Desmodur® Elastomer's Product Index
Chemical and Property Profiles

covestro

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A Matter of choice

A combined approach to choose the best solution

This brochure aims to guide the choice of the appropriate system and to give some keys to qualify the influence of the various chemicals on the final elastomer properties. It attemps to support molders' choice by enhancing the raw materials' impacts onto polyurethane elastomers.

The choice of a PU system should be based not only on the target mechanical properties, but it should also take into account the final application and the process' characterictics.

At first, the brochure emphasizes the respective influence of the basic raw materials according to their nature: depending on the components of a system, one can estimate the properties that will be conferred to the final elastomer resulting from their processing.

Secondly, each system is reviewed in detail to highlight the main properties they develop. Within the same product family, each property will be estimated according to the following scale:

★★★	Outstanding
★★	Excellent
★	Good
⊘	Not relevant

Given the many possible choices available, this brochure aims to help discriminating the large Covestro cast polyurethane system range.

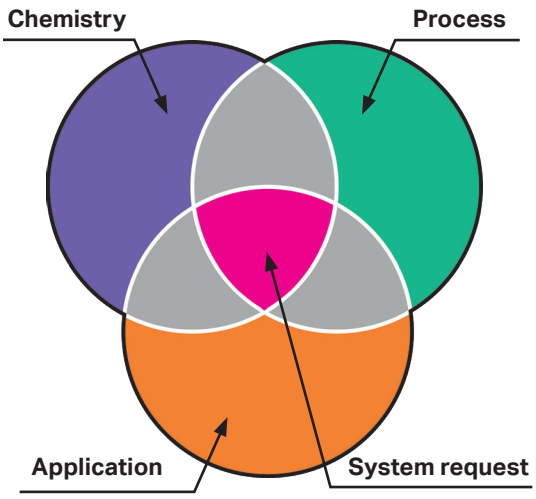
System selection: a challenging puzzle

There are numerous factors that need to be taken into account while choosing the right system to answer a given demand. However, one can identify three main influencing factors:

- Chemistry
- Process
- Application

It would never be sufficient to refer only to some of these criteria. The final choice always results from a balanced selection between these three domains.

For a global approach combining all aspects, our Covestro sales team remains at your disposal.



Choosing the right chemicals

Raw materials' influence on cast polyurethanes

There is a large choice of raw materials involved in the cast polyurethane chemistry. It enables a wide range of combinations depending on the requested final properties. In order to ease the analysis, one will focus on the following main chemical families, the diisocyanates and the long chain polyols.

Regarding the diisocyanates

The type of diisocyanate will essentially have an impact on the handling, the health and safety conditions as well as the process requirements.

Effects will be highlighted for the following products: Toluene diisocyanate (TDI) and Diphenylmethane diisocyanate (MDI).

TDI

Advantages

- Low moisture sensitivity
- Easy mixing
- Easy process
- Easy to reach high hardness
- Linear reaction kinetics

Drawbacks

- Difficulty to reach low hardness
- Toxicity

MDI

Advantages

- Adjustable pot-life
- Low toxicity
- Hydrolysis resistance
- Large range of hardnesses

Drawbacks

- Sensitive mixing and process
- Exponential reaction kinetics

Regarding the long chain polyol

The nature, molecular weight and functionality of the long chain polyol will play an important role in the elastic properties of the final product.

Among all the polyols available, the following raw material family types will be analysed: Polyether and Polyester polyols.

ETHER POLYOLS

Advantages

- Hydrolysis resistance
- Microorganism resistance
- Low temperature behavior
- Resilience

Drawbacks

- Solvent resistance
- Tear resistance

ESTER POLYOLS

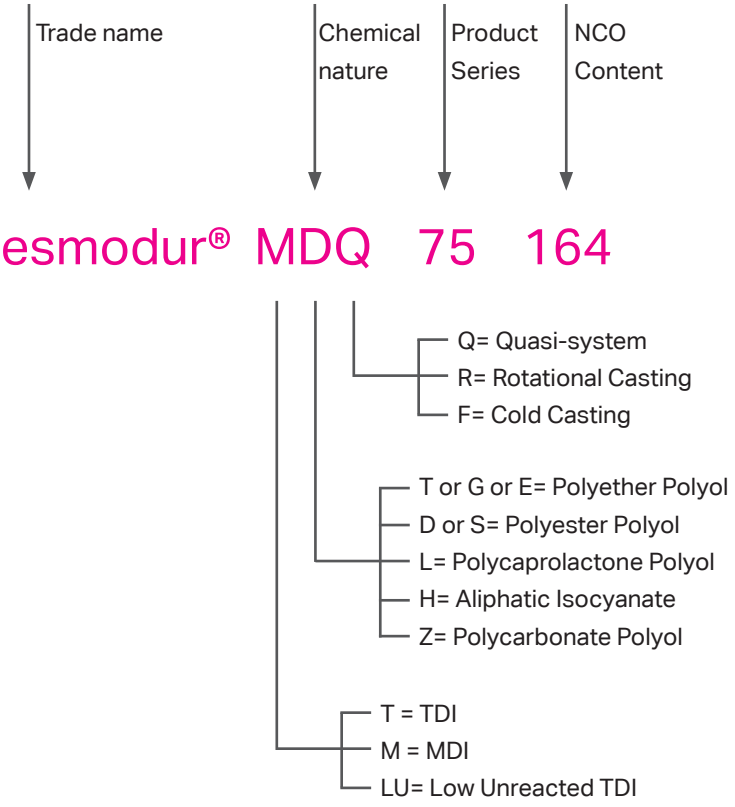
Advantages

- Solvent resistance
- Hydrocarbon resistance
- High temperature behavior
- Tear resistance
- Abrasion resistance

