WANHUA CHEMICAL
CATALOG FOR POLYURETHANES

WANHUA CHEMICAL GROUP CO., LTD.

WANHUA

CATALOG FOR POLYURETHANES

ISOCYANATES

MDI Series — Pure MDI

Product	Specification						Properties	Application
	MDI Purity	2,4' -MDI	Cyclohexane Insolubles %	Hydrolysable Chlorine %	Colour Pt-Co	Solidification point °C		
WANNATE® MDI-100	≥99.6	≤2.0	≤0.3	≤0.005	≤30	≥38.1	Good flowability and wide application field	Textile, shoe sole, elastomer, adhesive
WANNATE® MDI-100F	≥99.6	0-2.0	≤0.3	≤0.005	≤30	≥38.1	Special MDI which is environmental	Adhesive, elastomer, coatings, synthetic leather
WANNATE® MDI-100T	≥99.6	—	≤0.3	≤0.005	≤30	≥38.1	Special MDI which is more suitable for the TPU	Adhesive, elastomer, coatings, synthetic leather
WANNATE® MDI-100A	≥99.6	—	≤0.3	≤0.005	≤30	≥38.1	Special MDI which is more suitable for the spandex	Elastomer, coatings, synthetic leather, adhesive, sealant
WANNATE® MDI-1102	≥99.6	—	≤0.3	≤0.005	≤30	—	Special MDI which is more suitable for the spandex	Textile, shoe sole
WANNATE® MDI-50	≥99.6	50-54	≤0.3	≤0.005	≤30	—	Good flowability and wide application field	Elastomer, automotive, transportation, adhesive
WANNATE® MDI-50F	≥99.6	50-54	≤0.2	≤0.005	≤50	—	Provides better flow ability for the production of injection molding	Foam, elastomer, adhesive, coating
WANNATE® MDI-50S	≥99.6	50-54	≤0.3	≤0.005	≤30	—	Provides better flow ability for the production of injection molding	Foam, elastomer, adhesive, coating
WANNATE® MDI-60	≥99.6	40-45	≤0.3	≤0.005	≤30	—	Good flowability and wide application field	Coating

ISOCYANATES

MDI Series — Polymetric MDI

Product	Specification					Properties	Application
	Viscosity @25°C (mPa.s)	NCO %Wt	Hydrolysable Chlorine %	Acidity (HCL) %	Density 25°C (g/cm³)		
WANNATE® PM-200	150-250	30.5-32.0	≤0.2	≤0.05	1.220-1.250	Universal products, using a wide range	Heat insulation, home appliance, cold chain, building, household life, adhesive, sealant, coating
WANNATE® PM-200S	150-250	30.5-32.0	≤0.2	≤0.05	1.220-1.250	Provide lower reactivity and better flowability	Heat insulation, coating, adhesive, automobile, foam, synthetic wood
WANNATE® PM-400	350-500	30.5-32.0	≤0.2	≤0.05	1.220-1.250	High functionality, can improve cell homogeneity and dimensional stability of foams and the compressive strength vertical to the foaming direction	Building
WANNATE® PM-700	650-850	30.0-32.0	≤0.2	≤0.05	1.220-1.250	High functionality, can improve cell homogeneity and dimensional stability of foams	Building
WANNATE® PM-2010	70-250	30.5-32.0	≤0.2	≤0.05	1.220-1.250	Better batch to batch consistency, flowability. Provide light foam color and foaming ratio	Heat insulation, home appliance, cold chain
WANNATE® PM-2025	150-250	30.5-32.0	≤0.2	≤0.05	1.220-1.250	Does not contain formaldehyde composition	Adhesive, sealant
WANNATE® PM-2070	150-250	30.5-32.0	≤0.2	≤0.05	1.220-1.250	Can provide better flowability	The solar water heater industry

MDI Series — Liquified MDI

Product	Specification					Properties	Application
	Appearance	Viscosity @25°C (mPa.s)	NCO %Wt	Acidity % (HCL) %	Color APHA		
WANNATE® CDMDI-100H	Pale yellow liquid	25-60	28.0-30.0	≤0.04	≤220	Excellent heat stability and can significantly improve the hydrolysis resistance	Foam, automobil, transportation, coatings, adhesives, textile
WANNATE® CDMDI-100L	Pale yellow liquid	25-60	28.0-30.0	≤0.04	≤60	Excellent heat stability and can significantly improve the hydrolysis resistance	Textile, shoe, automobil, transportation, adhesives, coatings, prepolymer
WANNATE® CDMDI-100S	Pale yellow liquid	25-60	28.0-30.0	≤0.04	≤200	Excellent heat stability and can significantly improve the hydrolysis resistance	Shoe, automobil, transportation, adhesives, coatings, prepolymer

ISOCYANATES

MDI Series — Modified MDI

Product	Specification		Properties	Application
	Viscosity @25°C (mPa.s)	NCO %Wt		
WANNATE® 8001	55-75	28.8-29.8	Good flowability, high foamability	Molded foam parts, like seats, carpet, front wall, etc
WANNATE® PM-8223	20-40	31.8-32.8	High hardness, good physical properties	Molded foam parts, like seats, carpet, front wall, etc
WANNATE® PM-8215	170-250	30.5-32.0	Polymeric MDI, wide applications	Molded parts of rigid and semi rigid foam
WANNATE® PM-8214	40-60	31.6-32.6	Good flowability and high foamability	Auto headliner and packaging foam
WANNATE® 8626	120-160	27.8-28.8	Prepolymer for ISF, fast cure, high hardness, good low temperature stability	Steering wheel, armrest, bicycle seat, office and gymnastic equipments
WANNATE® 8629	200-400	25.5-26.5	Prepolymer for ISF, soft touch and excellent physical properties	Steering wheel, armrest, bicycle seat, office and gymnastic equipments
WANNATE® 8627	120-180	27.0-28.0	Prepolymer for air filter, excellent physical properties and good low temperature stability	Air filter, armrest, etc
WANNATE® 7025	10-30	35.5-36.5	MT product, high hardness, excellent physical properties, suitable for low density automotive seating	Car seats, back, head rest, etc
WANNATE® 7050	10-30	39.0-40.0	Tm50 product, suitable for low density automotive and motorcycle seating	Car seats, back, head rest, etc
WANNATE® 7080	5-25	44.3-45.3	T 20 product, good physical properties, suitable for low and medium density automotive seating	Car seats, back, head rest, etc
WANNATE® 8105	140-180	25.7-26.7	Very suitable for open-cell foam	Molded VEF/HRF
WANNATE® 8019	110-150	26.0-27.0	Suitable for open-cell foam, better processablity	Molded VEF/HRF
WANNATE® 8122	20-40	31.7-32.7	Higher blowing efficiency, especially suitable for all water low density VEF, Suitable for both molded and Slab foam.	Molded VEF/HRF
WANNATE® 8021	210-270	24.9-25.9	One component solvent - free moisture curing polyurethane adhesive suitable for rebonded foam with higher hardness	Binder for rebonded foam

ISOCYANATES

MDI Series — Modified MDI

Product	Specification		Properties	Application
	Viscosity @25°C (mPa.s)	NCO %Wt		
WANNATE® 8023	1100-1500	18.0-19.0	Solvent-free, one component solvent - free moisture curing polyurethane adhesive suitable for rebonded foam with better physical properties	Binder for rebonded foam
WANNATE® 6092A	950-1350	—	Good applicability of the process, operatation at room temperature, endure 100°C x 30min boiling with water	Two components solventless PU adhesive for flexible laminating
WANEXEL® 792B	400-900	—		
WANNATE® 6112	2200-3200	10.2-11.2	Cold molding or thermocompression process rubber binder	Rubber binder
WANNATE® 6150E	1400-2600	5.80-6.80	Onsite-process rubber binder	Rubber binder
WANNATE® 6145	1800-2800	10.8-11.8	High strength; High toughness	Rubber binder
WANNATE® 6142	3200-4800	10.2-11.2	High reactivity	Rubber binder
WANNATE® 6151	2000-3000	7.35-8.35	Long operating time, Excellent flexibility	Rubber binder
WANNATE® PM-6916	45-65	31.3-32.3	Modified MDI, self leveling coating, lower reactivity	Polyurethane flooring curing agent
WANNATE® 6170F	1000-2000	10.6-11.6	Low reactivity, long pot-life and high strength	Water-permeable road adhesive
WANNATE® 6928	2500-4500	15.6-16.6	High reactivity and high strength	Water-permeable road adhesive
WANNATE® 1631	33-53	28.1-29.7	Carbodiimide-midified MDI, mainly used in the production of high-performance microcellular PU elastomers and flexible PU integral skin foams	Microcellular elastomer, shoe sole, integral skin foam
WANNATE® 1635	30-60	28.0-30.0	Carbodiimide-midified MDI, mainly used in the production of high-performance microcellular PU elastomers and flexible PU integral skin foams	Microcellular elastomer, shoe sole, integral skin foam
WANNATE® 8312	600-800	15.2-16.2	Waterproof	Polyurea

