ONGRONAT®

ISOCYANATES FOR COATINGS, ADHESIVES, SEALANTS AND ELASTOMERS

WANHUA

BorsodChem
Chemistry for generations

Isocyanates for Coatings, Adhesives, Sealants and Elastomers

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. The suitability of a certain product to the intended application always needs to be determined with application tests. The Technical Service & Development Team of BorsodChem is glad to help you in case any product-related question arises.

BorsodChem's Production Site – Kazincbarcika, Hungary

Product portfolio

Product name	TYPICAL CHARACTERISTICS			Product description
	NCO% as m/m%	Viscosity (@25°C) as mPa.s	Functionality	
ONGRONAT® 1080	48.2	3	2.0	Standard TDI 80 suitable for a wide range of CASE applications. Acidity 10 mg/kg HCl • Adhesives • Coatings • Elastomers
ONGRONAT® NEO 1080 B new	48.2	3	2.0	TDI 80 produced from ISCC certified raw materials obtained from virgin biomass. Acidity 10 mg/kg HCl • Adhesives • Coatings • Elastomers
ONGRONAT® NEO 1080 C new	48.2	3	2.0	TDI 80 produced from ISCC certified raw materials obtained from waste materials of biological origin. Acidity 10 mg/kg HCl • Adhesives • Coatings • Elastomers
ONGRONAT® 1100	48.2	3	2.0	A high purity 2,4 TDI isomer (TDI 100) Acidity 5 mg/kg HCl • Adhesives • Coatings • Elastomers • Paints • Sealants
ONGRONAT® NEO 1100 B new	48.2	3	2.0	TDI 100 produced from ISCC certified raw materials obtained from virgin biomass. Acidity 5 mg/kg HCl • Adhesives • Coatings • Elastomers • Paints • Sealants
ONGRONAT® NEO 1100 C new	48.2	3	2.0	TDI 100 produced from ISCC certified raw materials obtained from waste materials of biological origin. Acidity 5 mg/kg HCl • Adhesives • Coatings • Elastomers • Paints • Sealants
ONGRONAT® 2100	31.0	200	2.7	Standard functionality polymeric MDI for a variety of CASE applications. Acidity 110 mg/kg HCl • 2 component adhesives • Formulation of binders
ONGRONAT® NEO 2100 B new	31.0	200	2.7	Standard functionality polymeric MDI produced from ISCC certified raw materials obtained from virgin biomass. Acidity 110 mg/kg HCl • 2 component adhesives • Formulation of binders
ONGRONAT® NEO 2100 C new	31.0	200	2.7	Standard functionality polymeric MDI produced from ISCC certified raw materials obtained from waste materials of biological origin. Acidity 110 mg/kg HCl • 2 component adhesives • Formulation of binders
ONGRONAT® 2510	31.0	600	2.9	Polymeric MDI with high functionality providing increased degree of chemical cross-linking. Acidity 130 mg/kg HCl • Adhesives with high degree of cross-linking
ONGRONAT® NEO 2510 B new	31.0	600	2.9	Polymeric MDI high functionality produced from ISCC certified raw materials obtained from virgin biomass. Acidity 130 mg/kg HCl • Adhesives with high degree of cross-linking
ONGRONAT® NEO 2510 C new	31.0	600	2.9	Polymeric MDI high functionality produced from ISCC certified raw materials obtained from waste materials of biological origin. Acidity 130 mg/kg HCl • Adhesives with high degree of cross-linking