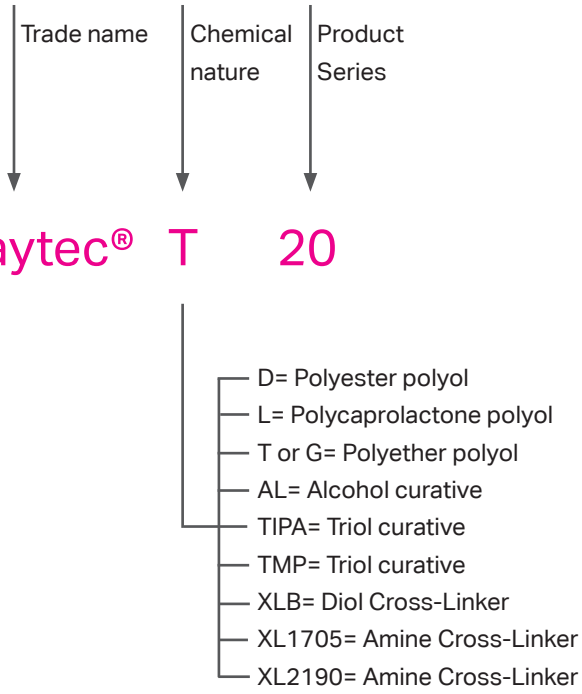
Drawbacks

- Sensitive to hydrolysis
- Sensitive to microorganism
- Low resilience

Prepolymer nomenclature



Curative nomenclature



Desmodur® high-performance systems

Versatility and outstanding properties

Due to their excellent combination of physical properties, polyurethane elastomers are used in a wide range of applications where flexibility and durability are needed. Covestro has been offering Desmodur® systems since shortly after polyurethane was first discovered in 1937.

Cast polyurethane elastomers based on Desmodur® systems from Covestro provide high abrasion and chemical resistance, load-bearing ability, and tunable flexibility.

They can withstand exposure to chemicals and oils, to cutting, tearing, sliding and stretching, impacts, and various damaging forces.

Desmodur® systems also allow many combinations in terms of cost, performance and processing conditions. Our experts will guide you to select the perfect system for your needs.

Our prepolymers are specifically designed while using the full range of available raw materials and most advanced technologies. Careful choice of raw materials and preparation conditions provide polyurethane elastomers with specific performance characteristics:

- TDI based systems, including Low Unreacted TDI monomer based systems
- MDI based systems, including amine crosslinked MDI based systems and Quasi-MDI based systems
- Rotational Casting systems
- Cold casting systems

The performance of Desmodur® based cast polyurethane elastomers has been repeatedly demonstrated in a wide landscape of applications in mining, oil and gas and construction industries, machine parts and other equipment, wheels and tires of all types, printing rolls and pulleys.

TDI - polyether based systems

TDI-polyether based systems list

The Desmodur® line of TDI based prepolymers involves various Polyether polyols such as Polypropylene glycol (PPG), Polytetramethylene ether glycol (PTMEG) and unconventional polyols. Covestro also offers Desmodur® prepolymers with a low unreacted TDI monomer content (Desmodur® LU-T based systems). Desmodur® TDI - polyether based prepolymers are designed to be processed with various amine curatives.

Desmodur® TT series		
Desmodur® TT129	MOCA	80A
Desmodur® TT129	Baytec® XL1705	78A
Desmodur® TT129	Baytec® XL2190	85A
Desmodur® TT131	MOCA	85A
Desmodur® TT131	Baytec® XL1705	80A
Desmodur® TT142	MOCA	90A
Desmodur® TT142	Baytec® XL1705	87A
Desmodur® TT142	Baytec® XL2190	93A
Desmodur® TT156	MOCA	93A
Desmodur® TT156	Baytec® XL1705	91A
Desmodur® TT163	MOCA	95A
Desmodur® TT163	Baytec® XL1705	95A
Desmodur® TT163	Baytec® XL2190	58D
Desmodur® TT174	MOCA	60D
Desmodur® TT174	Baytec® XL1705	58D
Desmodur® TT174	Baytec® XL2190	65D
Desmodur® TT194	MOCA	73D
Desmodur® TT194	Baytec® XL1705	70D
Desmodur® TT194	Baytec® XL2190	76D

Desmodur® TG series		
Desmodur® TGE244	MOCA	85A
Desmodur® TGE244	Baytec® XL1705	85A
Desmodur® TGE250	MOCA	90A
Desmodur® TGE250	Baytec® XL1705	90A
Desmodur® TGE256	MOCA	60D
Desmodur® TGE256	Baytec® XL1705	92A
Desmodur® TGE263	MOCA	60D

