ONGRONAT®, ONGROPIR® ONGROPUR®, ONGROCAT®

SYSTEM PORTFOLIO FOR RIGID POLYURETHANE FOAMS

WANHUA

BorsodChem
Chemistry for generations

System Portfolio for Rigid Polyurethane Foams

Versatile, cost effective and sustainable! Conserving energy and contributing to a sustainable environment, effective insulation is essential in modern construction. The potential energy savings are too significant to ignore – 25% for walls, 28% for roofs, 16% for floors and 20% for windows. Of all commonly used thermal insulation materials, rigid polyurethane insulation foams offer the lowest thermal conductivity, providing the same thermal performance with thinner material. It is durable, performs consistently throughout its lifetime and helps to maintain a comfortable living and working environment while reducing greenhouse gas emissions.

PU's thermal efficiency, light weight, small footprint and affordability make it perfect for food storage and transport. It is also ideal for water heaters, commercial display units and any appliances designed with low environmental impact and high energy savings in mind.

BorsodChem offers a great choice of ONGRONAT® isocyanate, ONGROPIR® and ONGROPUR® blended polyols as well as ONGROCAT® catalyst 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

BLENDED POLYOL PRODUCTS

Construction Industry

Insulated boards for wall, roof & floor

Product name	CHARACTERISTICS			Product description
	NCO% as m/m%	Viscosity (@25°C) as mPa.s	Density (@25°C) as g/cm^3	
ONGROPIR KT-6025	245	1300	1.19	Product is designed for PIR insulating elements with flexible facings such as aluminium foil or glass fiber paper. Energy efficiency and fire safety is a key point in this application. It has been developed to meet Class E on Small Flame test.

Garage door

Product name	CHARACTERISTICS			Product description
	NCO% as m/m%	Viscosity (@25°C) as mPa.s	Density (@25°C) as g/cm^3	
ONGROPUR KT-7010	355	1000	1.08	Product is designed for PUR based insulating elements mainly with steel facing. Highly stable processability. High insulation performance at minimum thickness. The suggested blowing agent is pentane for this system, however it can be suitable even for HFO.

Continuous lamination, sandwich panels

Product name	CHARACTERISTICS			Product description
	NCO% as m/m%	Viscosity (@25°C) as mPa.s	Density (@25°C) as g/cm^3	
ONGROPIR KT-6011	355	950	1.08	General used PUR polyol for low fire rated applications. Highly stable processability. The suggested blowing agent is pentane for this system. It is designesd as a 4 component PUR system.
ONGROPUR KT-6015	360	1200	1.08	General used PUR polyol for low fire rated applications. Highly stable processability. The suggested blowing agent is pentane for this system. It is designed as a 5 component system, because water or water additive usage is required.

Product name	CHARACTERISTICS			Product description
	NCO% as m/m%	Viscosity (@25°C) as mPa.s	Density (@25°C) as g/cm^3	
ONGROPIR KT-6033	243	1125	1.19	It is a polyisocyanurate system, offering a consistent Class E foam and achieving Bs2d0 Reaction to Fire test, across a variety of panel thickness and joint designs. Adhesion promoter is required. The product is designed as a 5 component system.
ONGROPUR KT-6043	225	1000	1.19	It is a fire-rated polyurathane system, offering a consistent Class E foam and achieveing Cs3d0 or better Reaction to Fire test, across a variety of pan-elthickness and joint designs. Processing condition require at least 45°C conveyour tempertue which is far from PIR technology's reqirement and also the adhesion promoter usage optional. It is designed as a 5 component system, because water or water additive usage is required.

Open cell spray insulation

Product name	CHARACTERISTICS		Product description
	Viscosity (@25°C) as mPa.s	Density (@25°C) as g/cm^3	
ONGROPUR KT-6017	200	1.06	Ideal for sealing hard-to-reach places where rigid boards cannot be used. Material can be applied on the spot thereby material transportation is more environmentally friendly compared to board insulation materials. It creates a continues insulation layer without thermal bridges. HFC/HFO free system.

