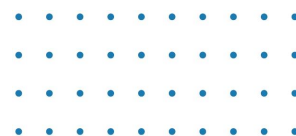


Company Introduction

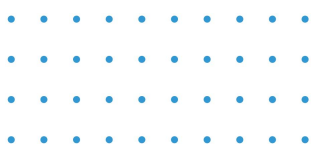


Shanghai Sisheng Polymer Materials Co., Ltd. (SiwoChem) is a research-driven company specializing in waterborne polyurethane technologies. With more than 20 years of experience in the development and manufacturing of waterborne polyurethane products, we are committed to delivering high-performance solutions for a wide range of industrial applications.

We currently operate two production sites in China, located in Shanghai and Shandong Province. Our business covers R&D, manufacturing, and sales of waterborne polyurethane products, supported by our independently developed intellectual property and patented technologies. Our product portfolio serves a broad range of applications, including coatings, adhesives, textiles, leather, packaging, printing inks, wood, and industrial coatings.

With a wide variety of waterborne polyurethane solutions available, selecting the right product for a specific application can be challenging. At SiwoChem, we aim to make that process easier by providing reliable products, consistent quality, and application-focused solutions tailored to our customers' needs.

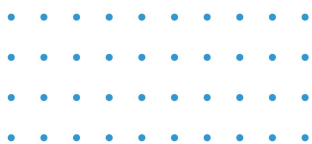
Sustainability is at the core of our business philosophy. We are committed to advancing environmentally responsible technologies while considering environmental protection, human well-being, and social responsibility throughout the product life cycle—from product design and manufacturing to application and end-of-life considerations. Through continuous innovation, we strive to create long-term value for our customers, our partners, and society.

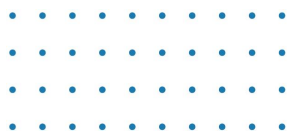




Product Catalogue

- 1** Water-dispersible Polyisocyanate Crosslinkers
- 2** Waterborne Blocked Polyisocyanate and Blocked Polyurethane Emulsion Crosslinkers
- 3** Waterborne Polyurethanes for Coatings, Textiles and Leather
- 4** Inherent Matte Waterborne Polyurethanes
- 5** Waterborne Polyurethanes for Adhesives
- 6** Cationic and Nonionic Waterborne Polyurethanes
- 7** Waterborne Polyurethanes for Packaging Materials and Water-Based Ink
- 8** Waterborne Polyurethanes for Water-Based Wood, Industrial and Decorative Coatings
(Including Hydroxyl-Functional Polyurethane Dispersions)





1 Water-dispersible Polyisocyanate Crosslinkers

Sales Grades	Type	Solid Content (%)	NCO Content (%)	Characteristics and Applications
EC-600	Aliphatic	100	21.0±1	Nonionic water-dispersed polyisocyanate, low viscosity and low hydrophilicity. It is mainly used in water-based adhesives, water-based printing pastes, and low-gloss water-based coatings. It can be diluted with propylene glycol methyl ether acetate (PMA) and dipropylene glycol dimethyl ether (DMM).
EC-200	Aliphatic	100	16.0±1	A sulfonate-modified water-dispersed polyisocyanate with high crosslinking density, fast drying, and high gloss. It is mainly used in water-based coatings, water-based adhesives, etc. It can be diluted with propylene glycol methyl ether acetate (PMA).
EC-100	Aliphatic	100	19.0±1	Nonionic water-dispersed polyisocyanate, low hydrophilicity. It is mainly used in water-based adhesives, water-based printing pastes and low-gloss water-based coatings. It can be diluted with propylene glycol methyl ether acetate (PMA) and dipropylene glycol dimethyl ether (DMM).