Desmodur® TTG series		
Desmodur® TTG528	MOCA	80A

Desmodur® TTX series		
Desmodur® TTX134	MOCA	83A
Desmodur® TTX134	Baytec® XL1705	80A
Desmodur® TTX146	MOCA	90A
Desmodur® TTX146	Baytec® XL1705	87A
Desmodur® TTX152	MOCA	93A
Desmodur® TTX152	Baytec® XL1705	91A
Desmodur® TTX163	MOCA	95A
Desmodur® TTX163	Baytec® XL1705	95A
Desmodur® TTX170	MOCA	96A

Desmodur® THT series		
Desmodur® THT780	MOCA	67D
Desmodur® THT786	MOCA	75D
Desmodur® THT795	MOCA	78D

Desmodur® LU-T series		
Desmodur® LU-T80	MOCA	80A
Desmodur® LU-T80	Baytec® XL1705	78A
Desmodur® LU-T90	MOCA	90A
Desmodur® LU-T90	Baytec® XL1705	87A
Desmodur® LU-T93	MOCA	93 A
Desmodur® LU-T93	Baytec® XL1705	93A
Desmodur® LU-T95	MOCA	95A
Desmodur® LU-T95	Baytec® XL1705	95A
Desmodur® LU-T60D	MOCA	60D
Desmodur® LU-T60D	Baytec® XL1705	60D
Desmodur® LU-T70D	MOCA	70D
Desmodur® LU-T75D	MOCA	75D
Desmodur® LU-T75D	Baytec® XL1705	75D

TDI-polyether based systems characteristics

The Desmodur® TDI-Polyether based systems provide PU elastomers with excellent properties. They are particularly adapted to applications requiring excellent overall physical mechanical properties. They are characterised by good abrasion resistance, high tensile strength, good behaviour at low temperature, high resilience, good resistance to hydrolysis (water, acid and base) and to micro-organisms. They offer low viscosity and easy processing characteristics. With these systems, a large range of hardness (from 80A to 80D) is available enabling to meet a wide variety of applications.

	Hydrolysis resistance	Microorganism resistance	Solvent resistance	UV stability	Abrasion resistance	Tear resistance	Suitable at low temp.	Suitable at high temp.	Dynamic properties	Green strength	Processing	Massive part molding
Desmodur® TT prepolymers cured with MOCA	★★	★★★	⊘	★★	★★	★★	★★	★★	★★	★★	★★★	★★★
Desmodur® TT prepolymers cured with Baytec® XL1705	★	★★★	⊘	★	★★	★★	★★	★	★	★★	★★	★★★
Desmodur® TT prepolymers cured with Baytec® XL2190	★★★	★★★	⊘	★★	★★	★★	★★	★★★	★★★	★★	★	★
Desmodur® TTX prepolymers cured with MOCA	★★	★★★	⊘	★★	★★★	★★★	★★	★★	★★	★★★	★★★	★★★
Desmodur® TTX prepolymers cured with Baytec® XL1705	★	★★★	⊘	★	★★★	★★★	★★	★	★	★★★	★★	★★★
Desmodur® TG prepolymers cured with MOCA	★	★★★	⊘	★★	★	★	★	★★	★	★★	★★★	★★★
Desmodur® TG prepolymers cured with Baytec® XL1705	★	★★★	⊘	★	★	★	★	★	⊘	★★	★★	★★★
Desmodur® TTG528 cured with MOCA	★★	★★★	⊘	★★	★★	★★	★★	★★	★★	★★	★★★	★★★
Desmodur® THT prepolymers cured with MOCA	★★	★★★	★★	★★	★★	★★	★★	★★	★★	★★	★★★	★★★
Desmodur® LU-T prepolymers cured with MOCA	★★	★★★	⊘	★★	★★	★★	★★	★★	★★★	★★	★★★	★★★
Desmodur® LU-T prepolymers cured with Baytec® XL1705	★	★	⊘	★	★★	★★	★★	★	★★★	★★	★★	★★★

TDI - polyester based systems

TDI-polyester based systems list

The Desmodur® systems from Covestro include several TDI-Polyester-based products. They cover conventional TDI based systems to Desmodur® prepolymers with a low unreacted TDI content (Desmodur® LU-D based systems) as well as specialities. Desmodur® TDI - Polyester based prepolymers are designed to be processed with various amine curatives or triols.

Desmodur® TD6 series		
Desmodur® TD630	MOCA	80A
Desmodur® TD630	Baytec® XL1705	75A
Desmodur® TD636	MOCA	85A
Desmodur® TD636	Baytec® XL1705	80A
Desmodur® TD643	MOCA	90A
Desmodur® TD643	Baytec® XL1705	87A
Desmodur® TD651	MOCA	95A
Desmodur® TD651	Baytec® XL1705	90A

Desmodur® TL series		
Desmodur® TL533	MOCA	60A
Desmodur® TL533	Baytec® XL1705	75A
Desmodur® TL535	MOCA	70A
Desmodur® TL535	Baytec® XL1705	80A
Desmodur® TL541	MOCA	75A
Desmodur® TL541	Baytec® XL1705	75A
Desmodur® TL542	MOCA	80A
Desmodur® TL542	Baytec® XL1705	80A
Desmodur® TL543	MOCA	85A
Desmodur® TL543	Baytec® XL1705	85A
Desmodur® TL552	MOCA	90A
Desmodur® TL552	Baytec® XL1705	90A
Desmodur® TL563	MOCA	95A
Desmodur® TL563	Baytec® XL1705	95A