Appliances

Water heaters

Product name	CHARACTERISTICS				Product description
	Hydroxyl value as mgKOH/g	Viscosity (@25°C) as mPa.s	Density (@25°C) as g/cm^3	Water content as %	
ONGROPUR KT-8010	310	700	1.08	4.3	Fully water blow PUR system with good insulation properties and good flowability.
ONGROPUR KT-8011	490	1600	1.08	2.1	Cyclopentane based PUR system for general use. Provide good insulation and good flowability.
ONGROPUR KT-8012	344	800	1.08	2.5	Cyclopentane based system with special fire protection, achieved EU class E rating. The system has good flowability, promoting the formation of a smooth surface.

ISO PRODUCTS

Product name	CHARACTERISTICS				Product description
	NCO% as m/m%	Viscosity (@25°C) as mPa.s	Acidity as mg/kg HCl	Functionality	
ONGRONAT® 2100	31.0	200	110	2.7	Standard functionality polymeric MDI for general purpose: it is used for the manufacture of rigid PUR insulating foams, semi rigid integral skin, and structural foams.
ONGRONAT® NEO 2100 B new	31.0	200	110	2.7	Standard functionality polymeric MDI produced from ISCC certified raw materials obtained from virgin biomass.
ONGRONAT® NEO 2100 C new	31.0	200	110	2.7	Standard functionality polymeric MDI produced from ISCC certified raw materials obtained from waste materials of biological origin.
ONGRONAT® 2510	31.0	600	130	2.9	Polymeric MDI with high functionality particularly suited for the manufacture of rigid insulating PUR and PIR foams – standard acidity range.
ONGRONAT® NEO 2510 B	31.0	600	130	2.9	Polymeric MDI high functionality produced from ISCC certified raw materials obtained from virgin biomass.
ONGRONAT® NEO 2510 C new	31.0	600	130	2.9	Polymeric MDI high functionality produced from ISCC certified raw materials obtained from waste materials of biological origin.
ONGRONAT® 2300	31.0	400	110	2.8	Polymeric MDI for the manufacture of rigid insulating PUR and PIR foams, semi rigid integral skin and structural foams.
ONGRONAT® NEO 3000 B new	31.0	400	110	2.8	A general stabilized pure 4'4'-MDI type produced from ISCC certified raw materials obtained from virgin biomass.
ONGRONAT® NEO 3000 C new	31.0	400	110	2.8	A general stabilized pure 4'4'-MDI type produced from ISCC certified raw materials obtained from waste materials of biological origin.

CATALYSTS, ADDITIVES

Product name	CHARACTERISTICS			Product description
	Viscosity (@25°C) as mPa.s	Density (@25°C) as g/cm^3	Potassium content as %	
ONGROCAT 6901		0.85 (@20)		Product is used as pure amine catalyst – DMCHA - in the formulation of PUR systems sold into a high variety of end-applications.
ONGROCAT 6902		0.973 (@20)		Product is used as diluted amine catalyst – DMCHA -in the formulation of PUR systems sold into a high variety of end-applications.
ONGROCAT 6906	45	1.09		Product is used as diluted amine catalyst – PM-DETA - in the formulation of various polyurathane systems. The product is predominantly used in the formualtion of PIR foams.
ONGROCAT 6908	500	1.07	12.8	Product is used as potasssium based trimer catalyst in the formulation of polyurethane systems finding use in continuous polyisocyanurate panel production.
ONGROCAT 6909	325	1.19	15.25	Product is used as potassium based timer catalyst in the formulation of polyurethane systems finding use in continuous polyisocyanurate panel production.
ONGROPUR KT-6040	15			Product is used as chemical blowing agent (water-additive) in the production of flexible and rigid faced laminated panels with polyurethane core.

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