

# WANHUA CHEMICAL (AMERICA) CATALOG FOR COATINGS

Wanhua Chemical (America) Co., Ltd.



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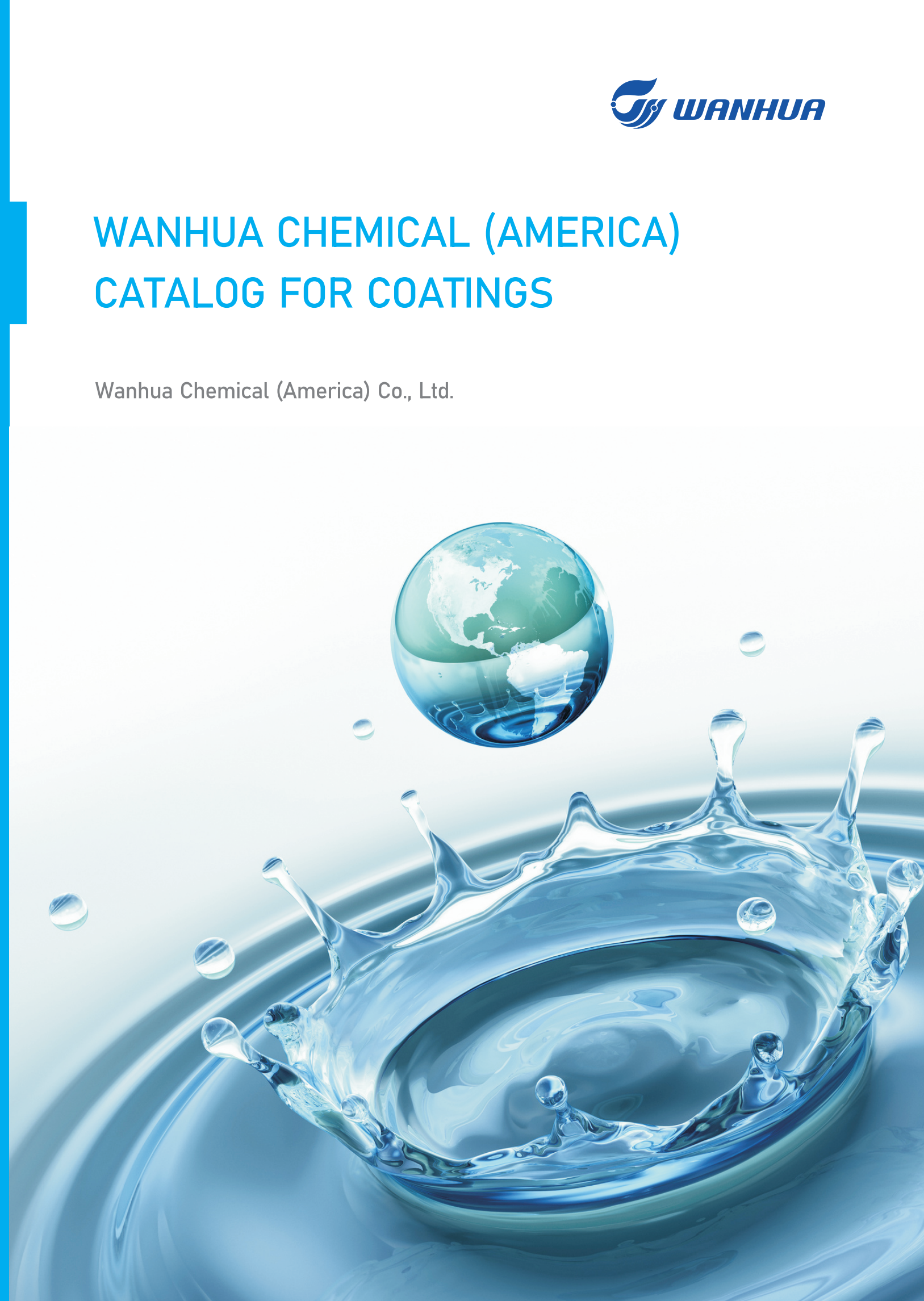
#### Disclaimer

We recommend all customers to use our products on the basis of the detailed data in this Material Safety Data Sheet (MSDS). We also suggest contacting us to confirm the product features before application.