2 Waterborne Blocked Polyisocyanate and Blocked Polyurethane Emulsion Crosslinkers

Sales Grades	Type	Solid Content (%)	Blocked NCO Content (%)	Deblocking Temperature (°C)	Characteristics and Applications
FB-10	Aliphatic	85±2	11.0	140	Nonionic waterborne blocked polyisocyanate, good water solubility. It contains 85% polyurethane solids, with the remaining 15% consisting of organic solvent. It is mainly used in water-based coatings and adhesives with high-temperature baking conditions, etc.
FB-12	Aliphatic	85±2	9.8	120	Nonionic waterborne blocked polyisocyanate, good water solubility. It contains 85% polyurethane solids, with the remaining 15% consisting of organic solvent. It is mainly used in water-based coatings and adhesives with high-temperature baking conditions, etc.
FB-15	Aliphatic	80±2	8.0	100	Nonionic waterborne blocked polyisocyanate, good water solubility. It contains 80% polyurethane solids, with the remaining 20% consisting of organic solvent. It is mainly used in water-based coatings and adhesives with high-temperature baking conditions, etc.
BPUD-1245	Aliphatic Emulsion	45±2	5.1	120	Blocked aqueous polyurethane emulsion. It contains 45% polyurethane solids, with the remaining 55% consisting of water. It is mainly used in water-based coatings and adhesives with high-temperature baking conditions, etc.



3 Waterborne Polyurethanes for Coatings, Textiles and Leather

3.1 Solid Content 45-60%

Sales Grades	Isocyanate/ Polyol Type	Solid Content (%)	Mechanical Properties			NMP	Characteristics and Applications
			Elongation (%)	Tensile Strength (MPa)	Modulus (100%, MPa)		
PUE-3060	Aliphatic/ Polycarbonate	58-61	780	31.8	1.94	No	The product has excellent UV resistance, weather resistance, water resistance, and abrasion resistance. Its coating film exhibits good elasticity, high elongation, and high tensile strength. It is suitable for elastic coating applications.
SiwoPUD-SWU	Aliphatic/ Polyether- carbonate	58-61	800-900	28.6	1.5	No	It is easy to mechanically foam, and thick coatings do not crack easily. It has excellent heat resistance, with a melting temperature above 200°C without crosslinking. The product has excellent water resistance, alkali resistance, aging resistance, and durability. It is suitable for the preparation of textile coatings, which can be applied to the following items: outerwear, bags, suitcases, high-tech articles, and other elastic coatings.
PUE-2580	Aliphatic/ Polyether	58-61	1700-1800	21.2	0.48	No	The coating film has high elongation and excellent elasticity. The product offers outstanding water resistance, alkali resistance, aging resistance, and durability. It is suitable for the preparation of textile coatings and other elastic coatings, and can be applied to outerwear, bags, luggage, shoe uppers and lining materials, elastic architectural coatings, and other related applications.
PUE-2560	Aliphatic/ Polyether- carbonate	58-61	1700-1800	18.4	0.36	No	It is a cost-effective product. Thick coatings do not crack easily. Its film has good heat resistance, alkali resistance, water resistance, and wear resistance. It is suitable for textile thick coatings and elastic coatings.
PUE-2761	Aliphatic/ Polyether	58-61	2200-2300	12.1	0.24	No	The coating film has high elongation and excellent alkali resistance, water resistance, and abrasion resistance. It is suitable for thick textile coatings, elastic coatings, and similar applications.
PUE-2564	Aliphatic/ Polyether	58-61	2900-3000	5.1	0.16	No	The coating film is very soft and has excellent extensibility, along with good water resistance and alkali resistance. It can be blended with polyacrylate emulsions and is mainly used in the formulation of elastic waterproof coatings and similar applications.
PUE-5060	Aliphatic/ Polyester	58-61	1700-1800	22.5	1.4	No	Its film has good mechanical properties, including softness, elasticity, and high elongation. It has weather resistance, water resistance, and wear resistance. It is suitable for thick fabric coatings, elastic coatings, and other applications.
PUE-2451	Aliphatic/ Polycarbonate	50±1	600-700	35.5	3.3	No	Its film has excellent water resistance, wear resistance, UV resistance, and weather resistance. Its coating has excellent fullness and film build. It is suitable for elastomeric architectural coatings, rubber coatings, leather coatings, fabric printing, and other applications.
PUE-2453	Aliphatic/ Polycarbonate	50±1	900-1000	44.0	2.2	No	It is similar to PUE-2451, but has lower hardness, better extensibility, and elasticity.