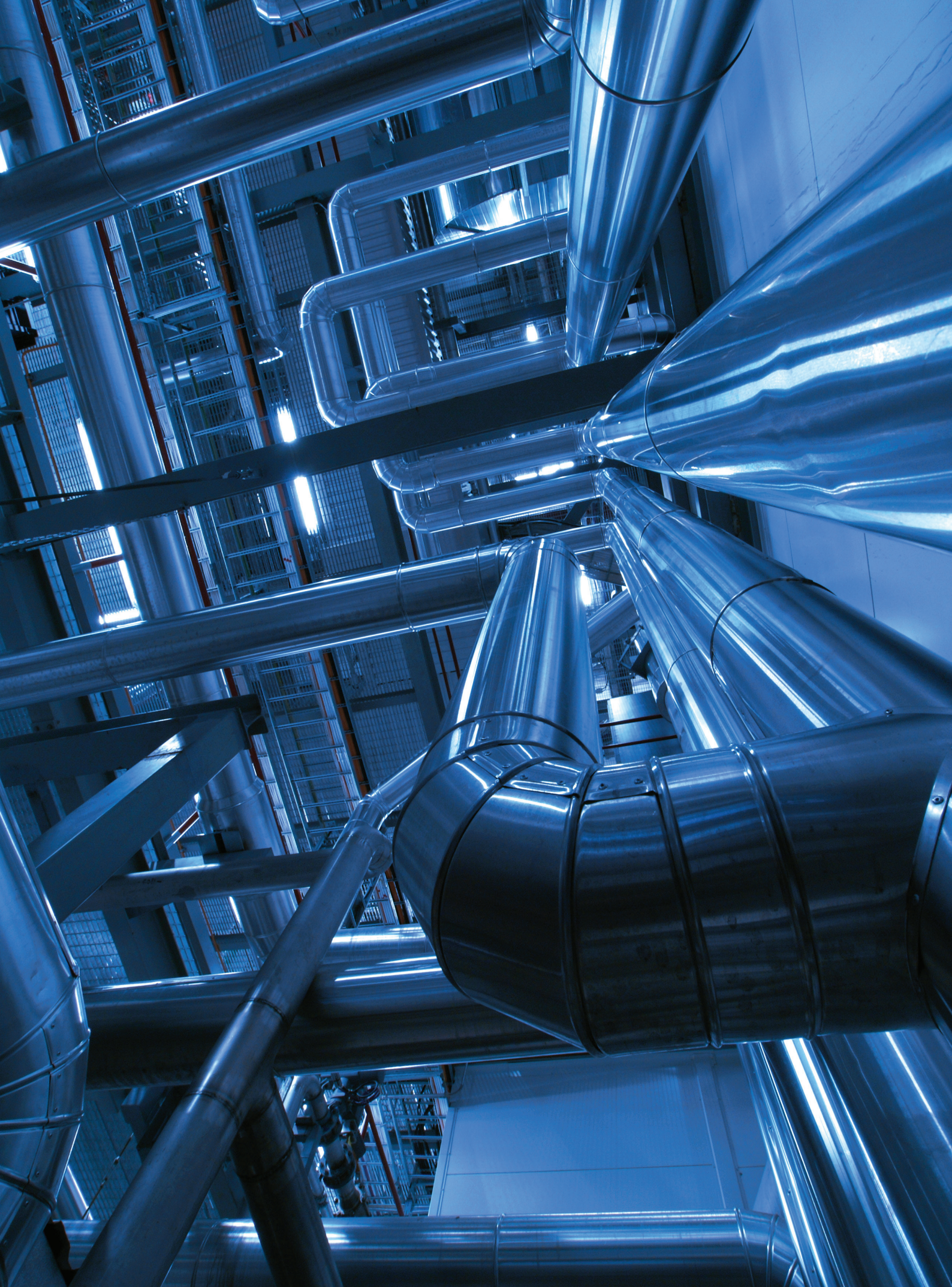
Product name	TYPICAL CHARACTERISTICS			Product description
	NCO% as m/m%	Viscosity (@25°C) as mPa.s	Functionality	
ONGRONAT® 3000	33.6	10 (at 43 °C)	2.0	A general, stabilized pure 4,4′-MDI type with wide tolerance for its acidity. • Adhesives • Coatings • Elastomers • Microcellular elastomers • Sealants
ONGRONAT® NEO 3000 B new	33.6	10 (at 43 °C)	2.0	A general stabilized pure 4′4′-MDI type produced from ISCC certified raw materials obtained from virgin biomass • Adhesives • Coatings • Elastomers • Microcellular elastomers • Sealants
ONGRONAT® NEO 3000 C new	33.6	10 (at 43 °C)	2.0	A general stabilized pure 4′4′-MDI type produced from ISCC certified raw materials obtained from waste materials of biological origin • Adhesives • Coatings • Elastomers • Microcellular elastomers • Sealants
ONGRONAT® 3020	33.6	10 (at 43 °C)	2.0	A stabilized pure 4,4′-MDI type with consistently low acidity. Acidity 8 mg/kg HCl • Flexible packaging adhesives • Microcellular elastomers • Reactive hotmelt adhesives • TPU
ONGRONAT® 3045	33.6	10 (at 43 °C)	2.0	4,4′-MDI grade with low acidity without stabilizer. Acidity 8 mg/kg HCl • Flexible packaging • Polyamide-imide fibers • Reactive hotmelt adhesives
ONGRONAT® 3050	33.6	10 (at 43 °C)	2.0	Stabilized pure 4,4′-MDI acidified in order to support the prevention of unwanted side reactions (i.e. trimerization) during prepolymer synthesis. Acidity 18 mg/kg HCl • Flexible packaging adhesives • Polyamide-imide fibers • Reactive hotmelt adhesives
ONGRONAT® 3600	33.6	14	2.0	A stabilized pure MDI variant with high 2,4′-MDI content for the production prepolymers finding end use in a wide variety of CASE applications. Acidity 5 mg/kg HCl • Binders • Elastomers • Flexible packaging adhesives
ONGRONAT® 3650	33.6	14	2.0	Stabilized pure MDI variant with high 2,4′-MDI content acidified in order to support the prevention of unwanted side reactions (i.e. trimerization) during prepolymer synthesis. Acidity 10 mg/kg HCl • Binders • Flexible packaging adhesives • Elastomers • Prepolymers with low NCO%
ONGRONAT® 3800	28.0	60	2.1	Carbodiimide-uretonimine modified MDI • Cast and microcellular elastomers • Formulation of rubber binders • Stabilization of prepolymers against freezing
ONGRONAT® CO 2160	31.0	200	2.7	Standard functionality polymeric MDI with increased acidity for CASE applications where reduced reacivity is advantageous. Acidity 160 mg/kg HCl • 2 component adhesives