Desmodur® TDL series		
Desmodur® TDL626	MOCA	73A
Desmodur® TDL626	Baytec® XL1705	68A
Desmodur® TDL630	MOCA	80A
Desmodur® TDL630	Baytec® XL1705	75A
Desmodur® TDL639	MOCA	85A
Desmodur® TDL639	Baytec® XL1705	80A
Desmodur® TDL645	MOCA	90A
Desmodur® TDL645	Baytec® XL1705	85A
Desmodur® TDL653	MOCA	95A
Desmodur® TDL653	Baytec® XL1705	95A

Desmodur® LU-D series		
Desmodur® LU-D70	MOCA	70A
Desmodur® LU-D70	Baytec® XL1705	72A
Desmodur® LU-D80	MOCA	80A
Desmodur® LU-D80	Baytec® XL1705	80A
Desmodur® LU-D85	MOCA	85A
Desmodur® LU-D85	Baytec® XL1705	85A
Desmodur® LU-D90	MOCA	90A
Desmodur® LU-D90	Baytec® XL1705	90A
Desmodur® LU-D95	MOCA	95A
Desmodur® LU-D95	Baytec® XL1705	95A

Desmodur® TD636 series		
Desmodur® TD636	Baytec® TMP + Plasticizer V10	20A - 25A - 30A - 35A - 40A - 45A - 50A - 55A - 58A
Desmodur® TD636	Baytec® TMP-TIPA + Plasticizer V10	20A - 25A - 30A - 35A - 40A - 45A - 50A - 55A - 58A

Desmodur® TD743 series		
Desmodur® TD743	Baytec® TMP + Plasticizer V10	35A - 40A - 45A - 50A - 50A - 58A

Desmodur® TD6400 series		
Desmodur® TD6400	Baytec® TMP + Plasticizer V10	35A - 40A - 45A - 50A - 50A - 58A
Desmodur® TD6400	Baytec® TMP-TIPA + Plasticizer V10	35A - 40A - 45A - 50A - 50A - 58A

TDI-polyester based systems characteristics

The Desmodur® TDI-Polyester series demonstrate high performances in terms of tear resistance and dynamical properties. Particularly recommended for applications requesting cut resistance and/or in contact with hydrocarbons and solvents and a low compression set. Covestro developed various specific series: to facilitate hand casting or to resist to very aggressive environments such as solvents. Covestro developed TDI-Caprolactone series with excellent dynamical properties and offering a good compromise in resistance to both water and hydrocarbons environments.

	Hydrolysis resistance	Microorganism resistance	Solvent resistance	UV stability	Abrasion resistance	Tear resistance	Suitable at low temp.	Suitable at high temp.	Dynamic properties	Green strength	Processing	Massive part molding
Desmodur® TD6 prepolymers cured with MOCA	⊘	⊘	★	★★	★★★	★★★	⊘	★★★	★★	★★★	★★	★★★
Desmodur® TD6 prepolymers cured with Baytec® XL1705	⊘	⊘	★	★★	★★★	★★★	⊘	★★★	★	★★★	★★	★★★
Desmodur® TL prepolymers cured with MOCA	★	⊘	★	★★	★★	★★	⊘	★★	★★	★★★	★★★	★★★
Desmodur® TL prepolymers cured with Baytec® XL1705	★	⊘	★	★★	★★	★★	⊘	★★	★	★★★	★★★	★★★
Desmodur® TDL prepolymers cured with MOCA	⊘	⊘	★	★★	★★	★★★	⊘	★★★	★★	★★★	★★★	★★★
Desmodur® TDL prepolymers cured with Baytec® XL1705	⊘	⊘	★	★★	★★	★★★	⊘	★★★	★	★★★	★★★	★★★
Desmodur® TD636 cured with Baytec® TMP + Plast. V10	⊘	⊘	★★	★★	⊘	⊘	⊘	⊘	⊘	★★★	★★★	★★★
Desmodur® TD636 cured with Baytec® TMP-TIPA + Plast. V10	⊘	⊘	★★	★★	⊘	⊘	⊘	⊘	⊘	★★★	★★★	★★★
Desmodur® TD743 cured with Baytec® TMP + Plast. V10	⊘	⊘	★★★	★★	⊘	⊘	⊘	⊘	⊘	★★★	★	★★★
Desmodur® TD6400 cured with Baytec® TMP + Plast. V10	⊘	⊘	★★	★★	⊘	⊘	⊘	⊘	⊘	★★★	★★★	★★★
Desmodur® TD6400 cured with Baytec® TMP-TIPA + Plast. V10	⊘	⊘	★★	★★	⊘	⊘	⊘	⊘	⊘	★★★	★★★	★★★
Desmodur® LU-D prepolymers cured with MOCA	⊘	⊘	★	★★	★★★	★★★	⊘	★★★	★★	★★★	★★★	★★★
Desmodur® LU-D prepolymers cured with Baytec® XL1705	⊘	⊘	★	★	★★★	★★★	⊘	★★★	★	★★★	★★★	★★★

MDI - polyether based systems

MDI-polyether based systems list

The Desmodur® systems from Covestro include several MDI-Polyether based products. They cover conventional MDI and quasi-MDI based systems. They also include amine cross-linked MDI prepolymers (Desmodur®MAX-T based systems). Desmodur® MDI - Polyether based prepolymers are usually processed with alcohol based curatives such as Baytec® XLB.

