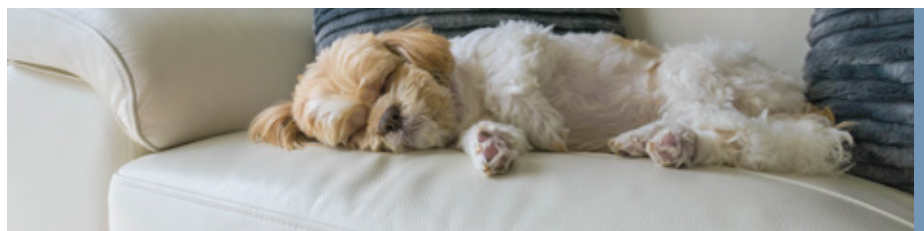
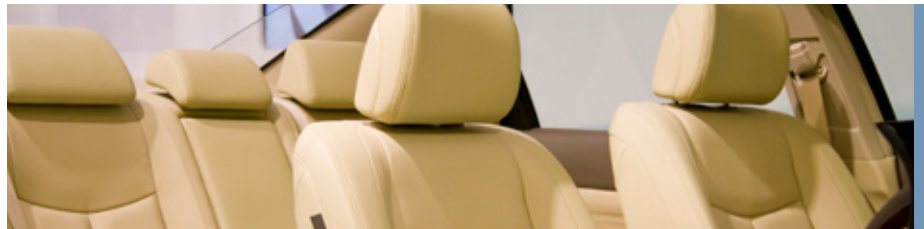


ONGRONAT®

Isocyanates for Flexible and Semi-rigid Polyurethane Foams



FLEXIBLE

FOAM

Isocyanates for Flexible and Semi-rigid Polyurethane Foams

Polyurethane fits everywhere – in your home, your car and your office! Comfortable, lightweight and durable, PU flexible foam is an excellent cushioning and filling material for seating and mattresses. PU flexible foam is widely used to reduce noise transmission by more than 50% compared with more traditional materials. The foams' versatility - there are no limits in density or shape - makes them popular with both designers and manufacturers, and with end-customers.

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

Automotive Seating

* Theoretical maximum value

** Typical value

PRODUCT NAME	CHARACTERISTICS						FUNCTIONALITY	PRODUCT DESCRIPTION
	NCO% as wt%		Viscosity @ 25 °C as mPa.s		Acidity as ppm HCl			
	min.	max.	min.	max.	min.	max.		
ONGRONAT® 1065	48.0	48.24*	3**	3**	20		2.0	Standard TDI 65 used for the production of flexible polyurethane foams applied in the automotive industry
ONGRONAT® 1080	48.0	48.24*	3**	3**	15		2.0	Standard TDI 80 widely used for the production of flexible polyurethane foams used in the automotive industry
ONGRONAT® TR 4011	34.9	36.9	7	17			2.1	MDI-TDI blend designed for the production of seat backs with low density, while imparting good physical properties
ONGRONAT® TR 4040	31.6	33.6	15	45			2.2	MDI blend for moulded flexible automotive seating with good support and durability
ONGRONAT® TR 4060	28.5	29.5	610	750			2.6-2.7	MDI based isocyanate for automotive headrest (Pour In Place)
ONGRONAT® TR 4120	32.1	33.1	15	35			2.2	MDI blend for the production of moulded flexible foams for automotive seating application
ONGRONAT® TR 5010	28.0	30.0	50	110			2.2	MDI prepolymer for automotive (front) seat application
ONGRONAT® TR 5040	28.1	30.1	50	130			2.2	MDI prepolymer for moulded flexible foams used in the automotive industry to be produced via the PiP (pour in place) technique
ONGRONAT® TR 5050	28.4	30.4	40	110			2.2	MDI prepolymer for the manufacture of moulded flexible foams for automotive seating application
ONGRONAT® TR 5760	23.8	25.8	200	320			2.2	MDI prepolymer designed for high density automotive seating
ONGRONAT® XP 1091	31.9	33.5	10	40			2.1	MDI blend for the production of moulded polyurethane flexible foams for automotive seating
ONGRONAT® XP 1142	31.5	33.5	10	35			2.1	MDI blend for the production of flexible moulded foams for automotive seating