PUE-2456	Aliphatic/ Polyether	50±1	1900-2100	17.5	0.76	No	Its film has excellent soft-touch properties, excellent resilience, excellent hydrolysis resistance, and alkali resistance. It is suitable for fabric printing, thick coatings, elastic coatings, and synthetic leather.
PUE-Z501	Aliphatic/ Polyether	50±1	1600-1700	24.6	1.5	No	It is a cost-effective product. Its film is soft and has excellent ductility, excellent alkali resistance, and good wash fastness. It can be used in fabric printing, leather coating, etc.
PUE-5083	Aliphatic/ Polyether	50±1	1000	15.5	1.3	No	This resin emulsion is prone to foaming and is primarily used for synthetic leather base layers. The resulting film exhibits excellent resilience, flexural fatigue resistance, and dry/wet peel strength, as well as outstanding alkali resistance and low-temperature performance. It withstands 150,000 flex cycles at room temperature and 150,000 cycles at -25°C.
PUE-990F	Aliphatic/ Polycarbonate	45±1	600	28.1	3.5	No	Its film has excellent water resistance, abrasion resistance, and lightfastness. It is suitable for coatings, fabric printing, and synthetic leather.
PUE-2013F	Aliphatic/ Polyester-carbonate	45±1	1000	9.5	1.0	No	Its film is soft and has excellent elasticity, adhesion, hydrolysis resistance, wear resistance, UV resistance, weather resistance, and excellent water resistance. It can be used in fabric printing, elastic coating, leather and label printing.

3.2 Solid Content 20-40%

Sales Grades	Isocyanate/ Polyol Type	Solid Content (%)	Mechanical Properties			NMP	Characteristics and Applications
			Elongation (%)	Tensile Strength (MPa)	Modulus (100%, MPa)		
PUD-6992	Aliphatic/ Polycarbonate	32±1	500-600	32.2	4.8	No	The coating film has medium hardness and excellent heat resistance, water resistance, solvent resistance, abrasion resistance, weather resistance, and hydrolysis resistance. It can be used as a topcoat in a wide range of applications, especially where high weather resistance and long-term durability are required.
PUD-6991	Aliphatic/ Polycarbonate	32±1	750-850	46.8	3.9	No	Compared with PUD-6992, this product has lower heat resistance and slightly higher surface energy. It offers excellent water resistance, abrasion resistance, weather resistance, and hydrolysis resistance. After the addition of a crosslinking agent, it also provides excellent alcohol-rub resistance. It can be used as a topcoat in a wide range of applications.
PUD-6993	Aliphatic/ Polycarbonate	32±1	1000-1100	19.1	1.1	No	The coating film is clear and has a soft feel. It provides excellent adhesion to leather and excellent dry- and wet- rub resistance, as well as outstanding flex resistance and low-temperature resistance.
PUD-6911	Aliphatic/ Polycarbonate	32±1	900-1000	7.0	0.6	No	The product forms a soft coating film with good extensibility, elasticity, and excellent water resistance. It is suitable for use in textile printing inks.

PUD-994F	Aliphatic/ Polycarbonate	35±1	350-450	49.6	10.6	No	The product offers excellent water resistance, adhesion, abrasion resistance, weather resistance, and hydrolysis resistance. It is suitable for leather, paper, rubber, and plastic substrates, as well as architectural coatings, industrial coatings, and similar applications.
PUD-986F	Aliphatic/ Polyester-carbonate	35±1	300-400	26.2	9.4	No	The coating film has medium hardness and high gloss, with excellent water resistance and hydrolysis resistance. It also provides excellent adhesion and abrasion resistance. It is suitable for coatings, leather finishing, and other applications.
PUD-987F	Aliphatic/ Polyester-carbonate	35±1	900-1000	43.2	3.2	No	The coating film is transparent, with excellent water resistance, abrasion resistance, and adhesion. It is suitable for coating and printing applications on substrates such as nylon and waterproof fabrics.
PUD-6805	Aliphatic/ Polyether	33±1	1100	47.4	2.2	No	The coating film is soft, with excellent resilience and resistance to alkali and water. It offers good low-temperature flex resistance and high peel strength. It is suitable for textile printing coatings, leather, and other applications.
PUD-6806	Aliphatic/ Polyether	35±1	1500	34.3	1.1	No	The coating film is softer than PUD-6805, with excellent resilience and resistance to alkali and water. It offers good low-temperature flex resistance and high peel strength. It is suitable for textile printing coatings, leather, and other applications.
PUD-808F	Aliphatic/ Polyether	40±1	850-950	35.0	2.5	No	The coating film has excellent resilience and fastness, as well as excellent alkali resistance and wash fastness. It offers high peel strength and is suitable for textile printing coatings, leather, and other applications.
PUD-Z401	Aliphatic/ Polyether	40±1	1300-1400	20.2	1.4	No	It is a cost-effective product. The coating film is soft, with good resilience, alkali resistance, and wash fastness. It also offers good low-temperature flex resistance. It is suitable for textile printing coatings, leather, and other applications.