ISOCYANATES

MDI Series — Modified MDI

Product	Specification		Properties	Application
	Viscosity @25°C (mPa.s)	Density @25°C (g/cm³)		
WANNATE® 8617	600-800	22.5-23.5	Polyether-type modified MDI, used for polyurethane elastomer, integral skin foam, shoe sole and waterproof	Microcellular elastomer, shoe sole
WANNATE® 8678	900-1300	18.4-19.4	Polyether-type modified MDI, used for polyurethane elastomer and shoe sole	Microcellular elastomer, shoe sole
WANNATE® 8611	300-500	21.3-22.3	Polyether-type modified MDI, used for breathable shoe insole	Breathable
WANNATE® PM-8135	20-40	31.8-32.8	High hardness, especially suitable for all water density VEF, Suitable for both molded and Slab foam	Molded VEF/HRF
WANNATE® 6947	9-23	31.6-33.6	A mixture of MDI mixed isomers with carbodiimide modified 4,4'-methylene diphenyl diisocyanate and additives	LIQUID MDI
WANNATE® PM-6901	57-77	31.2-32.2	A mixture of diphenylmethane diisocyanate and polyphenylmethane polyisocyanate	LIQUID MDI
WANNATE® PM-6905	16-36	32.3-33.3	A mixture of diphenylmethane diisocyanate and polyphenylmethane polyisocyanate	LIQUID MDI
WANNATE® PM-6907	27-47	31.4-32.4	A mixture of diphenylmethane diisocyanate and polyphenylmethane polyisocyanate	LIQUID MDI
WANNATE® PM-6920	45-65	31.3-32.3	A mixture of diphenylmethane diisocyanate and polyphenylmethane polyisocyanate	LIQUID MDI
WANNATE® PM-8219	40-70	31.7-32.7	A mixture of diphenylmethane diisocyanate and polyphenylmethane polyisocyanate	LIQUID MDI

ISOCYANATES

TDI Series— Derivatives

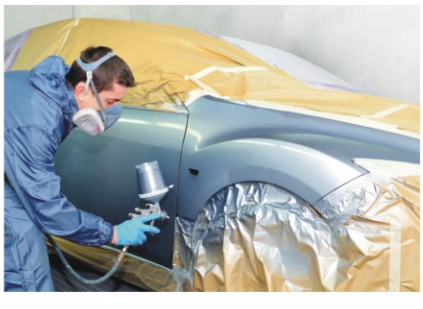
Product	Specification			Properties	Application
	State 20°C	Viscosity @80°C (mPa.s)	Hardness (Shore A, Cured with MOCA)		
WANNATE® 3W3236	White solid	1800	85±2	TDI/polyester-based, high level of physical & mechanical properties,excellent resistance to oil, fuels	CPU
WANNATE® 3W3242	White solid	1400	90±2	TDI/polyester-based, high level of physical & mechanical properties, excellent resistance to oil, fuels	CPU
WANNATE® 3W3250	White solid	1200	95±2	TDI/polyester-based, high level of physical & mechanical properties, excellent resistance to oil, fuels	CPU
WANNATE® 3T3236	White solid	1800	85±2	TDI/Polyester-based, better properties of abration resistance	CPU
WANNATE® 3T6252	White solid	600	94±2	TDI/ better properties of abration resistance	CPU
WANNATE® 3E878B	Colorless transparent liquid	—	85±2A	TDI/PPG, low viscosity and easy processing, good resilience and hydrolysis resistance	CPU

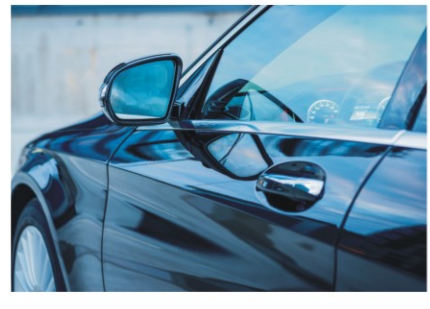
Product	Specification			Properties	Application
	State 20°C	Viscosity @25°C (mPa.s)	Hardness (Shore A, Cured with MOCA)		
WANNATE® TL-75E	Colorless transparent liquid	1500±500	—	Low free TDI content for enviornmentally friendly applications Low viscosity, easy to operate.	Coatings, adhesive
WANNATE® TT-150B	Colorless transparent liquid	250±100	—	Low viscosity and high compatibility	TT series is mostly applied to formulate rapid drying two-component polyurethane coatings.
WANNATE® TT-150E	Colorless transparent liquid	115±35	—	Low viscosity and high compatibility	
WANNATE® TT-350B	Colorless transparent liquid	1300±500	—	Low viscosity and high compatibility	
WANNATE® TT-350E	Colorless transparent liquid	375±75	—	Low viscosity and high compatibility	

ISOCYANATES

Aliphatic Isocyanate Series — Derivatives

Product	Specification						Properties	Application
	Solids %	Solvent	NCO content %	Viscosity @25°C (mPa.s)	Color value (Hazen)	Monomeric HDI %		
WANNATE® HT-100	100	Solvent-free	21.7~22.2	2500±750	≤40	≤0.20	Outstanding weathering resistance, excellent mechanical performance, good dilution stability	Automotive refinish, rail traffic paint, wood coatings and plastic coatings
WANNATE® HT-90B	90±1	10% n-butyl acetate	19.8±0.3	500±150	≤40	≤0.20	Outstanding weathering resistance, excellent mechanical performance, good dilution stability	Automotive refinish, rail traffic paint, wood coatings and plastic coatings
WANNATE® HT-90BS	90±1	5% n-butyl acetate and 5% solvent naphtha 100	19.8±0.3	500±150	≤40	≤0.20	Outstanding weathering resistance, excellent mechanical performance, good dilution stability	Automotive refinish, rail traffic paint, wood coatings and plastic coatings
WANNATE® HT-75B	75±1	25% n-butyl acetate	16.5±0.5	80±20	≤40	≤0.20	Outstanding weathering resistance, excellent mechanical performance, good dilution stability	Automotive refinish, rail traffic paint, wood coatings and plastic coatings
WANNATE® HT-75BS	75±1	25% n-butyl acetate and solvent naphtha 100(1:1)	16.5±0.5	85±15	≤40	≤0.20	Outstanding weathering resistance, excellent mechanical performance, good dilution stability	Automotive refinish, rail traffic paint, wood coatings and plastic coatings
WANNATE® HT-600	100	Solvent-free	23.0±0.5	1200±300	≤40	≤0.25	Low viscosity polyisocyanate, high NCO content, low VOC emission	Automotive refinish, rail traffic paint, wood coatings and plastic coatings
WANNATE® HT-790B	90±1	10% n-butyl acetate	17.8±0.5	1800±700	≤40	≤0.30	Fast drying polyisocyanate, high crosslinking density, better chemical resistance	Automotive refinish, rail traffic paint, wood coatings and plastic coatings
WANNATE® HB-100	100	Solvent-free	22.0±0.3	9000±2000	≤80	≤0.5	Outstanding gloss and color retention, excellent adhesion and favorable flexibility, high chemical resistance	Heavy-duty anticorrosion fields like metal, machinery coating, marine and bridge coating
WANNATE® HB-75B	75±1	25% n-butyl acetate	16.5±0.3	150±50	≤40	<0.5	Outstanding gloss and color retention, excellent adhesion and favorable flexibility, high chemical resistance	Heavy-duty anticorrosion fields like metal, machinery coating, marine and bridge coating
WANNATE® HB-75MX	75±1	12.5% 1-methoxy -2-propyl acetate (MPA) and 12.5% xylene	16.5±0.3	225±75	≤40	<0.5	Outstanding gloss and color retention, excellent adhesion and favorable flexibility, high chemical resistance	Heavy-duty anticorrosion fields like metal, machinery coating, marine and bridge coating