Product name	TYPICAL CHARACTERISTICS			Product description
	NCO% as m/m%	Viscosity (@25°C) as mPa.s	Functionality	
ONGRONAT® CO 2170	31.0	200	2.7	Polymeric MDI with standard functionality high acidity -thus significantly reduced reactivity for various CASE applications. Acidity 200 mg/kg HCl • 2 component adhesives • Modeling, Tooling, Prototyping
ONGRONAT® CO 4050	32.6	14	2.0	Monomeric MDI blend with 2,4' MDI for prepolymers. • Flexible packaging adhesives • Stone and gravel binders • Rubber binders
ONGRONAT® CO 4110	30.0	220	2.7	Polymeric MDI type with increased compatibility towards water-glass • Silicate PU foams
ONGRONAT® CO 5700	8.5	4000	2.0	Polyether and monomeric MDI based prepolymer with low NCO% • Ready-to-use moisture curing binder for molded rubber tiles
ONGRONAT® CO 5750	10.5	4000	2.2	Polyether and monomeric MDI based prepolymer with low NCO% • Ready-to-use moiusture curing binder for molded rubber
ONGRONAT® FB 5450	16.6	1500	2.3	Polymeric MDI containing prepolymer with low NCO%. • Ready-to-use moisture curing binder for molded rubber tiles and foam particles
ONGRONAT® FB 5460	20.0	300	2.0	Monomeric MDI based prepolymer • Moisture curing foam binder
ONGRONAT® FB 5470	20.0	700	2.3	MDI based prepolymer with polymeric MDI • Moisture curing foam binder
ONGRONAT® TR 2000	31.0	200	2.7	A type of standard functionality polymeric MDI with narrow acidity specification. Acidity 110 mg/kg HCl • Formulation of automotive headliner adhesives
ONGRONAT® TR 4010	31.8	100	2.5	Mid-functionality MDI blend based on polymeric MDI with normal reactivity • Binders • Floor coatings • One and 2 component adhesives
ONGRONAT® TR 4015	31.3	130	2.6	Polymeric MDI with slightly reduced functionality • Cast polyurethanes for electric encapsulation, • One component • Adhesives
ONGRONAT® TR 4025	32.1	50	2.3	Mid-functionality MDI blend based on polymeric MDI • Coatings
ONGRONAT® TR 4040	32.6	30	2.2	Low functionality MDI blend based on polymeric MDI • Adhesives • Flooring underlays
ONGRONAT® TR 5500	25.9	170	2.1	Low functionality MDI prepolymer • Cast elastomers
ONGRONAT® WO 2750	31.0	200	2.7	Polymeric MDI • Standard binder for composite wood products
ONGRONAT® WO 4080	30.0	220	2.7	Polymeric MDI emulsifiable in aqueous medium • Emulsifiable binder for composite wood products

