

ONGRONAT®

Isocyanates for Coatings, Adhesives, Sealants and Elastomers





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With an extensive choice of polyols, isocyanates, chain extenders, blowing agents and additives, PU offers broad range of mechanical properties thus can be formulated into many different types of products for a growing variety of applications including Coating, Adhesive, Sealant and Elastomer.

PU-based adhesive and coating are tough, durable and highly weather-resistant choices for many different materials and surfaces. They offer strong adhesive properties and consistent finish and higher levels of gloss. PU One Component Foam (OCF) is a great contributor to reduce energy consumption and bills being the most efficient insulating and sealing material for mounting door and window frames, sealing gaps and cracks as well as for eliminating cold bridges.

BorsodChem offers a great choice of Ongronat® isocyanate products for these applications providing excellent material properties and benefits.

The application-related information contained in this brochure has the purpose to give indication about the typical use of our products. Depending on the other components in the system, the suitability of our isocyanate products contained herein is not limited to the given applications, however the suitability of a certain product to the intended application always needs to be determined with application tests. The Technical Service & Development team at BorsodChem is glad to help you in case any product-related question arises.

Product portfolio

* Theoretical maximum value

** Typical value

PRODUCT NAME	CHARACTERISTICS						PRODUCT DESCRIPTION	
	NCO% as wt%		Viscosity @ 25 °C as mPa.s		Acidity as ppm HCl			Functionality
	min.	max.	min.	max.	min.	max.		
ONGRONAT® 1080	48.0	48.24*	3**	3**	15	2.0	Standard TDI 80 suitable for various CASE applications	
ONGRONAT® 1100	48.0	48.24*	3**	3**	10	2.0	A high purity 2,4 TDI isomer, imparting controlled reactivity, that makes this product particularly suited for paints, coatings and sealants and adhesive applications	
ONGRONAT® 1101	48.0	48.24*	3**	3**	40	2.0	High purity 2,4 TDI isomer with increased acidity and reduced reactivity	
ONGRONAT® 2100	30.0	32.0	170	230	300	2.6 - 2.7	Standard functionality polymeric MDI for a variety of CASE applications	
ONGRONAT® 2300	30.0	32.0	350	450	300	2.7	Polymeric MDI with slightly increased functionality for CASE applications	
ONGRONAT® 2510	30.0	32.0	520	680	300	2.8	Polymeric MDI with high functionality providing increased degree of chemical cross-linking	
ONGRONAT® 3000	33.4	33.58*	10 (43 °C)**	10 (43 °C)**	50	2.0	A general pure MDI type with wide tolerance for its acidity suitable for a variety of coatings, adhesives, sealants and elastomer/microcellular elastomer applications	
ONGRONAT® 3020	33.4	33.58*	10 (43 °C)**	10 (43 °C)**	10	2.0	A standardised reactivity pure MDI type with consistently low acidity designed for coatings, adhesives, sealants and elastomer/microcellular elastomer applications	
ONGRONAT® 3050	33.4	33.58*	10 (43 °C)**	10 (43 °C)**	10	25	2.0	Acidified pure MDI specifically designed for the synthesis of conventional polyether-based prepolymers with low NCO%
ONGRONAT® 3600	33.4	33.58*	13	15	50	2.0	A pure MDI variant with high content of 2,4'-isomer for the production prepolymers finding end use in a wide variety of CASE applications	
ONGRONAT® 3650	33.4	33.58*	13	15	50	2.0	Acidified pure MDI variant with high content of 2,4'-isomer for the synthesis of conventional polyether-based prepolymers with low NCO%	
ONGRONAT® 3800	27.0	29.0	30	90		2.15	Carbodiimide-modified MDI providing improved stability to prepolymers at low storage temperatures if used as component in their formulation	
ONGRONAT® CO 2150	30.0	32.0	170	230	90	120	2.6 - 2.7	Standard functionality polymeric MDI with acidity controlled between a narrow range for sensitive applications
ONGRONAT® CO 2160	30.0	32.0	170	230	120	200	2.6 - 2.7	Standard functionality polymeric MDI with increased acidity for CASE applications where reduced reactivity is advantageous
ONGRONAT® CO 2170	30.0	32.0	170	230	160	240	2.6 - 2.7	Polymeric MDI with standard functionality and significantly reduced reactivity for various CASE applications
ONGRONAT® CO 4050	31.6	33.6	9	19			2.0	Monomeric MDI blend with 2,4' MDI for prepolymers
ONGRONAT® CO 4070	30.0	32.0	170	230			2.6 - 2.7	Standard functionality polymeric MDI with increased 2,4' MDI content
ONGRONAT® CO 4150	30.8	32.8	80	120			2.5	Mid-functionality MDI blend with normal reactivity for various CASE applications