4 Inherent Matte Waterborne Polyurethanes

Sales Grades	Isocyanate/ Polyol Type	Solid Content (%)	Gloss at 60°	Mechanical Properties			NMP	Characteristics and Applications
				Elongation (%)	Tensile Strength (MPa)	Modulus (100%, MPa)		
Matt PUD-1901	Aliphatic/ Polyether	32±1	≤0.5	400-500	19.2	3.6	No	Its coating has excellent matting performance and abrasion resistance. No matting powder is added; the matte effect is achieved through intramolecular matting. It is recommended for paper, leather, textiles, and other coating applications.
Matt PUD-1903	Aliphatic/ Polyether	32±1	≤0.5	700-800	33.4	2.8	No	Its film has a soft touch and excellent matting properties. No matting powder is added; the matte effect is achieved through intramolecular matting. It is recommended for paper, leather, textile, plastic coatings, etc.

Matt PUD-1900	Aliphatic/ Polyether	32±1	≤1.0	-	-	-	No	Does not contain matting powder; provides intramolecular matting. The coating film has a fine, smooth hand feel and a soft touch, with excellent heat-yellowing resistance.
Matt PUD-1910	Aliphatic/ Polycarbonate	32±1	≤0.8	200	23.5	11.5	No	It is a modified product of PUD-1911. It is free of matting powder and achieves intramolecular matting. The coating film has excellent hardness and abrasion resistance, as well as excellent xenon-arc weathering resistance and hydrolysis resistance. It is recommended for synthetic leather topcoats, industrial coatings, and other applications.
Matt PUD-1911	Aliphatic/ Polycarbonate	32±1	-	-	-	-	No	A high-performance waterborne polyurethane matting resin. It is free of matting powder and achieves intramolecular matting. The coating film has excellent abrasion resistance, xenon-arc weathering resistance, and hydrolysis resistance. When applied alone, the coating film appears whitish and does not form a continuous film. It is recommended for use in combination with high-gloss waterborne resins.

5 Waterborne Polyurethanes for Adhesives

Sales Grades	Isocyanate/ Polyol Type	Solid Content (%)	Min Activation Temperature (°C)	NMP	Characteristics and Applications
U-654	Aliphatic/ Polyester	50±1	55-60	No	Crystalline polyurethane. It has a low thermal activation temperature, good initial tack, and high bonding strength. It provides excellent adhesion to most synthetic and natural materials. It has good compatibility with most waterborne resins, including slightly acidic resins and substances. A temperature of 60–70°C or higher is recommended to ensure sufficient activation of the dried adhesive layer.
U-658	Aliphatic/ Polyester	50±1	70-80	No	Crystalline polyurethane. It has a higher thermal activation temperature, good initial tack, and high bonding strength. It provides excellent adhesion to most synthetic and natural materials. It has good compatibility with most waterborne resins, including slightly acidic resins and substances. A temperature of 80–90°C or higher is recommended to ensure sufficient activation of the dried adhesive layer.
U-678	Aliphatic/ Polycarbonate	48-50	70-80	No	Polycarbonate-based polyurethane. Compared with the polyester-based polyurethanes above, it provides better hydrolysis resistance and aging resistance.
U-679	Aliphatic/ Polycarbonate	48-50	120-130	No	Polycarbonate-based polyurethane. Compared with the polyester-based polyurethanes above, it provides better hydrolysis resistance and aging resistance.
U-674	Aliphatic/ Polyester	48-50	70-80	No	Non-crystalline polyurethane. The adhesive film has excellent flexibility and adhesion, with excellent bonding performance on most synthetic and natural materials. It is particularly suitable for semi-dry bonding and wet bonding. For thermal activation bonding, a temperature of 80–90°C or higher is recommended to ensure sufficient activation of the dried adhesive layer.