Product name	TYPICAL CHARACTERISTICS			Product description
	NCO% as m/m%	Viscosity (@25°C) as mPa.s	Functionality	
ONGRONAT® WO 4090	30.0	220	2.7	Polymeric MDI with increased reactivity • Fast cure binder for composite wood products
ONGRONAT® WO 4091	29.0	435	2.7	Polymeric MDI based prepolymer • Pressed wood pallets
ONGRONAT® XP 1013	24.5	380	2.1	Low functionality prepolymer based on carbodiimide-uretonimine modified MDI • Adhesives • Flooring, • Sealants • Two component coatings
ONGRONAT® XP 1043	30.6	130	2.5	Mid functionality MDI prepolymer with polymeric MDI • Adhesives • Industrial coatings
ONGRONAT® XP 1093	32.5	20	2.2	MDI blend of low functionality • Formulation of rubber binders
ONGRONAT® XP 1101	29.5	50	2.2	Carbodiimide-uretonimine modified MDI Suitable for applications where VOC / FOG content is a concern • Adhesives • Elastomers • Coatings
ONGRONAT® XP 1103	15.5	700	2.0	Ready-to-spray MDI prepolymer with elevated levels of 2,4' MDI • Sprayed polyurea coatings (low reactivity)
ONGRONAT® XP 1116	32.7	25	2.2	Low functionality MDI mixture containing polymeric MDI • Formulation of rubber binders
ONGRONAT® XP 1117	32.5	15	2.1	Low functionality MDI mixture containing polymeric MDI • Formulation of rubber binders - improved compatibility with polyethers
ONGRONAT® XP 1122	23.0	750	2.0	4,4'-MDI based prepolymer with low molecular weight and high 4,4'-MDI content • Elastomers • Modeling, tooling, prototyping
ONGRONAT® XP 1131	30.5	30	2.1	Carbodiimide-uretonimine modified MDI with reduced reactivity for the manufacture of technical elastomers. Acidity 55 mg/kg HCl • Cast polyurethane elastomers
ONGRONAT® XP 1145	24.0	600	2.2	Low functionality MDI prepolymer with excellent low temperature stability • Coatings • Elastomers
ONGRONAT® XP 1146	31.5	100	2.5	MDI blend with reduced functionality for low reactive 2K systems • 2 component adhesives
ONGRONAT® XP 1147	32.5	22,5	2.1	MDI blend offering low viscosity, low functionality and low reactivity • 2 component coatings • Binders • Adhesives • Sealants
ONGRONAT® XP 1148	32.5	20	2.1	Low functionality MDI mixture containing polymeric MDI • Binders • Electric encapsulation • Coatings

Product name	TYPICAL CHARACTERISTICS			Product description
	NCO% as m/m%	Viscosity (@25°C) as mPa.s	Functionality	
ONGRONAT® XP 1149	32.1	40	2.3	Low viscosity, mid-functional MDI blend • Adhesives • Coatings • Elastomers • Polymer concrete • Sealants
ONGRONAT® XP 1150	18.0	700	2.1	Low functionality MDI prepolymer • Foam rebonding - less elastic than ONGRONAT® FB 5460
ONGRONAT® XP 1151	32.0	17,5	2.1	A type of carbodiimide modified MDI used as isocyanate component of polyurethane adhesives and elastomers with high 4,4'-MDI monomer content (frost-sensitive!) • Adhesives • Elastomers
ONGRONAT® XP 1155	30.2	30	2.1	Carbodiimide-uretonimine modified MDI with improved cold stability • Raw material of adhesives. • Carbodiimide-uretonimine modified MDI with improved cold stability
ONGRONAT® XP 1156	15.5	950	2.0	Ready-to-spray MDI prepolymer with moderate 2,4'-MDI content • Sprayed polyurea coatings (standard reactivity)
ONGRONAT® XP 1157	24.5	475	2.2	Solvent-free, brown colour, medium viscosity MDI prepolymer • Coatings • Modeling • Tooling • Prototyping
ONGRONAT® XP 1166	16.0	4000	2.6	Polymeric MDI based prepolymer • Structural wood adhesives
ONGRONAT® XP 1167	31.0	30	2.1	A type of carbodiimide-uretonimine modified MDI with reduced reactivity and improved low temperature stability • Liquid PU waterproofing membranes • Low VOC adhesives and
ONGRONAT® XP 1169	28.5	175	2.3	Mid-functionality MDI prepolymer • Adhesives • Modeling, tooling, prototyping • Elastomers • Sealants
ONGRONAT® XP 1171	26.5	210	2.3	Mid-functionality MDI prepolymer • Foamed in place gaskets (FIPG) • Sealants
ONGRONAT® XP 1173	31.5	65	2.4	Mid functionality MDI blend with reduced reactivity • Flooring • Low reactivity adhesives and coatings • Polymer concrete
ONGRONAT® XP 1174	29.0	35	2.1	Carbodiimide modified MDI based product with improved cold stability • Polyurethane castings
ONGRONAT® XP 1177	29.5	50	2.2	Carbodiimide-uretonimine modified MDI suitable for applications where VOC / FOG content is a concern • Flexible packaging adhesives • Resins for the impregnation of fiberglass • Stabilization of prepolymers against freezing • Tire sealants • Tire flatproofing