* Theoretical maximum value

** Typical value

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	NCO% as wt%		Viscosity @ 25 °C as mPa.s		Acidity as ppm HCl		Functionality	
	min.	max.	min.	max.	min.	max.		
ONGRONAT® TR 4010	30.8	32.8	80	120			2.5	Mid-functionality MDI blend based on polymeric MDI with normal reactivity
ONGRONAT® TR 4015	30.3	32.3	100	160			2.6	MDI blend with slightly reduced functionality based on polymeric MDI
ONGRONAT® TR 4025	31.1	33.1	35	65			2.3	Mid-functionality MDI blend based on polymeric MDI
ONGRONAT® TR 4030	30.7	32.7	50	90			2.5	Mid-functionality MDI blend based on polymeric MDI
ONGRONAT® TR 4040	31.6	33.6	15	45			2.2	Low functionality MDI blend based on polymeric MDI
ONGRONAT® XP 1027	22.0	24.0	1200	1600			2.0	Low functionality MDI prepolymer for elastomers
ONGRONAT® XP 1028	25.0	27.0	150	250			2.1	Low functionality MDI prepolymer for elastomers
ONGRONAT® XP 1043	30.1	31.1	100	160			2.4	MDI variant for the production of industrial coatings and adhesives
ONGRONAT® XP 1092	29.0	31.0	20	40			2.1	Special MDI variant with low functionality developed as component of adhesives and binders
ONGRONAT® XP 1093	31.5	33.5	10	30			2.1	MDI blend of low functionality for polyurethane coatings, adhesives, sealants and elastomers
ONGRONAT® XP 1101	28.5	30.5	30	70			2.15	Carbodiimide-uretonimine modified MDI for microcellular elastomers, RIM elastomers, coatings and cast elastomers for applications where control over the VOC emission of the final product is a concern
ONGRONAT® XP 1103	14.8	16.2	600	800			2.0	MDI prepolymer for polyurea spray elastomers (high 2,4' MDI content)
ONGRONAT® XP 1115	22.0	24.0	800	1400			2.0	MDI prepolymer for the production of polyurethane elastomers
ONGRONAT® XP 1116	32.0	33.4	10	40			2.2	A low viscosity MDI blend for the formulation of polyurethane prepolymers and adhesives
ONGRONAT® XP 1117	31.5	33.5	5	25			2.1	MDI product with low functionality for the formulation of adhesives and rubber binders - improved compatibility with polyethers that avoids opalescence
ONGRONAT® XP 1122	22.0	24.0	650	850			2.0	MDI prepolymer for high quality flexible polyurethane elastomers, integral skin foams, polyurethane shoe soles and automotive fittings
ONGRONAT® XP 1131	29.5	31.5	15	45	40	70	2.1	Carbodiimide-uretonimine modified MDI with reduced reactivity for the manufacture of technical elastomers
ONGRONAT® XP 1148	31.5	33.5	10	30			2.1	MDI blend for the formulation of polyurethane binders