U-676	Aliphatic/ Polyester	48-50	100-110	No	Non-crystalline polyurethane. It has a high activation temperature, while the adhesive film provides excellent flexibility and adhesion. It offers excellent bonding performance on most synthetic and natural materials, particularly for semi-dry bonding and wet bonding. For thermal activation bonding, a temperature of 110–120°C or higher is recommended to ensure sufficient activation of the dried adhesive layer.
U-1529	Aliphatic/ Specialty polyester	45±1	90-95	No	It has a high thermal activation temperature, good dry film properties, strong anti-blocking performance, strong adhesion, and high bonding strength. It also provides improved heat resistance.
U-100	Aliphatic/ Polyether-ester	50±1	100-110	No	Amorphous polymer. It has a high thermal activation temperature, while the adhesive film is relatively soft and highly elastic. It is suitable for bonding substrates such as leather, textiles, fabrics, and elastomers.

6 Cationic and Nonionic Waterborne Polyurethanes

6.1 Cationic Waterborne Polyurethanes

Sales Grades	Isocyanate/ Polyol Type	Solid Content (%)	pH	Mechanical Properties			NMP	Characteristics and Applications
				Elongation (%)	Tensile Strength (MPa)	Modulus (100%, MPa)		
PUD-2309	Aliphatic/ Polyether	35±1	3.5-5.5	900-1000	5.1	1.0	No	It is a highly cost-effective, cationic, high-molecular-weight polyurethane aqueous dispersion. It is mainly used for textile treatment and leather basecoats.
PUD-2509	Aliphatic/ Polyester	30±1	3.5-5.5	900-1000	13.1	1.7	No	It has a high acid value and strong cationic character. It is mainly used for textile treatment and as a primer for digital printing materials.
PUD-1219HB	Aliphatic/ Polyether	30±1	3.5-5.5	300	6.7	4.2	Contains DEF	Its film offers medium hardness, excellent hydrolysis resistance and water resistance, as well as good salt spray resistance. It is primarily used for metal surface treatment, glass fiber sizing agents, and other coating applications.
PUD-2419	Aliphatic/ Polyester	30±1	3.5-5.5	580	21.3	4.2	No	It is a highly cost-effective product. The film has medium hardness, excellent abrasion resistance, water resistance, and good alcohol resistance and chemical resistance. It is mainly used for metal surface treatment, glass fiber sizing agents, and waterborne wood sealer coats.
PUD-2417	Aliphatic/ Polycarbonate	30±1	3.5-5.5	500	14.3	2.9	No	The resulting film offers medium hardness, excellent abrasion resistance and acid resistance, along with good alkali resistance. It also provides good water, alcohol, and chemical resistance. It is primarily used for metal surface treatment, glass fiber sizing agents, and waterborne wood sealer primers.

PUD-2517	Aliphatic/ Epoxy-modified Polycarbonate	30±1	3.5-5.5	Shore A Hardness (A) : 96	No	The film has high hardness, excellent adhesion, wear resistance, acid and alkali resistance, water resistance, alcohol resistance, and chemical resistance. It is mainly used in metal surface treatment and wood sealing primers, etc.
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6.2 Nonionic Waterborne Polyurethanes