Desmodur® MT21 series		
Desmodur® MT2140	Baytec® XLB	75A
Desmodur® MT2151	Baytec® XLB	80A
Desmodur® MT2169	Baytec® XLB	85A
Desmodur® MT2173	Baytec® XLB	90A
Desmodur® MT2184	Baytec® XLB	95A

Desmodur® MAX-T series		
Desmodur® MAX-TD410-7	MOCA	85A
Desmodur® MAX-TD410-7	Baytec® XL1705	80A
Desmodur® MAX-TD910-3	MOCA	90A
Desmodur® MAX-TD910-3	Baytec® XL1705	85A
Desmodur® MAX-T40	MOCA	95A
Desmodur® MAX-T40	Baytec® XL1705	90A
Desmodur® MAX-T60	MOCA	54D
Desmodur® MAX-T60	Baytec® XL1705	95A
Desmodur® MAX-T80	MOCA	62D

Desmodur® MT2173 series		
Desmodur® MT2173	Baytec® T20 + Baytec® XLB	70A - 75A - 80A - 85A - 90A

Desmodur® MT3593 series		
Desmodur® MT3593	Baytec® T20 + Baytec® XLB	60A - 65A - 70A - 75A - 80A - 85A - 90A - 93A

Desmodur® MTX series		
Desmodur® MTX6076	Baytec® T4X + Baytec® XLB	60A - 65A - 70A - 75A - 80A - 85A - 90A - 95A - 55D - 60D - 65D - 70D - 75D

Desmodur® MTQ25130 series		
Desmodur® MTQ25130	Baytec® T20 + Baytec® XLB	60A - 65A - 70A - 75A - 80A - 85A - 90A - 95A
Desmodur® MTQ25130-F	Baytec® T20-F + Baytec® XLB-F (1)	60A - 65A - 70A - 75A - 80A - 85A - 90A - 95A

Desmodur® MTQ25165 series		
Desmodur® MTQ25165	Baytec® T10 + Baytec® XLB	60A - 65A - 70A - 75A - 80A - 85A - 90A - 95A

Desmodur® MGQ series		
Desmodur® MGQ32135	Baytec® D13 + Baytec® XLB	60A - 65A - 70A - 75A - 80A - 85A - 90A - 95A
Desmodur® MGQ33101	Baytec® G30 + Baytec® XLB	50A - 55A - 60A - 65A - 70A - 75A - 80A - 85A - 90A

Desmodur® ME-230 series		
Desmodur® ME-230	Baytec® T20 + Baytec® XLB	67A - 74A - 85A - 55D - 57D - 65D

Desmodur® MT99 series		
Desmodur® MTX6076	Baytec® XL99	80A - 85A - 90A - 95A - 60D

(1) This version of the system is compatible with an FDA approval. Please contact your Covestro representative for further details.

MDI-polyether based systems characteristics

The Desmodur® MDI-Polyether series demonstrate high resistance to heat build-up and are therefore recommended for all applications requiring dynamical properties. They are also particularly recommended for applications requesting abrasion resistance and/or hydrolysis resistance. In wet and warm surroundings, it is compulsory to use an MDI-Ether system to prevent hydrolysis damages through water or acids and bases. These systems will be intended for instance for uses at low temperature.

	Hydrolysis resistance	Microorganism resistance	Solvent resistance	UV stability	Abrasion resistance	Tear resistance	Suitable at low temp.	Suitable at high temp.	Dynamic properties	Green strength	Processing	Massive part molding
Desmodur® MT21 prepolymers cured with Baytec® XLB	★★★	★★★	⊘	⊘	★★	★★	★★	⊘	★★	★	★	★★
Desmodur® MT2173 cured with Baytec® T20 + Baytec® XLB	★★★	★★★	⊘	⊘	★★	★★	★★	⊘	★	★★	★★	★★★
Desmodur® MT3593 cured with Baytec® T20 + Baytec® XLB	★★★	★★★	⊘	⊘	★★	★★	⊘	⊘	★	★★	★★★	★★★
Desmodur® MTX cured with Baytec® T2X + Baytec® XLB	★★★	★★★	⊘	⊘	★★	★★	★★	⊘	★★	★★★	★★★	★★★
Desmodur® MTX cured with Baytec® T4X + Baytec® XLB	★★★	★★★	⊘	⊘	★★	★★	★★	⊘	★★	★★★	★★★	★★★
Desmodur® MTQ25130 cured with Baytec®T20 + Baytec®XLB	★★★	★★★	⊘	⊘	★★	★	★★	⊘	★	★	★	★
Desmodur® MTQ25165 cured with Baytec®T10 + Baytec®XLB	★★★	★★★	⊘	⊘	★★	★	★★★	⊘	★	★★	★	★
Desmodur® MGQ32135 cured with Baytec®D13 + Baytec®XLB	★★	★★	⊘	⊘	★★★	★★★	★★	⊘	★	★★★	★★	★★★
Desmodur® MGQ33101 cured with Baytec®G30 + Baytec®XLB	★★	★★★	⊘	⊘	★★	★	★	⊘	★	★★	★★	★★★
Desmodur® ME-230 cured with Baytec® T20 + Baytec® XLB	★★★	★★★	⊘	⊘	★★	★★	★★	⊘	★★	★★	★★	★★★
Desmodur® MAX-T prepolymers cured with MOCA	★★	★★★	⊘	⊘	★★	★★	★★	★★	★★	★★★	★★★	★★★
Desmodur® MAX-T prepolymers cured with Baytec® XL1705	★★	★★★	⊘	⊘	★★	★★	★★	★★	★★	★★★	★★★	★★★
Desmodur® MT99 prepolymers cured with Baytec® XL99	★★★	★★★	⊘	⊘	★★	★★	★★	★★	★★★	★★★	★★★	★★★