ISOCYANATES

Aliphatic Isocyanate Series — Monomers

Product	Specification				Properties	Application
	Purity %	NCO content %	Color value (Hazen)	Viscosity @25°C (mPa.s)		
WANNATE® HDI	⩾99.5	⩾49.7	⩽30	approx.3	Outstanding anti-yellowing properties improves the flexibility of PU products	Adhesive, electrophoretic paint
WANNATE® HMDI	⩾99.5	⩾31.8	⩽30	approx.30	Moderate reaction rate, outstanding yellowing resistance, high mechanical performance	Waterborne polyurethane dispersions, adhesives and UV resins
WANNATE® IPDI	⩾99.5	⩾37.5	⩽30	approx.10	Structural adjustability, yellowing resistance, stability and durability mechanical performance	Waterborne polyurethane dispersions, adhesives and UV resins
WANNATE® X-600 (H6XDI)	⩾99.7	⩾43.0	⩽30	Acidity/%⩽0.01	Outstanding optical properties. excellent weatherability and thermal resistance. good adhesion to the substrate.	UV resins, TPU, leathers, coatings
WANNATE® X-500(XDI)	⩾99.5	⩾44.0	⩽30	Hydrolyzed chlorine content/%⩽0.0500	—	Coating adhesive sealant

Specialty Amines

Product	Specification					Properties	Application
	Purity %	Total Amine mgKOH/g	Water content %	MDA Content %	Color (APHA) Pt-Co		
WANALINK® 1104	—	290-370	⩽0.50	—	—	Medium activity to meet construction requirements. Ames test negative, health friendly Liquid, convenient and energy saving. Test results of chemical properties of liquid raw materials meet the industry's strictest standards	Field
WANALINK® 6200	⩾96.0	—	⩽0.050	⩽0.030	—	Liquid, safe and easy handing. Low toxicity-Ames test negative. Improved flowablity and adhesion. Low moisture sensitivity. Compatible with a wide range of polyols, co-curatives and all other polyurethane chemicals	Polyurea, PU foams, Elastomers, Adhesives, Coatings, Sealants
WANAMINE® PMDETA	⩾98.50	—	⩽0.5	—	⩽100	—	Polyurethane catalyst
WANAMINE® DMCHA	⩾99.0	—	⩽0.20	—	⩽50	—	Polyurethane catalyst
WANAMINE® SP703	—	570-640	⩽0.50	—	—	—	Spray polyurethane foam

POLYETHER POLYOLS

Flexible polyether polyol

Product	Specification							Properties	Application
	Appearance	Viscosity (mPa.s)	Water content (%)	Density (g/cm³)	K+ (ppm)	PH value	OHV (mgKOH/g)		
WANOL® F3135	Colorless	800-1000	≤0.05	1.00±0.10	≤3	5-7	34±1.5	A glycerol based polyether polyol	High-resilience cold -cure PU foam, integral skin, etc
WANOL® F3140	Colorless	850-1050	≤0.05	1.00±0.10	≤3	5-7	42±2	A glycerol based polyether polyol with an average molecular weight at 4000	Cell opener for high -resilience molded foam
WANOL® F3147	Colorless	500-700	≤0.05	1.00±0.10	≤3	5-7	46±1.5	A general purpose, nominal 3500 molecular weight, glycerol based polyether polyol used in the manufacture of flexible slabstock PU foam, which processes well on all types of foam machinery	Flexible slabstock PU foam
WANOL® F3156D	Colorless	450-750	≤0.05	1.00±0.10	≤3	5.5-7.5	56±1.5	A glycerol based, DMC catalyzed polyether polyol suitable to produce flexible slabstock foam, which processes well on all types of foam machinery	Flexible slabstock PU foam
WANOL® F3160	Colorless	1000-1300	≤0.05	1.00±0.10	≤3	5-7	28±1.5	A glycerol based polyether polyol with nominal 6000 molecular weight	High-resilience cold -cure PU foam, integral skin foam, etc
WANOL® S3007	Colorless	190-350	≤0.05	1.05±0.10	≤5	5-7	245±15	A conventional viscoelastic polyether polyol	Viscoelastic foam, adhesives
WANOL® F3148P	White, opaque, viscous liquid	≤6000	≤0.10	1.05±0.10	—	6-9	27±2	A polymer polyol with low VOC, low smell and ultra-high solid content, which is used to increase the bearing capacity of the foam.	Mattresses, sofas, clothing, shoe cotton and strong cotton, etc.
WANOL® F3145P	White, opaque, viscous liquid	≤5000	≤0.10	1.05±0.10	—	6-9	30±2	A polymer polyol with low VOC and low smell quality. It is used to increase the bearing capacity of the foam.	Conventional flexible slabstock foams with increased loadbearing properties
WANOL® F3005	Colorless	200-400	≤0.03	1.05±0.10	≤3	5-7	306±6	A low molecular weight, propanediol based polyether polyol for products with better strength and low odor	Viscoelastic foam
WANOL® F3056D	Colorless	400-700	≤0.05	1.00±0.10	≤3	5-7.5	56±1.5	A DMC catalyzed, relatively high functionality polyether polyol for elastomers, which increases the tensile strength of products	Viscoelastic foam, adhesives
WANOL® F3330H	Colorless	350-550	≤0.05	1.00±0.10	≤3	5-7	56±2	A high reactivity polyether polyol, producing sole materials with higher strength, faster solidification and less demolding time	Shoe sole, pulp
WANOL® F3150	Colorless	1100-1600	≤0.05	1.00±0.1	≤5	5-7	33-36	A viscoelastic polyol with low VOC and odor	Conventional and molded slabstock viscoelastic foam
WANOL® F4037	Colorless	500-700	≤0.05	1.10±0.1	≤5	8.5-11.5	60±2	An amine initialized polyether polyol. It is suitable to produce PU coatings and adhesives with better physical properties	Coatings, adhesives, sealants and elastomers