Sales Grades	Isocyanate/ Polyol Type	Solid Content (%)	pH	Mechanical Properties			NMP	Characteristics and Applications
				Elongation (%)	Tensile Strength (MPa)	Modulus (100%, MPa)		
PUD-1107	Aliphatic/ Polyester	30±1	6.0-7.5	500	0.68	0.4	No	Its film exhibits excellent softness and resilience, as well as good water resistance. It has good compatibility with cationic and anionic aqueous polyurethane dispersions, acrylic emulsions, or other ionic aqueous resins.
PUD-2307	Aliphatic/ Polyester	35±1	6.0-7.5	700-800	20.1	2.5	No	It is a cost-effective product. Its film has excellent elongation and elasticity, and excellent water resistance. It has good compatibility with cationic, anionic waterborne polyurethane and other cationic and anionic waterborne resins.
PUD-1108	Aliphatic/ Polyether	30±1	6.0-7.5	1500	-	-	No	Its film is very soft. It has good compatibility with cationic and anionic aqueous polyurethane dispersions, acrylic emulsions, or other ionic aqueous resins.
PUD-2308	Aliphatic/ Polyether	35±1	6.0-7.5	900-1000	17.4	1.6	No	It is a cost-effective product. Its film has excellent elongation and elasticity, excellent hydrolysis resistance, and excellent water resistance. It has good compatibility with cationic and anionic aqueous polyurethane dispersions, and other ionic aqueous resins.

7 Waterborne Polyurethanes for Packaging Materials and Water-Based Inks

Sales Grades	Isocyanate/ Polyol Type	Solid Content (%)	Mechanical Properties			NMP	Characteristics and Applications
			Elongation (%)	Tensile Strength (MPa)	Modulus (100%, MPa)		
PUD-2411	Aliphatic/ Polycarbonate	32±1	550-650	46.8	9.6	No	The emulsion features a small particle size and offers good ductility and elasticity, along with excellent water resistance. It is particularly suitable for digital inkjet printing applications on corrugated paper and similar substrates.



PUD-6992S	Aliphatic/ Polycarbonate	32±1	500-600	32.2	4.8	No	The emulsion has a small particle size. The film has medium hardness and excellent heat, water, solvent, abrasion, weather, and hydrolysis resistance. It is suitable for digital inkjet printing and related applications.
PUD-6991S	Aliphatic/ Polycarbonate	32±1	750-850	46.8	3.9	No	The emulsion has a small particle size. Compared with PUD-6992S, it has lower heat resistance and slightly higher surface energy. It has excellent water resistance, abrasion resistance, weatherability, and hydrolysis resistance. It can be used as a topcoat for various applications.
PUD-6993S	Aliphatic/ Polycarbonate	32±1	1000-1100	19.1	1.1	No	The emulsion has a small particle size. The film is clear and transparent with a soft feel. It provides excellent adhesion to leather and resistance to dry/wet rubbing, excellent flex resistance, and low-temperature resistance.
PUD-6911S	Aliphatic/ Polycarbonate	32±1	900-1000	7.0	0.6	No	The emulsion has a small particle size. Characterized by a soft film with good extensibility and elasticity, and strong water resistance. It is suitable for use in fabric printing inks and digital inkjet printing applications.
PUD-6900S	Aliphatic/ Polyester	32±1	600	9.3	1.6	No	The emulsion has a small particle size. Good adhesion to PVC and PET. It is suitable for printing inks and digital inkjet printing applications.
PUD-6805S	Aliphatic/ Polyether	32±1	1100	47.4	2.2	No	The emulsion has a small particle size. The film is soft with excellent resilience and excellent alkali resistance and water resistance. It provides good low-temperature flex resistance. It can be used for fabric printing coatings, leather, and digital inkjet printing.
PUD-2509S	Aliphatic/ Polyether	30±1	900-1000	13.1	1.7	No	The emulsion has a small particle size. It is mainly used for fabric treatment and as a primer for digital printing materials.
PUD-201	Aliphatic/ Polyester- carbonate	35±1	400-500	25.7	4.3	No	Its film dries slowly and exhibits good adhesion. It offers good water resistance and waterproof performance, making it suitable for textile printing, coatings, and printing inks on substrates such as nylon rainproof fabric.
PUD-1209	Aliphatic/ Polyester	33±1	500-600	11.2	2.5	No	Its film is transparent and has medium hardness, excellent water resistance, and excellent abrasion performance. It can be used in inks, water-based varnishes, paper coatings, and related applications.
PUD-919F	Aliphatic/ Polyester- carbonate	35±1	290	18.2	8.4	No	It exhibits high hardness, high gloss, excellent water resistance, excellent abrasion resistance, excellent alkali resistance, and hydrolysis resistance. It is mainly used in printing and packaging applications.
PUD-E620	Aliphatic/ Polycarbonate	40±1	800-900	53.5	3.8	No	The dispersion can be diluted with 80% industrial alcohol and has good storage stability. Its film has medium hardness and exhibits excellent water resistance, excellent abrasion resistance, excellent light fastness, and excellent hydrolysis resistance. It is suitable for leather, rubber, film substrates, etc.
PUD-2310	Aliphatic/ Polyester	35±1	900-1000	20.0	1.3	Contains DEF	Its film is soft and has excellent elasticity and adhesion to PVC, PET, and other substrates. It can be diluted with 80-90% industrial alcohol and stored stably. It is suitable for hard-to-adhere leather, fabric coatings, as well as water- based ink for a variety of printed film materials.