MDI - polyester based systems

MDI-polyester based systems list

The Desmodur® systems from Covestro include several MDI-Polyester based products. They cover conventional MDI and quasi-MDI based systems. They also include amine cross-linked MDI prepolymers (Desmodur®MAX-D based systems). Desmodur® MDI - Polyester based prepolymers are usually processed with alcohol based curatives such as Baytec® XLB.

Desmodur® MS series		
Desmodur® MS-242	Baytec® XLB	85A
Desmodur® MS-80	Baytec® XLB	90A
Desmodur® MS-090	Baytec® XLB	93A
Desmodur® MS-092	Baytec® XLB	93A

Desmodur® ML31 series		
Desmodur® ML3182	Baytec® XLAL905	90A
Desmodur® ML31106	Baytec® XLAL905	95A

Desmodur® MAX-D series		
Desmodur® MAX-D30	MOCA	85A
Desmodur® MAX-D30	Baytec® XL1705	92A
Desmodur® MAX-D40	MOCA	92A
Desmodur® MAX-D40	Baytec® XL1705	90A
Desmodur® MAX-D58	MOCA	55D
Desmodur® MAX-D58	Baytec® XL1705	95A

Desmodur® MD1665 series		
Desmodur® MD1665	Baytec® XLB	85A

Desmodur® MD1380		
Desmodur® MD1380	Baytec® D21 + Baytec® XLB	65A - 70A - 75A - 80A - 85A - 90A - 93A

Desmodur® MD1578 series		
Desmodur® MD1578	Baytec® D21 + Baytec® XLAL905	65A - 70A - 75A - 80A - 85A - 90A - 93A

Desmodur® MD15120 series		
Desmodur® MD15120	Baytec® D15 + Baytec® XLB	60A - 65A - 70A - 75A - 80A - 85A - 90A - 95A - 55D - 60D
Desmodur® MD15120-F	Baytec® D15-F + Baytec® XLB-F (1)	60A - 65A - 70A - 75A - 80A - 85A - 90A - 95A - 55D - 60D

Desmodur® MDQ23165 series		
Desmodur® MDQ23165	Baytec® D22-70MF + Baytec® XLB	60A - 65A - 70A - 75A - 80A - 85A - 90A - 95A - 55D

Desmodur® MDQ24163 series		
Desmodur® MDQ24163	Baytec® D24 + Baytec® XLB	55A - 60A - 65A - 70A - 75A - 80A - 85A - 90A - 95A - 55D
Desmodur® MDQ24163	Baytec® D24 + Baytec® XLB + Plasticizer V09	35A - 40A - 45A - 50A

Desmodur® MDQ29170 series		
Desmodur® MDQ29170	Baytec® D22-10 + Baytec® XLB	60A - 65A - 70A - 75A - 80A - 85A - 90A - 95A

Desmodur® MLQ22165 series		
Desmodur® MLQ22165	Baytec® L20 + Baytec® XLB	60A - 65A - 70A - 75A - 80A - 85A - 90A - 93A - 95A

Desmodur® MDQ75164 series		
Desmodur® MDQ75164	Baytec® D75 + Baytec® XL AL32	60A - 65A - 70A - 75A - 80A - 85A - 90A - 95A

(1) This version of the system is compatible with an FDA approval. Please contact your Covestro representative for further details.

MDI-polyester based systems characteristics

The Desmodur® MDI-Polyester series shows generally very good resistance to abrasion and tear and very good resistance to chemicals (hydrocarbons, oils, solvents…). They are also qualified for applications requiring excellent resistance to internal heat build-up and very good dynamic properties.