POLYETHER POLYOLS

Rigid polyether polyol

Product	Specification							Properties	Application
	Appearance	Viscosity (mpa·s)	Water Content (%)	Density (g/cm^3)	K+ (ppm)	PH value	OHV (mgkOH/g)		
WANOL® R2310	Colorless	200-300	≤0.05	1.00±0.10	≤5	5-7	168±5	A glycerol initialized polyether triol used as cross linker or dilute agent in formulations	One component adhesives, rigid foams, coatings and sealants
WANOL® R2303	Colorless	400-800	≤0.08	1.10±0.10	≤8	5-7	560±15	A glycerol initialized polyether triol used as cross linker or dilute agent in formulations	Rigid foams, coatings, cross linkers, etc
WANOL® R2304	Colorless	300-500	≤0.08	1.05±0.10	≤8	5-7	415±10	A glycerol initialized polyether triol used as cross linker or dilute agent in formulations	Rigid foams, coatings, cross linkers, etc
WANOL® R2305	Colorless	200-400	≤0.08	1.05±0.10	≤8	5-7	335±10	A glycerol initialized polyether triol used as cross linker or dilute agent in formulations	Rigid foams, coatings, cross linkers, etc
WANOL® R2307	Colorless	190-350	≤0.15	1.05±0.10	≤50	4-7	245±15	A glycerol initialized polyether triol used as cross linker or dilute agent in formulations	Rigid foams, coatings, cross linkers, etc
WANOL® R4040	Red Brown	15000-22000	≤0.07	1.10±0.10	≤50	7-10	375±15	An aromatic amine based polyether polyol with good compatibility with pentane blowing agents	Rigid foams for insulation applications
WANOL® R2450A	Light Yellow to Yellow	5200-8200	≤0.15	1.10±0.10	—	9-12	490±15	A propylene oxide adduct initialized with sucrose and glycerol	Rigid foams for building panels, pre-insulated pipes, structural foam, etc.
WANOL® R2470M	Red brown	28000-36000	≤0.15	1.10±0.10	≤50	8-11	475±25	A propoxylated mannich based polyol, can avoid phase separation in pentane blowing blended polyol systems	High flame resistant foams
WANOL® R2490	Light yellow	9200-11800	≤0.15	1.10±0.10	—	9-12	500±15	A sorbitol based polyether polyol with high funcionality, products produced by Wanol R2490 have good dimentional stability	All kinds of rigid foams with good dimentional stability
WANOL® R6245	Light yellow	22000-30000	≤0.2	1.10±0.10	≤50	4.5-8	450±15	A sorbitol based polyether polyol with high funcionality	All kinds of rigid foams with good dimentional stability
WANOL® R4110	Light Yellow to Yellow	2500-3800	≤0.15	1.10±0.10	—	9-12	450±15	A sucrose and diethylene glycol based polyether polyol with high functionality and good compatibility with pentane series blowing agents	Rigid foam with good physical properties
WANOL® R4110H	Light Yellow to Yellow	3500-4300	≤0.15	1.10±0.10	—	9-12	480±15	A sucrose and diethylene glycol based polyether polyol catalyzed by amine	Conventional rigid foams
WANOL® R420	Light Yellow to Yellow	5500-8500	≤0.15	1.10±0.10	≤50	4-7	430±15	A sucrose based polyether polyol with high functionality	Rigid foam with good physical properties
WANOL® R8240	Light Yellow to Yellow	4000-6000	≤0.15	1.10±0.10	—	9-12	400±20	A sucrose based polyether polyol with high functionality and good compatibility with pentane series blowing agents	Rigid foam with good physical properties

POLYETHER POLYOLS

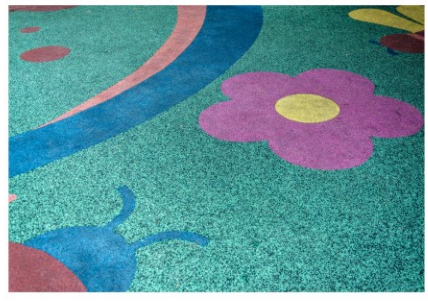
Rigid polyether polyol

Product	Specification							Properties	Application
	Appearance	Viscosity (mpa·s)	Water Content (%)	Density (g/cm^3)	K+ (ppm)	PH value	OHV (mgkOH/g)		
WANOL® R8245	Light Yellow to Yellow	28000-36000	≤0.15	1.10±0.10	≤50	4.5-7	450±15	A sucrose based polyether polyol with high functionality	Rigid foam with good physical properties
WANOL® R8336	Light Yellow to Yellow	2700-4000	≤0.15	1.10±0.10	≤50	4-7	360±15	A sucrose based polyether polyol with high functionality and better compatibility with pentane series blowing agents	Rigid foam with good physical properties
WANOL® R8338	Light Yellow to Yellow	7500-10000	≤0.15	1.10±0.10	≤50	4.5-7	380±15	A sucrose based polyether polyol with high functionality and better compatibility with pentane series blowing agents	Rigid foam with good physical properties
WANOL® R8349	Light Yellow to Yellow	8500-12000	≤0.20	1.10±0.10	≤50	4-7	490±20	A propylene oxide adduct initialized with sucrose and glycerol	Rigid foam with good physical properties
WANOL® FR-130	Colorless to Light Yellow	≤800	≤0.15	1.50±0.10	—	—	110±10	A reactive flame retardant with phosphrous and halogen in the molecule, foams produced by FR-130 have both good flame retardancy and physical properties	Flame retardant foam
WANOL® R2430M	Red brown	1000-3500	≤0.15	1.05±0.1	≤50	8-11	280-300	A mannich based polyol suitable for high flame resistant rigid foams production, it can also increase the system compatibility and avoid phase separation in formulations	Flame resistant spray foams, building panels
WANOL® R6250	Light yellow	25000-39000	≤0.10	1.10±0.1	800-1100	7.5-10	485-515	A sorbitol based polyether polyol suitable to produce all kind of rigid foams with good dimensional stability	Fridge, building panels, pipe in pipe, .etc
WANOL® R8345B	Light yellow	4100-5400	≤0.06	1.10±0.1	≤50	4.5-7	435-465	A polyether polyol initialized with sucrose and glycerol which is suitable to produce rigid foams with good physical properties	Building panels, pre-insulated pipes, structural foam, .etc

POLYETHER POLYOLS

CASE polyether polyol

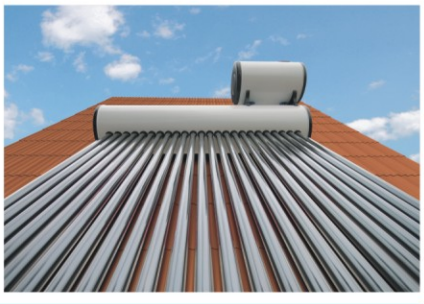
Product	Specification							Properties	Application
	Appearance	Viscosity (mpa·s)	Water Content (%)	Density (g/cm^3)	K+ (ppm)	PH value	OHV (mgkOH/g)		
WANOL® C2010	Colorless	100-200	≤0.03	1.00±0.10	≤3	5-7	112±3.5	A propanediol based standard polyether polyol for elastomers	Adhesives, elastomers
WANOL® C2010D	Colorless	100-200	≤0.03	1.00±0.10	≤3	5-7.5	112±3.5	A propanediol based, DMC catalyzed polyether polyol for elastomers	Adhesives, elastomers
WANOL® C2030D	Colorless	500-750	≤0.03	1.00±0.10	≤3	5-7.5	37.5±2	A DMC catalyzed polyether polyol for elastomers with larger molecular weight, used to increase the elongation at break of products	Adhesives, pulp
WANOL® C2004	Colorless	40-140	≤0.05	1.00±0.10	≤3	5-7	280±10	A low molecular weight, propanediol based polyether polyol for products with better strength and low odor	Adhesives, OCF
WANOL® C2020	Colorless	270-370	≤0.03	1.00±0.10	≤3	5-7.5	56±1.5	A relatively larger molecular polyether polyol used to increase the elongation at break of products	Adhjesives, elastomers, pulp
WANOL® C2040D	Colorless	750-1250	≤0.03	1.00±0.10	≤3	5-7.5	28±1.5	A high molecular weight, DMC catalyzed polyether polyol for elastomers, can significantly improve the elongation at break of product systems	Adhesives, pulp
WANOL® C2140	Colorless	750-950	≤0.03	1.00±0.10	≤3	5-7	27.5±1.5	A high reactivity polyether polyol for sole materials with faster solidification, less demolding time and low odor	Shoe sole, pulp
WANOL® C2140F	Colorless	750-950	≤0.03	1.00±0.10	≤3	5-7	28.5±1.5	A polyether polyol with higher reactivity compared to Wanol® C2140	Shoe sole, pulp
WANOL® C2107	Colorless	100-160	≤0.05	1.0±0.1	≤5	5-7	145-155	A high reactive polyether polyol for adhesives, which increases the product adhesion	Adhesives
WANOL® C2120	Colorless	300-400	≤0.05	1.0±0.1	≤5	5-7	55-59	A high reactive polyether polyol for adhesives, which increases the product adhesion	Adhesives