PUD-1512LF	Aliphatic/ Polyester	35±1	1200-1300	34.5	2.1	No	It has excellent adhesion to substrates such as leather, PVC, PBT, OPP, and BOPP. The coating film is soft, elastic, and slightly tacky, making it suitable for use as a primer or topcoat resin.
PUD-ZY27	Aliphatic/ Polyether	35±1	Shore A Hardness (A) : 83			Contains DMM	The product has excellent temperature resistance and good peel performance after adding a stripping agent. It is suitable for heat transfer coatings in packaging printing and other industries.

8 Waterborne Polyurethanes for Water-Based Wood, Industrial and Decorative Coatings (Including Hydroxyl-Functional Polyurethane Dispersions)

Sales Grades	Isocyanate/ Polyol Type	Solid Content (%)	Shore A Hardness	NMP	Characteristics and Applications
PUD-1591HB	Aliphatic/ Polycarbonate	36±1	96	Contains DEF	Its coating has high hardness and excellent adhesion on metal, glass, and other substrates. It has excellent water resistance, solvent resistance, chemical resistance, and excellent weather and stain resistance. It can be used for metal, glass, wood coatings, and industrial coatings, etc.
PUD-1620X	Aliphatic/ Polycarbonate	35±1	97	No	Its film is hard and tough, with excellent heat and abrasion resistance, and good solvent and chemical resistance. It has high weatherability and stain resistance. It can be used for metal, glass, wood coatings, and industrial coatings.
PUD-920F	Aliphatic/ Polyester- carbonate	35±1	87	No	It has excellent water resistance, alkali resistance, and hydrolysis resistance. Its film has high hardness, good wear resistance, and chemical resistance. It can be widely used in wood coatings, floor coatings, plastic coatings, and acrylic emulsion modification.
PUD-910F PUD-912F	Aliphatic/ Polyester	33±1	94-96	No	The film dries quickly and has high hardness and high gloss. Excellent abrasion resistance and blocking resistance. It is mainly used for printing varnishes, wood coatings, and modification of acrylic emulsions. PUD-912F has basically the same technical specifications as PUD-910F, but offers better alcohol rub resistance and better adhesion to substrates such as metal compared to PUD-910F.
PUD-909F	Aliphatic/ Polyester	33±1	Elongation: 380% Tensile Strength: 23.8Mpa 100%Modulus: 6.4Mpa	No	It is a cost-effective product. Its film has medium hardness, high gloss, good water resistance, and wear resistance. It is mainly used in printing varnish, wall paint, steel structure, and acrylic emulsion modification.
OH-PUD-903 Contains 1.2% hydroxyl groups	Aliphatic/ Polyester	33±1	98 (without crosslinker)	No	It has a low hydroxyl content. The film has high hardness. It can be used in one-component or two-component systems. Adding a water-dispersible polyisocyanate curing agent (5-10%) provides excellent water and alcohol resistance. It can be used for waterborne wood coatings and decorative paints.