	Hydrolysis resistance	Microorganism resistance	Solvent resistance	UV stability	Abrasion resistance	Tear resistance	Suitable at low temp.	Suitable at high temp.	Dynamic properties	Green strength	Processing	Massive part molding
Desmodur® MD1380 cured with Baytec®D21 + Baytec® XLB	⊘	⊘	⊘	⊘	★★	★★	⊘	⊘	★★★	⊘	★	★
Desmodur® MD1578 cured with Baytec®D21 + Baytec®XLAL905	⊘	⊘	⊘	⊘	★★	★★	⊘	⊘	★★★	⊘	★★	★
Desmodur® MD1665 cured with Baytec® XLB	⊘	⊘	⊘	⊘	★★	★★★	⊘	⊘	★★	⊘	★	★★
Desmodur® MD115120 cured with Baytec®D15 + Baytec® XLB	⊘	⊘	⊘	⊘	★★	★★	⊘	⊘	★★	⊘	★★	★★
Desmodur® ML31prepolymers cured with Baytec® XLAL905	⊘	⊘	⊘	⊘	★★	★★	⊘	⊘	★★	⊘	★★	★★
Desmodur® MS-242 cured with Baytec® XLB	⊘	⊘	⊘	⊘	★★	★★	⊘	⊘	★	⊘	★★	★
Desmodur® MS-80 cured with Baytec® XLB	⊘	⊘	⊘	⊘	★★★	★★	⊘	⊘	★★★	⊘	★	★
Desmodur® MS-090 cured with Baytec® XLB	⊘	⊘	⊘	⊘	★★	★★★	⊘	⊘	★★	⊘	★★	★
Desmodur® MS-092 cured with Baytec® XLB	⊘	⊘	⊘	⊘	★★	★★	⊘	⊘	★★★	⊘	★	★
Desmodur®MDQ23165 cured with Baytec®D22-70MF + Baytec®XLB	⊘	⊘	⊘	⊘	★★★	★★★	⊘	⊘	★	⊘	★	★
Desmodur®MDQ24163 cured with Baytec®D24 + Baytec®XLB	⊘	⊘	⊘	⊘	★★★	★★★	⊘	⊘	⊘	⊘	★★	★
Desmodur®MDQ24163 cured with Baytec®D24 + Baytec®XLB + V09	⊘	⊘	⊘	⊘	★★★	⊘	⊘	⊘	★	⊘	★★★	★★★
Desmodur®MDQ29170 cured with Baytec®D22-10 + Baytec®XLB	⊘	⊘	★★	⊘	★★★	★★★	⊘	⊘	★	⊘	★	★
Desmodur®MLQ22165 cured with Baytec®L20 + Baytec®XLB	⊘	⊘	⊘	⊘	★★★	★★	⊘	⊘	★★	⊘	★★	★
Desmodur® MAX-D prepolymers cured with MOCA	⊘	⊘	⊘	⊘	★★	★★★	⊘	⊘	★★	⊘	★★	★★
Desmodur® MAX-D prepolymers cured with Baytec® XL1705	⊘	⊘	⊘	⊘	★★	★★★	⊘	⊘	★★	⊘	★★	★★
Desmodur® MDQ75164 cured with Baytec®D75 and Baytec®XLAL32	⊘	⊘	⊘	⊘	★★★	★★★	⊘	⊘	★	⊘	★★★	★★★

Rotational Casting systems

Rotational Casting systems list

Covestro has developed a broad portfolio of Desmodur® systems specifically designed for the Rotational Casting of industrial rollers with a wide range of hardness values. This range contains cast polyurethane systems available in both ether and ester series. The Rotational Casting molding technique enables the coating of rollers with liquid polyurethane without a mold.

Desmodur® 30BV30: Ester based systems		
Desmodur® 30BV30	Baytec® 30BV29+Baytec® XL9611+Baytec® XLB	62A - 72A - 79A - 84A - 88A - 91A - 93A - 94A - 95A - 96A - 98A

Desmodur® 0363: Ether based systems		
Desmodur® 0363	Baytec® XL 0328+Baytec® 0354+Baytec® 0340	73A - 80A - 85A - 90A - 92A

Desmodur® MTR31130: Ether based systems		
Desmodur® MTR31130	Baytec® RT9265	65A
Desmodur® MTR31130	Baytec® RT9270	70A
Desmodur® MTR31130	Baytec® RT9275	75A
Desmodur® MTR31130	Baytec® RT9280	80A
Desmodur® MTR31130	Baytec® RT9285	85A
Desmodur® MTR31130	Baytec® RT9290	90A
Desmodur® MTR31130	Baytec® RT9295	95A
Desmodur® MTR31130	Baytec® RT9231	60D
Desmodur® MTR31130	Baytec® RT9232	65D
Desmodur® MTR31130	Baytec® RT9234	70D

Rotational Casting systems characteristics

The Desmodur® MDI-Polyether Rotational Casting systems give elastomers with good resistance to hydrolysis, to abrasion and a low compression set. The Desmodur® MDI-Polyester Rotational Casting system is recommended for applications requiring good resistance to tear and hydrocarbons.

	Hydrolysis resistance	Microorganism resistance	Solvent resistance	UV stability	Abrasion resistance	Tear resistance	Suitable at low temp.	Suitable at high temp.	Dynamic properties	Green strength	Processing	Massive part molding
Desmodur® 30BV30 based system (Ester series)	⊘	⊘	⊘	⊘	★★★	★★★	⊘	⊘	★	⊘	★★★	⊘
Desmodur® 0363 based system (Ether series)	★★	★★★	⊘	⊘	★	★	★	⊘	★	⊘	★★★	⊘
Desmodur® MTR3130 based system (Ether series)	★★	★★★	⊘	⊘	★★	★★	★★	★★	★★	⊘	★★★	⊘

Cold casting systems

Cold casting systems list

With no need to pre-heat molds or post-cure formed parts in ovens, the cold cast process is simpler and faster than hot casting of polyurethane elastomers and requires less of an initial investment.