POLYETHER POLYOLS

Blended Polyether Polyols

Product	Specification				Properties	Application
	Appearance	Specific gravity 25°C (g/cm³)	Viscosity 25°C (mPa.s)	Water content (%)		
WANEFOAM® Panel Formulated Polyol System	—	1.10±0.10	200-800	1.0-2.0	Excellent adaptability, thermal insulation property, good flame retardant performance, adhesive, compression strength and weather resistance	Continuous panel
WANEFOAM® Pipe Formulated Polyol System	—	1.10±0.10	200-1000	1.5-4.0	Excellent heat insulation performance and compressive strength, easy process and stable foam quality, CCOT certificate (140°C, 30years)	Pipe insulation
WANEFOAM® Reefer Container Formulated Polyol System	—	1.10±0.10	2000-5000	1.0-2.0	Good flowability, thermal insulation property and low k-factor, good foam quality and less surface defects	Non-appliances
WANEFOAM® Spray Formulated Polyol System	—	1.10±0.10	75-175	0.5-1.5	Good cell structure and excellent heat insulation performance, good adhension and dimensional stability, stable foam quality and have a longer shelf life, High foam yield for high FR system	Spray
WANEFOAM® RCP 5/6 Series	Pale Yellow to Reddish Brown Transparent Liquid	1.08±0.05	2000-8000	1.5-2.5	Excellent operationality and stability, the manufactured foam has good demoulding, dimensional stability,and surface adhesion, low thermal conductivity and surface defects	Refrigerator/ Freezer/ Water heater
WANEFOAM® RCM5/6 Series	Pale Yellow to Reddish Brown Transparent Liquid	1.08±0.05	2500-9000	1.5-2.5	Excellent operationality and stability, the manufactured foam has good demoulding, dimensional stability, strength distribution, and surface adhesion, low thermal conductivity and surface defects	Refrigerator/ Freezer/ Water heater
WANEFOAM® RCB 5/6 Series	Pale Yellow to Reddish Brown Transparent Liquid	1.08±0.05	3000-10000	1.5-2.5	Applied to co-blowing agent systems, the manufactured foam has good dimensional stability, demoulding, thermal conductivity and strength distribution, surface adhesion, low surface defects	Refrigerator/ Freezer/ Water heater
WANEFOAM® RFO5/6 Series	Pale Yellow to Reddish Brown Transparent Liquid	1.08±0.05	3000-10000	1.5-2.5	Applied to HFO blowing agent systems, the manufactured foam has low thermal conductivity, good dimensional stability, demoulding and surface adhesion, low surface defects	Refrigerator/ Freezer/ Water heater
WANEFOAM® RH5/6 Series	Pale Yellow to Reddish Brown Transparent Liquid	1.08±0.05	300-1200	2.0-4.0	Optimized water blowing agent systems, excellent operationality, stability, and flowability, the manufactured foam has good demoulding, dimensional stability, strength distribution, low surface defects	Refrigerator/ Freezer/ Water heater



POLYETHER POLYOLS

Blended Polyether Polyols

Product	Specification				Properties	Application
	Appearance	Specific gravity 25°C (g/cm³)	Viscosity 25°C (mPa.s)	Water content %		
WANEFLEX™ 50/51/52 High Resilience Series Formulated Polyol	Colorless liquid, whit or light yellow liquid	1.02-1.05	800-2000	—	Excellent physical properties, easy to use, low emission, fast cure	Automotive
WANEFLEX™ 53/54 Acoustic Series Formulated Polyol	Colorless liquid, whit or light yellow liquid	1.02-1.05	400-1600	—	Excellent physical properties, easy to use, low emission, fast cure	Automotive
WANEFLEX™ 56/57 Interal Skin Foam Series Formulated Polyol	Whit or light yellow liquid, black liquid	1.02-1.12	400-1600	—	Excellent physical properties, soft touch, fast cure	Automotive and furniture
WANEFLEX™ 58/59 Semi-rigid Series Formulated Polyol	Colorless or light yellow liquid, black liquid	1.02-1.12	800-2000	—	Light weight, excellent sound absorption, low emission, easy to use	Automotive
WANEFLEX™ 68/69 Composite Series Formulated Polyol	Black liquid, light yellow liquid	1.02-1.12	800-2000	—	Light weight, excellent mechanical properties, good thermostability, short demolded time	Automotive
WANEFLEX™ 60/61/62 Viscoelastic Series Formulated Polyol	Light yellow liquid	1.0-1.1	400-1500	—	Water-blown systems, excellent durability	Furniture

AUXILIARIES

Hardeners

Product	Specification			Properties	Application
	Solids (%wt)	Viscosity @25°C (mPa.s)	NCO (%wt)		
Aquolin® 161	100	2000-4000	18-19	Excellent chemical resistane, long pot-life	Waterborne 2k hardener
Aquolin® 268	100	4500-6500	20-21	Excellent dispersability, higher hardness and chemical resistance, excellent compatibility	Waterborne 3k hardener
Aquolin® 269	100	500-2000	18.8-19.8	Excellent water dispersity and hand-mixing, excellent water resistance.	Waterborne 2K harder
Aquolin® 270	100	2500-4500	20.2-21.2	Exellent water dispersability, fast drying and yellow resistance	Waterborne 4k hardener
Aquolin® 280	100	<1000	19.2-20.2	Excellent water resistance, excellent weather resistance, long pot life.	Waterborne 2K harder

AUXILIARIES

Thickeners

Product	Specification	Properties	Application
	Hardness (Shore A)		
Vesmody® U300	20±1	Newtonian rheology, prepared with specific, unicaptmtechnology of wanhua	High shear visco, levelling
Vesmody® U505	40±1	Excellent levelling and anti-sagging performance, microbe resistance	Medium, high shear visco
Vesmody® U601	35±1	Balance between levelling and anti-sagging, water and alkali resistance	Low, medium shear visco
Vesmody® U604	25±1	Pseudoplastic rheology, excellent medium-shear viscosity thickening efficiency	Medium shear visco
Vesmody® U605	40±1	Pseudoplastic rheology, excellent medium-shear viscosity thickening efficiency, stable to pigment, good leveling ability	Medium shear visco
Vesmody® U705	40±1	Excellent levelling and anti-sagging performance, balance between medium and low visco	High, medium and low visco
Vesmody® U902	35±1	Excellent low-shear viscosity thickening efficiency, thixotropy, high gloss and good water resistance	Lower shear visco
Vesmody® U905	40±1	Excellent low-shear viscosity thickening efficiency, thixotropy, high gloss and good water resistance	Lower shear visco

POLYURETHANE PRODUCTS

TPU

Product	Specification					Properties	Application
	Hardness (Shore A)	Hardness (Shore D)	Density (g/cm^3)	Tensile Strength (Mpa)	Tear Strength (N/mm)		
WANTHANE® WHT-1164IC	—	64	1.21	45	225	Excellent mechanical properties, good abrasion resistance, short cycle time	Automotive, textile industry, footwear, industrial engineering
WANTHANE® WHT-1172	—	72	1.22	48	260	Eproperties, good abrasion resistance, short cycle time	Automotive, textile industry, footwear, industrial engineering
WANTHANE® WHT-1180	—	80	1.18	32	90	Excellent mechanical properties, good abrasion resistance, short cycle time	Automotive, textile industry, footwear, industrial engineering
WANTHANE® WHT-1185EC	—	85	1.19	37	100	Excellent mechanical properties, good abrasion resistance, short cycle time	Automotive, textile industry, footwear, industrial engineering
WANTHANE® WHT-1190	—	90	1.19	42	120	Excellent mechanical properties, good abrasion resistance, short cycle time	Automotive, textile industry, footwear, industrial engineering
WANTHANE® WHT-1195	95	55	1.2	43	140	Excellent mechanical properties, good abrasion resistance, short cycle time	Automotive, textile industry, footwear, industrial engineering
WANTHANE® WHT-1198IC	98	60	1.21	44	175	Excellent mechanical properties, good abrasion resistance, short cycle time	Automotive, textile industry, footwear, industrial engineering
WANTHANE® WHT-1264	—	64	1.21	38	190	Excellent mechanical properties, outstanding extrusion stability, short cycle time, low cost	Textile industry, footwear, industrial engineering
WANTHANE® WHT-1290	91	—	1.19	28	110	Excellent mechanical properties, outstanding extrusion stability, short cycle time, low cost	Textile industry, footwear, industrial engineering
WANTHANE® WHT-1295	96	56	1.2	31	140	Excellent mechanical properties, outstanding extrusion stability, short cycle time, low cost	Textile industry, footwear, industrial engineering
WANTHANE® WHT-1295B	97	65	1.21	32	180	Excellent mechanical properties, outstanding extrusion stability, short cycle time, low cost	Textile industry, footwear, industrial engineering
WANTHANE® WHT-1485RV	85	—	1.2	36	95	Excellent mechanical properties, outstanding extrusion stability, short cycle time	Textile industry, footwear, industrial engineering