Product name	TYPICAL CHARACTERISTICS			Product description
	NCO% as m/m%	Viscosity (@25°C) as mPa.s	Functionality	
ONGRONAT® XP 1180	27.5	175	2.2	Low viscosity polymeric MDI based short chain prepolymer • Adhesives • Elastomers
ONGRONAT® XP 1183	32.5	30	2.2	Solvent-free polymeric MDI based isocyanate blend • Electronic encapsulation • Formulation of adhesives
ONGRONAT® XP 1184	15.4	1500	2.1	Fast curing MDI prepolymer • Adhesives for structural wood bonding • Moisture curing coatings • Reactive hotmelt adhesives
ONGRONAT® XP 1192	15.0	2000	2.4	Polymeric MDI-based prepolymer with high viscosity • One component adhesives
ONGRONAT® XP 1204	10.2	1800	2.0	Linear MDI prepolymer with low NCO% for high flexibility • In situ rubber binding (moisture curing) • Sprayed polyurea coatings (soft, improved flexibility)
ONGRONAT® XP 1213	24.8	650	2.6	Polymeric MDI-based prepolymer with medium viscosity • Cost effective foam binder
ONGRONAT® XP 1216	24.0	220	2.1	Medium viscosity polymeric MDI-based prepolymer with elevated reactivity. Acidity 260 mg/kg HCl • Raw material for industrial adhesives and primers
ONGRONAT® XP 1250	19.4	610	2,2	Polyether-based prepolymer with MDI mixed isomers and polymeric MDI • Sprayed polyurea coatings
ONGRONAT® XP 1256	32.3	25	2.2	Low functionality MDI mixture containing polymeric MDI • Formulation of rubber binders
ONGRONAT® XP 1277	6.8	5500	2.2	Solvent free, colourless, high viscosity prepolymer • 1 component moisture curing PU systems • Isocyanate for the production of artificial leather
ONGRONAT® XP 1283	8.6	3000	2.0	Low functionality, high-viscosity prepolymer • Parquet bonding • Sports flooring
ONGRONAT® XP 1287	26.2	150	2.1	4,4'-MDI based short chain prepolymer • Cast elastomers
ONGRONAT® XP 1291	10.6	2200	2.0	Polyether based prepolymer with low functionality and low reactivity • Sports flooring
ONGRONAT® XP 1325	25.5	200	2.1	Isocyanate terminated prepolymer of low functionality and low molecular weight • Cast elastomers



About Wanhua - BorsodChem

Wanhua Chemical Group is a global leading supplier of innovative chemical products covering polyurethanes, petrochemicals, performance chemicals and advanced materials. The company's technology enables the production of MDI, TDI, Polyol, ADI, specialty amines, TPU, PA12, PMMA, PC, PUD, and more.

BorsodChem - part of the Wanhua Chemical Group - is a key European producer of MDI, TDI, PVC resins, base chemicals and specialty chemicals with manufacturing facilities in Hungary and Czech Republic.

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.

Legal statement

www.borsodchem.com
www.whchem.com