Desmodur® TGF2101		
Desmodur® TGF2101	Baytec® RG421	60A
Desmodur® TGF2101	Baytec® RG422	65A
Desmodur® TGF2101	Baytec® RG423	70A
Desmodur® TGF2101	Baytec® RG424	75A
Desmodur® TGF2101	Baytec® RG425	80A
Desmodur® TGF2101	Baytec® RG426	85A
Desmodur® TGF2101	Baytec® RG427	90A
Desmodur® TGF2101	Baytec® RG428	95A

Desmodur® TGF223		
Desmodur® TGF223	Baytec® RG201	25A
Desmodur® TGF223	Baytec® RG202	35A
Desmodur® TGF223	Baytec® RG203	45A
Desmodur® TGF223	Baytec® RG205	55A

Desmodur® B9M10		
Desmodur® B9M10	Baytec® JG25A	25A
Desmodur® B9M10	Baytec® JG45A	45A
Desmodur® B9M10	Baytec® JG60A	60A

Cold casting systems characteristics

Cold cast elastomers based on Desmodur® prepolymers are particularly appropriate for the manufacture of prototypes and concrete molds because they have low shrinkage and high elongation.

	Hydrolysis resistance	Microorganism resistance	Solvent resistance	UV stability	Abrasion resistance	Tear resistance	Suitable at low temp.	Suitable at high temp.	Dynamic properties	Green strength	Processing	Massive part molding
Desmodur® TGF2101 based systems	★★★	★★★	⊘	★	⊘	⊘	★★★	⊘	⊘	★★	★★★	★★★
Desmodur® TGF223 based systems	★★★	★★★	⊘	★	⊘	⊘	★★★	⊘	⊘	★★	★★★	★★★
Desmodur® B9M10 based systems	★★★	★★	⊘	★★	⊘	⊘	★★★	⊘	⊘	★★★	★★★	★★★

Customized systems

Customized systems list

Covestro has developed a range of Desmodur® systems designed for specific applications. These MDI based systems process at room temperature, but require heated molds.

Desmodur® B9M10: Multi-purpose system (two-component version available)		
Desmodur® B9M10	Baytec® LDF440 + Baytec® XLB	35A -40A - 45A - 50A - 55A - 60A - 65A - 70A - 75A - 80A - 85A - 90A - 95A

Desmodur® B9M10: applications dedicated			
Desmodur® B9M10	Baytec® CG9 125	83 A	Rope coatings
Desmodur® B9M10	Baytec® CD9 9056	85A	Agriculture wear parts
Desmodur® B9M10	Baytec® CG9 9086 82D MF	82D	Bend restrictors
Desmodur® B9M10	Baytec® CG9 9060D	60D	Spool material
Desmodur® B9M10	Baytec® CG9 9065D	65D	Spool material
Desmodur® B9M10	Baytec® CG9 9080D	80D	Spool material
Desmodur® B9M10	Baytec® CG9 9082D	82D	Spool material
Desmodur® B9M10	Baytec® CG9 9132	50D	Field joints

Desmodur® B9M27: applications dedicated			
Desmodur® B9M27	Baytec® CG9 5002	80D	Tooling resin
Desmodur® B9M27	Baytec® CG9 6011	95A	Encapsulation

Customized systems characteristics

	Hydrolysis resistance	Microorganism resistance	Solvent resistance	UV stability	Abrasion resistance	Tear resistance	Suitable at low temp.	Suitable at high temp.	Dynamic properties	Green strength	Processing	Massive part molding
Desmodur® B9M10 cured with Baytec® LDF440 + Baytec® XLB	★★	★	⊘	⊘	★★	★	★	⊘	⊘	★★	★★★	★★
Desmodur® B9M10 cured with Baytec® CG9 125	★★	★	⊘	⊘	★	★	★★	⊘	⊘	★	★★	★
Desmodur® B9M10 cured with Baytec® CD9 9056	★	★	⊘	⊘	★	★	★	⊘	⊘	★	★★	★
Desmodur® B9M10 cured with Baytec® CG9 9086 82D MF	★★	★	⊘	⊘	★	★	★★	⊘	⊘	★★	★★★	★★★
Desmodur® B9M10 cured with Baytec® CG9 9132	★★★	★	⊘	⊘	★	★	★★	★★	⊘	★★★	★★	★★★
Desmodur® B9M27 cured with Baytec® CG9 5002	★	★	⊘	⊘	★	⊘	★	★★	⊘	★	★★	★
Desmodur® B9M27 cured with Baytec® CG9 6011	★	★	⊘	⊘	★	⊘	★	★★	⊘	⊘	★★	⊘
Desmodur® B9M10 cured with Baytec® CG9 90XXD	★★	★	⊘	⊘	★	★	★★	★★	⊘	★★★	★★★	★★★

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