POLYURETHANE PRODUCTS

TPU

Product	Specification					Properties	Application
	Hardness (Shore A)	Hardness (Shore D)	Density (g/cm^3)	Tensile Strength (Mpa)	Tear Strength (N/mm)		
WANTHANE® WHT-1490IV	90	—	1.2	37	100	Outstanding extrusion stability, short cycle time	Textile industry, footwear, industrial engineering
WANTHANE® WHT-1495EC	95	55	1.21	38	148	Excellent mechanical properties, outstanding extrusion stability, short cycle time	Textile industry, footwear, industrial engineering
WANTHANE® WHT-1495RV	95	55	1.21	40	150	Outstanding extrusion stability, short cycle time	Textile industry, footwear, industrial engineering
WANTHANE® WHT-1565IC	66	—	1.18	25	70	Outstanding abrasion resistance, good low temperature flexibility, excellent mechanical properties	Textile industry, footwear
WANTHANE® WHT-1570IC	73	—	1.19	30	75	Outstanding abrasion resistance, good low temperature flexibility, excellent mechanical properties	Textile industry, footwear
WANTHANE® WHT-1580	80	—	1.19	26	80	Outstanding abrasion resistance, good low temperature flexibility, excellent mechanical properties	Textile industry, footwear
WANTHANE® WHT-1585	86	—	1.19	30	90	Outstanding abrasion resistance, good low temperature flexibility, excellent mechanical properties	Textile industry, footwear
WANTHANE® WHT-1680AB	80	—	1.19	30	80	Stable melt viscosity, good workability for high frequency welding	Fabric coating
WANTHANE® WHT-1685AD	85	—	1.19	32	90	Stable melt viscosity, good workability for high frequency welding	Fabric coating
WANTHANE® WHT-1685AB	85	—	1.19	40	97	Stable melt viscosity, good workability for high frequency welding	Fabric coating
WANTHANE® WHT-1690AB	90	—	1.19	37	102	Stable melt viscosity, good workability for high frequency welding	Fabric Coating
WANTHANE® WHT-1695AB	95	—	1.2	42	122	Stable melt viscosity, good workability for high frequency welding	Fabric Coating

POLYURETHANE PRODUCTS

TPU

Product	Specification					Properties	Application
	Hardness (Shore A)	Hardness (Shore D)	Density (g/cm^3)	Tensile Strength (Mpa)	Tear Strength (N/mm)		
WANTHANE® WHT-2180	80	—	1.18	24	100	Low compression set, good oil resistance and hydrolysis resistance, excellent abrasion resistance and low temperature flexibility	Electrical engineering, industrial engineering
WANTHANE® WHT-2185	85	—	1.19	26	110	Low compression set, good oil resistance and hydrolysis resistance, excellent abrasion resistance and low temperature flexibility	Electrical engineering, industrial engineering
WANTHANE® WHT-2190	90	—	1.2	29	120	Low compression set, good oil resistance and hydrolysis resistance, excellent abrasion resistance and low temperature flexibility	Electrical engineering, industrial engineering
WANTHANE® WHT-2195	95	55	1.2	31	125	Low compression set, good oil resistance and hydrolysis resistance, excellent abrasion resistance and low temperature flexibility	Electrical engineering, industrial engineering
WANTHANE® WHT-2198	98	60	1.21	32	135	Low compression set, good oil resistance and hydrolysis resistance, excellent abrasion resistance and low temperature flexibility	Electrical engineering, industrial engineering
WANTHANE® WHT-7180	80	—	1.21	30	85	Excellent mechanical properties, good wear resistance, outstanding heat and fungus resistance	Industrial engineering
WANTHANE® WHT-7185	85	—	1.22	35	100	Excellent mechanical properties, good wear resistance, outstanding heat and fungus resistance	Industrial engineering
WANTHANE® WHT-7190	90	—	1.24	40	110	Excellent mechanical properties, good wear resistance, outstanding heat and fungus resistance	Industrial engineering
WANTHANE® WHT-7195	95	—	1.3	45	120	Excellent mechanical properties, good wear resistance, outstanding heat and fungus resistance	Industrial engineering
WANTHANE® WHT-8170	70	—	1.1	25	60	Outstanding hydrolysis resistance, good low temperature flexibility, excellent anti-UV property	Industrial engineering, sports and leisure
WANTHANE® WHT-8180	80	—	1.1	25	75	Outstanding hydrolysis resistance, good low temperature flexibility, excellent anti-UV property	Industrial engineering, sports and leisure
WANTHANE® WHT-8185	85	—	1.11	26	80	Outstanding hydrolysis resistance, good low temperature flexibility, excellent anti-UV property	Industrial engineering, sports and leisure

POLYURETHANE PRODUCTS

TPU

Product	Specification					Properties	Application
	Hardness (Shore A)	Hardness (Shore D)	Density (g/cm^3)	Tensile Strength (Mpa)	Tear Strength (N/mm)		
WANTHANE® WHT-8190	90	—	1.12	28	100	Outstanding hydrolysis resistance, good low temperature flexibility, excellent anti-UV property	Industrial engineering, sports and leisure
WANTHANE® WHT-8195	95	—	1.13	30	110	Outstanding hydrolysis resistance, good low temperature flexibility, excellent anti-UV property	Industrial engineering, sports and leisure
WANTHANE® WHT-8280	80	—	1.1	23	75	Excellent transparency, outstanding hydrolysis resistance, good fungus resistance and anti-UV property	Sports and leisure
WANTHANE® WHT-8285	85	—	1.11	25	80	Excellent transparency, outstanding hydrolysis resistance, good fungus resistance and anti-UV property	Sports and leisure
WANTHANE® WHT-8290	90	—	1.12	28	100	Excellent transparency, outstanding hydrolysis resistance, good fungus resistance and anti-UV property	Sports and leisure
WANTHANE® WHT-8254	85	—	1.13	29	115	Excellent transparency, outstanding hydrolysis resistance, good fungus resistance and anti-UV property	Sports and leisure
WANTHANE® WHT-8264	90	—	1.14	30	120	Excellent transparency, outstanding hydrolysis resistance, good fungus resistance and anti-UV property	Sports and leisure
WANTHANE® WHT-A880	80	—	1.08	14	55	Non-yellowing, high abrasion resistance, low temperature flexibility	Shoes, automotives, electronic Industry
WANTHANE® WHT-A885	85	—	1.09	16	75	Non-yellowing, high abrasion resistance, low temperature flexibility	Shoes, automotives, electronic Industry
WANTHANE® WHT-A890	90	—	1.1	25	85	Non-yellowing, high abrasion resistance, low temperature flexibility	Shoes, automotives, electronic Industry
WANTHANE® WHT-A895	95	—	1.1	30	95	Non-yellowing, high abrasion resistance, low temperature flexibility	Shoes, automotives, electronic industry
WANTHANE® WHT-8280H	80	—	1.15	40	200	Low mold shrinkage, good impact resistance, high mechanical properties, perfect transparency	Industrial engineering, sports and leisure
WANTHANE® WHT-1180H	80	—	1.18	46	237	Low mold shrinkage, good impact resistance, high mechanical properties, perfect transparency	Industrial engineering, sports and leisure