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	min.	max.	min.	max.	min.	max.		
ONGRONAT® XP 1149	31.1	33.1	20	60			2.3	Mixture of polymeric and monomeric MDI with reduced reactivity suitable for the production of the PUR backing of artificial turf
ONGRONAT® XP 1151	31.0	33.0	5	30			2.0	A type of carbodiimide modified MDI used as isocyanate component of prepolymers and polyurethane adhesives
ONGRONAT® XP 1154	25.5	27.5	110	290			2.3	Carbodiimide-uretonimine modified MDI with high degree of modification designed as raw material for polyurethane prepolymers and adhesives
ONGRONAT® XP 1155	29.2	31.2	15	45			2.1	Carbodiimide-uretonimine modified MDI with improved cold stability for the production of prepolymers and adhesives
ONGRONAT® XP 1156	14.8	16.2	500	900			2.0	MDI prepolymer for polyurea spray elastomers (standard grade)
ONGRONAT® XP 1163	31.5	33.5	7	21			2.0	MDI blend of high monomeric content for the production of adhesives and prepolymers
ONGRONAT® XP 1167	30.0	32.0	15	45			2.1	Special MDI variant developed as component of adhesives and binders (Low VOC)
ONGRONAT® XP 1169	27.5	29.5	135	215			2.3	Mid-functionality MDI prepolymer for CASE applications
ONGRONAT® XP 1171	25.5	27.5	170	250			2.3	Mid-functionality prepolymer suitable for the formulation of foamed in place gaskets
ONGRONAT® XP 1177	28.5	30.5	25	55			2.1	Carbodiimide-modified MDI with improved stability and lower concentration of impurities (low VOC)
ONGRONAT® XP 1183	31.5	33.5	15	45			2.2	MDI blend designed as isocyanate component of polyurethane systems for electro casting resins
ONGRONAT® XP 1185	30.0	32.0	15	45			2.1	Low functionality MDI type developed as component of adhesives and coatings (Low VOC, low acidity)
ONGRONAT® XP 1238	30.5	32.5	80	120	350	450	2.5	Mid functionality MDI blend with for low reactive 2K PU systems
ONGRONAT® XP 1239	31.5	33.5	15	30	350	450	2.1	MDI blend offering low viscosity and low functionality for the formulation of 2K polyurethane coatings, adhesives, sealants and primers also suitable to be processed into prepolymer
ONGRONAT® XP 1246	30.0	32.0	170	230	160	240	2.6 - 2.7	Standard functionality polymeric MDI with increased acidity (CASE grade)
ONGRONAT® XP 1249	30.3	32.3	100	160			2.6	Polymeric MDI with functionality of 2.6 (reduced reactivity)
ONGRONAT® XP 1250	18.4	20.4	510	710			2.2	MDI prepolymer for polyurea spray elastomers (higher functionality for crosslinking)

About BorsodChem

BorsodChem is part of the Wanhua Chemical Group, which is the world's fastest growing producer and marketer of polyurethane raw materials and related products with significant influence on the worldwide PU market. Wanhua's acquisition of the European based BorsodChem in 2011 turned both companies from regional players into one global company and created one of the largest isocyanate producers in the world.

Wanhua is number one MDI manufacturer globally with intellectual property rights, leading global technology and with the largest and most integrated isocyanate manufacturing complex. BorsodChem is leading European producer of MDI, TDI, PVC resins, base chemicals and specialty chemicals. With manufacturing facilities in Hungary and Czech Republic the company is growing steadily throughout Europe and have gained a confident foothold from which to extend its operations further. This long-term development of BorsodChem is secured by the Wanhua Chemical Group through major investment programs, enlarging production capacities in line with market growth, as well as benefiting further from the integration between PVC and isocyanate production.

The group adheres to the highest standard of business ethics and safety standards as well as promotes 'green chemistry' and environmental responsibility. Wanhua-BorsodChem supplies high quality raw materials for all kinds of goods in a wide range of industries with expanding product portfolio and solutions.

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