Automotive Sound Insulation

* Theoretical maximum value

** Typical value

PRODUCT NAME	CHARACTERISTICS						FUNCTIONALITY	PRODUCT DESCRIPTION
	NCO% as wt%		Viscosity @ 25 °C as mPa.s		Acidity as ppm HCl			
	min.	max.	min.	max.	min.	max.		
ONGRONAT® TR 2000	30.0	32.0	170	230	90	120	2.6 - 2.7	Polymeric MDI with reactivity controlled in a narrow range for the production of semi-rigid foams for automotive sound insulation
ONGRONAT® TR 4001	32.4	34.4	30	60			2.3	MDI-TDI blend designed as component for low density carpet backing providing good flowability and good adhesion
ONGRONAT® TR 4030	30.7	32.7	50	90			2.5	Mid-functionality MDI blend based on polymeric MDI for the production of flexible foams used in automotive sound insulation
ONGRONAT® TR 4100	31.1	33.1	35	75			2.3	MDI blend for sound insulating flexible foams used in the automotive industry
ONGRONAT® XP 1030	31.2	33.2	25	55			2.3	MDI blend for the production of flexible foam parts with low density and higher degree of openness
ONGRONAT® XP 1107	26.6	28.6	60	140			2.2	MDI prepolymer product used in flexible foams for automotive sound insulation
ONGRONAT® XP 1127	31.1	33.1	25	65			2.3	MDI blend for the production of semi-rigid acoustic foam with low density for the automotive industry
ONGRONAT® XP 1152	30.3	32.3	45	105			2.5	An MDI blend for the production of semi-rigid polyurethane foams used for sound insulation
ONGRONAT® XP 1200	28.7	30.7	60	90			2.3	MDI prepolymer for the production of molded flexible foam parts used in automotive sound insulation

Integral Skin Foams

* Theoretical maximum value

** Typical value

PRODUCT NAME	CHARACTERISTICS						FUNCTIONALITY	PRODUCT DESCRIPTION
	NCO% as wt%		Viscosity @ 25 °C as mPa.s		Acidity as ppm HCl			
	min.	max.	min.	max.	min.	max.		
ONGRONAT® 3800	27.0	29.0	30	90			2.15	Carbodiimide-modified MDI used for the production of integral skin foams, when VOC emission is not a concern
ONGRONAT® TR 5500	24.9	26.9	130	210			2.1	Low functionality MDI prepolymer for integral skin foams
ONGRONAT® XP 1101	28.5	30.5	30	70			2.15	Carbodiimide-uretonimine modified MDI used for integral skin foams, when low VOC emission of the final product is desired

Comfort

* Theoretical maximum value
** Typical value

PRODUCT NAME	CHARACTERISTICS						FUNCTIONALITY	PRODUCT DESCRIPTION
	NCO% as wt%		Viscosity @ 25 °C as mPa.s		Acidity as ppm HCl			
	min.	max.	min.	max.	min.	max.		
ONGRONAT® 1065	48.0	48.24*	3**	3**		20	2.0	Standard TDI 65 mostly used for the production of flexible polyurethane foams
ONGRONAT® 1080	48.0	48.24*	3**	3**		15	2.0	Standard TDI 80 widely used for the production of flexible polyurethane foams
ONGRONAT® FB 5020	28.1	30.1	40	100			2.2	MDI prepolymer for the production of HR & VE flexible slabstock foams
ONGRONAT® FB 5030	24.2	26.2	150	230			2.2	MDI prepolymer for the production of moulded flexible foam parts with low density and higher degree of foam openness
ONGRONAT® FB 5550	26.3	28.3	140	220			2.2	Mid-functionality MDI prepolymer for high resilience / high density foam pads finding end use in office and medical furniture
ONGRONAT® TR 4040	31.6	33.6	15	45			2.2	MDI blend for HR & VE slabstock foams
ONGRONAT® XP 1066	28.7	30.7	40	100			2.3	MDI prepolymer for moulded flexible polyurethane foam parts
ONGRONAT® XP 1085	29.0	31.0	50	100			2.2	Low viscosity MDI prepolymer for high resilience and viscoelastic slabstock foams
ONGRONAT® XP 1086	27.7	29.7	75	145			2.2	MDI prepolymer for high resilience and viscoelastic slabstock foams
ONGRONAT® XP 1094	27.3	29.3	50	110			2.1	MDI prepolymer for polyester-based high resilience and viscoelastic slabstock foams
ONGRONAT® XP 1123	30.7	32.7	10	40			2.1	MDI prepolymer for cold cure viscoelastic foams
ONGRONAT® XP 1136	31.4	33.4	15	45			2.2	MDI blend for HR & VE and hypersoft polyurethane foams
ONGRONAT® XP 1137	27.9	29.9	65	115			2.2	MDI prepolymer for high resilience and viscoelastic flexible polyurethane foams
ONGRONAT® XP 1138	25.9	27.9	80	180			2.3	MDI prepolymer for moulded flexible polyurethane foams
ONGRONAT® XP 1175	30.3	32.3	15	45			2.1	Low functionality MDI prepolymer for the production of moulded viscoelastic flexible foams
ONGRONAT® XP 1181	31.5	33.5	10	30			2.1	Low functionality MDI blend for the production of flexible slabstock polyurethane foams

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.

www.borsodchem.com
www.whchem.com



Legal statement

This information is based on our most recent knowledge. However, the application and processing of the product after sale is beyond our control and we cannot assume responsibility for use of this material outside BorsodChem premises. The user is obliged to check the suitability of this product for the intended use and accepts sole responsibility for compliance with any legal requirements relating to its use. This document does not constitute a warranty or guarantee.