POLYURETHANE PRODUCTS

TPU

Product	Specification					Properties	Application
	Hardness (Shore A)	Hardness (Shore D)	Density (g/cm^3)	Tensile Strength (Mpa)	Tear Strength (N/mm)		
WANTHANE® WHT-F390	90	—	1.19	40	120	Stable melt viscosity, outstanding toughness, strength and impact resistance	Fabric coating
WANTHANE® WHT-1195G	95	55	1.20	45	150	Excellent mechanical properties, good abrasion resistance, short cycle time	Automotive, textile industry, footwear, industrial engineering
WANTHANE® WHT-1190G	—	90	1.20	41	130	Excellent mechanical properties, good abrasion resistance, short cycle time	Automotive, textile industry, footwear, industrial engineering
WANTHANE® WHT-C190	90	—	1.19	35	110	Stable melt viscosity, outstanding toughness, strength and impact resistance	Wire & cable

TPU

Product	Specification				Properties	Application
	Hardness (Shore A)	Density (g/cm^3)	Tensile Strength (Mpa)	Ring-ball softening temperature (°C)		
WANTHANE® WHT-6232	82	1.19	25	145	Wide range of activation temperature, soft touch with high elasticity	Film
WANTHANE® WHT-6236	78	1.19	12	117	Wide range of activation temperature, soft touch with high elasticity	Film
WANTHANE® WHT-6290	96	1.19	23	87	Wide range of activation temperature, soft touch with high elasticity, excellent bonding strength with various substrates	Footwear
WANTHANE® WHT-6228C	95	1.20	22	130	Wide range of activation temperature, soft touch with high elasticity, excellent bonding strength with various substrates	Film
WANTHANE® WHT-MT3	75	1.19	23	130	Wide range of activation temperature, soft touch with high elasticity, excellent bonding strength with various substrates	Film

POLYURETHANE PRODUCTS

Waterborne Polyurethanes

Product	Specification		Properties	Application
	Solids (wt%)	MFFT (°C)		
Lacper® 4220	40±1	13	Very low amount of film forming agent, fast drying, high gloss, good compatibility with acrylic emulsion.	Furniture, home decoration, semi outdoor wood coatings
Lacper® 4211	40±1	47	Solvent free, high fullness, excellent flexibility, good compatibility with acrylic acid, solvent free; The effect of electrostatic spraying is excellent.	Furniture and home decoration wood coatings
Lacper® 4221	40±1	26	High hardness, quick drying, excellent stack resistance, good flexibility, good adhesion to PVC.	Furniture and home decoration wood coatings
Lacper® 4219	40±1	48	High hardness, quick drying, excellent stack resistance, solvent free	Wooden door, furniture, home decoration wood coating
Lacper® 4218	40±1	40	Low odor PUD, high fullness, fast hardness establishment, good compatibility with acrylic acid, solvent free	Furniture and home decoration wood coatings
Lacper® 4101	35±1	49	Excellent permeability, excellent chemical resistance, fast hardness establishment, excellent scratch resistance, solvent-free	Furniture and home decoration wood coatings
Lacper® 4109	38±1	22	High gloss, high fullness, high film hardness, good leveling	Wooden door, furniture, home decoration wood coating
Leasys® 5530	35±1	10	High gloss, good permeability, good film forming property, no cracking in thick coating	Furniture and home decoration wood coatings
Urosin® 4617	40±1	—	Good chemical resistance, easy to mat, high hardness, dust free before uv curing	Industrial coating
Urosin® 4616	38±1	6.0-8.0	Excellent transparency, viscosity and stability	Waterborne UV furniture wood coatings
Urosin® 4633	38±1	6.0-8.0	Excellent transparency, viscosity and stability	Water based UV furniture coatings and floor wood coatings
Crysol® 6130	35±1	—	Good stipping performance on plastic, excellent water resistance, also suitable for Al-Mg alloy, tinplate	Industrial coating
Crysol® 6136	40±1	<60	Excellent boiling water resistance, excellent aluminum powder orientation, recommended for UV matching primer. No APEO, NMP, NEP contained.	Plastics coating

POLYURETHANE PRODUCTS

Waterborne Polyurethanes

Product	Specification		Properties	Application
	Solids (wt%)	MFFT (°C)		
Crysol® 6512	48±1	—	Outstanding building up, flexibility	Soft touch top, good chemical, abrasive and scratch resistance
Crysol® 6140	40±1	<5	Very low VOC possible, good building up, good flexibility	High hardness, good flexibility, quick drying, high gloss, good property of film forming and abrasive resistance
Adwel® 1640	50±1	5-15	Excellent immediate peel strength, good tack, outstanding brushability	Footwear adhesive
Adwel® 1695	45±1	10-15	Excellent bonding strength and heat/water resistance, outstanding brushability, high cost-effective	Footwear adhesive
Adwel® 1631	48±1	10	1K application, good tack, outstanding initial heat resistance and final heat/water resistance	Footwear, auto interior, 3D lamination adhesive
Adwel® 1630C	50±1	5	Long open time, good reactivation	Footwear, auto interior, 3D lamination adhesive
Adwel® 1665	50±1	5	Fast thermal activation, good tack	Auto interior, 3D lamination adhesive
Adwel® 1675	40±1	5	Rapid crystallization, good bonding property	Auto interior, 3D lamination adhesive
Adwel® 1633	50±1	10	Good balance of performance, good compatibility with other dispersions, high cost-effective	3D lamination adhesive
Adwel® 1633D	46±1	5	Excellent strength and heat resistance, low activated temperature, high cost-effective	3D lamination adhesive
Adwel® 1636	50±1	10	Suitable for brushing, excellent wet tacky, sufficient open time, high cohesion	Waterborne contact adhesive
Adwel® 1636A	41±1	—	Suitable for spraying, excellent wet tacky, sufficient open time, high cohesion	Waterborne contact adhesive
Archsol® 8529	40±1	44	Soft touch top, good chemical, abrasive and scratch resistance	Easy matting, excellent coating permeability, excellent water resistance, and weathering resistance, excellent anti\contamination

POLYURETHANE PRODUCTS

Waterborne Polyurethanes

Product	Specification		Properties	Application
	Solids (wt%)	MFFT (°C)		
Archsol® 8530	35±1	34	Outstanding adhesion, excellent flexibility and weather ability, good effect pigments orientation	High gloss, excellent resistance to yellowing
Archsol® 8558	50±1	—	Excellent adhesion, water resistance, yellow resistance, transparency, high gloss and hardness	Excellent mechanical properties, yellow resistance and hand feeling
Archsol® 8560	50±1	—	Good stipping performance on plastic, excellent water resistance, also suitable for Al-Mg alloy, tinplate	Excellent elongation and soft handls
Carfil® ST11	45.5±1.5	—	Prevention of excessive skin hydration, higher active penetration into skin, 360° fit on skin	Skin transfer mask
Carfil® 9235NP	35±1	—	Easily removable, high gloss, non-irritating	Water-based nail polish
Carfil® H10	29.0-31.0	0	Naturally volumizing effect smooth touch & vivid hair suitable for transparent system	Shampoo
Leasys® 1258	39-41	—	Soft handle, dry laminating resin, high bonding fastness	Textile synthetic leather lamination layer
Leasys® 3068A	28-30	—	Soft handle, dry laminating resin, high bonding fastness	Textile synthetic leather lamination layer
Leasys® 3102	34-36	—	Self-matt, good black matt, high temperature embossing, alcohol resistance, good adhesion to PVC	Matting finishing for PVC
Leasys® 3215	34-36	—	Soft handle, good adhesion with ab material, good flexing, can be used for solvent-free laminating layer	Lamination layer for automobile and sofa
Leasys® 3234	44-46	—	Middle soft handle, wet paste, good adhesion	Textile synthetic leather lamination layer
Leasys® 3250	29-31	—	Middle hard handle, good aging resistance、good flexing, excellent comprehensive performance	Synthetic leather top coating
Leasys® 3257	38-40	—	Polycarbonate type, film forming soft elastic, dry, excellent velvety feeling release paper construction leveling, excellent wear resistance, twists and turns, oil resistance, alcohol resistance	Synthetic leather top coating

