by making surfaces slippery. They also reduce vibration, providing a more comfortable working environment for workers and equipment.



Elastomers - Application Areas

Mines & Quarries

Elastomers are used in mines and quarries with important functions such as absorbing vibration, providing impact absorption and reducing friction. They are also preferred as sealing and insulating materials for pipelines and equipment. Their flexibility and durability allow them to work effectively in the harsh conditions of mines and quarries.

Renewable Energies

Elastomers are widely used in renewable energy sources. They reduce vibration in wind turbines, are used in mounting systems in solar panels and as waterproof seals in hydropower plants. Their flexibility and durability increase the efficiency of renewable energy plants.

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