POLYURETHANE PRODUCTS

Waterborne Polyurethanes

Product	Specification	Properties	Application
	Solids (wt%)		
Leasys® 3270	48-50	Middle hard handle, good aging resistance、good flexing, excellent comprehensive performance	Synthetic leather top coating
Leasys® 3271	48-50	Self foaming resin, excellent packing performance	Synthetic leather foam
Leasys® 3451	48-50	High peel strength, can bond a variety of substrates, heat activated	Textile synthetic leather lamination layer
Leasys® 3458	48-50	Polyester type, soft elastic, good color fastness	Synthetic leather top coating/Impregnation
Leasys® 3459	48-50	Polycarbonate polyether type, good aging resistance, excellent alkali resistance and high resilience	Synthetic leather top coating/foam
Leasys® 3468	49-51	Polyester type, soft elastic, excellent hydrolysis resistance	Synthetic leather top coating
Leasys® 3480	48-50	Middle soft handle, aromatic high cost performance, good resilience, good hydrolysis resistance	Synthetic leather foam
Leasys® 3481	48-50	Middle soft handle, aromatic high cost performance, excellent pressure mark folding performance, good hydrolysis resistance	Synthetic leather foam
Leasys® 3501B	48-50	Super soft handle, good rebound, pressure mark dead fold	Synthetic leather foam
Leasys® 3501X	48-50	Super soft handle, good rebound, good washing resistance, good adhesion	Textile printing
Leasys® 3502	48-50	Super soft handle, good rebound, pressure mark dead fold	Synthetic leather foam
Leasys® 3520	48-50	The content of bio base is more than 80%, good rebound, pressure mark dead fold	Synthetic leather foam
Leasys® 3602	44-46	Wet process resin for synthetic leather	Synthetic leather foam

POLYURETHANE PRODUCTS

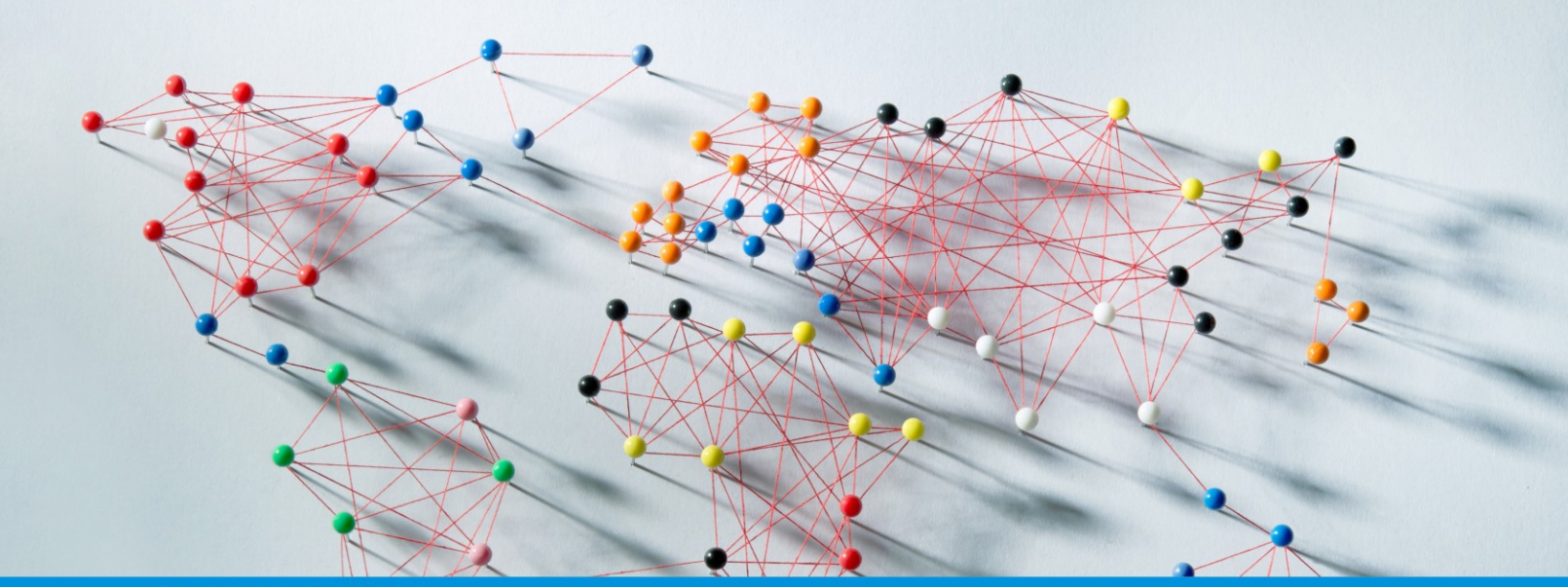
Waterborne Polyurethanes

Product	Specification	Properties	Application
	Solids (wt%)		
Leasys® 3611	39-41	Wet process resin for synthetic leather	Synthetic leather foam
Leasys® 3720	39-41	Hard handle, high gloss, good adhesion, good anti adhesion	Glossy finishing for PVC
Leasys® 3900	37-39	Hard handle, excellent comprehensive properties such as wear resistance and pure friction, good aging resistance, good flexing	Synthetic leather top coating
Leasys® 3920	31-33	Polycarbonate type, excellent resistance to xenon lamp and high temperature yellowing	Glossy finishing for PVC
Leasys® 3978	39-41	Good adhesion on PVC, dry and wet rubbing performance, good fastness, hard water resistance	Finishing for PVC
Leasys® 3979	39-41	Good adhesion on PVC, good dry and wet rubbing fastness	Finishing for PVC
Leasys® 3996	29-31	Soft handle, smooth handle, strong skin feeling	Synthetic leather top coating
Tekspro® 5215	49-51	Good aging resistance, good flexing	Synthetic leather top coating/ lamination layer
Tekspro® 5219	44-46	Aromatic products with high cost performance, medium soft, good elasticity, good aging resistance and flexing	Synthetic leather top coating/ lamination layer
Leasys® 5531	34-36	Polyester type, high gloss, hard handle, excellent wear resistance	Glossy finishing for PVC
Tekspro® 5636A	28-30	High cost performance, crystalline, good adhesion	PVC laminates
Tekspro® 5639	48-52	Resistant to yellowing, crystalline, good adhesion	PVC laminates
Tekspro® 7311	29-31	Middle soft handle, good flexing	Synthetic leather top coating/ Film primer

POLYURETHANE PRODUCTS

Waterborne Polyurethanes

Product	Specification	Properties	Application
	Solids (wt%)		
Tekspro® 7351	54-56	Soft handle, super high rebound, good flexing	Textile printing
Tekspro® 7352	54-56	Soft handle, super high rebound, good flexing	Textile printing
Tekspro® 7360	49-51	Soft handle, good rebound, good adhesion, excellent powder coating performance	Textile printing
Tekspro® 7377	34-36	Hard handle, transparent film, good wear resistance	Synthetic leather top coating
Tekspro® 7378	34-36	Hard handle, transparent film, good wear resistance	Synthetic leather top coating
Tekspro® 7390	58-62	Soft handle, good rebound, good adhesion, excellent powder coating performance	Textile printing
Tekspro® 7396	49-51	Low temperature resistance, alkali resistance	Textile printing/gloves



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Disclaimer

The figures in this document are typical values for reference only. The guaranteed values in the sales contract shall prevail. Users are responsible for testing products purchased from the Company to verify the suitability for the proposed process, application, and standards. As applications and processing of our products are affected by various factors, which are all beyond the control of the Company, thus users shall bear full responsibility. It is our duty to help customers solve technical issues that arise in the use of our products, but the Company shall not be liable for any indirect damages resulting from the technical support.

The Company shall not be liable for the following under any circumstances:
(1) Indirect, secondary, or incidental losses, or loss of potential profits;
(2) Losses of a third party other than the customer resulting from our products being resold, leased, or given;
(3) Losses in other raw materials purchased aside from our products, losses in labor or utility, or losses due to maintenance costs or the suspension of production.

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