We believe that these suggestions and data are authentic and reliable. The information in this technical data sheet, express or implied, regarding product features, application, quality, safety, product specification, merchantability, and applicability of specific use is only for reference. No warranty is given. Information provided should not be regarded as the permission for implement of patent technology, also should not be regarded as inducement to implement the patent technology without the owner's authorization.



Wanhua Chemical





# ADVANCING CHEMISTRY, TRANSFORMING LIVES!



## Introduction

### Wanhua Chemical & Wanhua Chemical (America)

Wanhua Chemical Group Co.,Ltd. is among the global leading suppliers of chemical innovative products. Relying on the continuous innovation, commercialized facilities and efficient operation, the company provides customers with more competitive products and solutions.

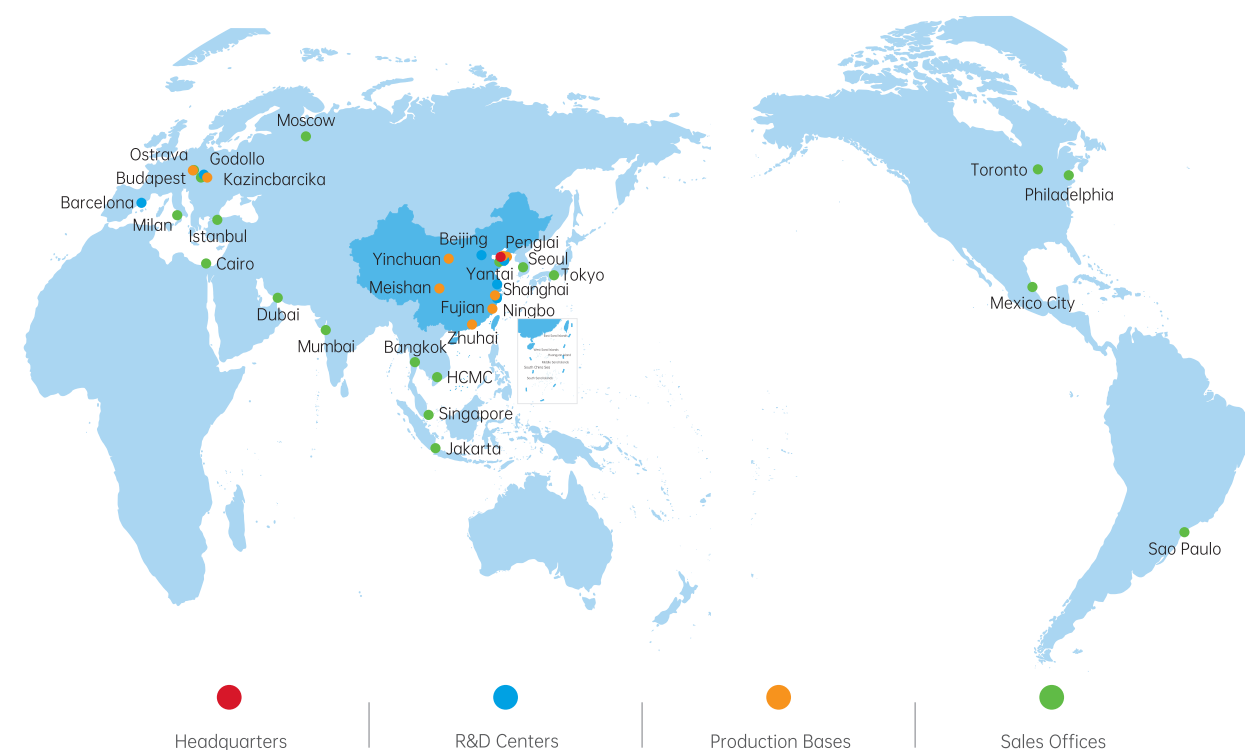
Wanhua Chemical has always been adhering to innovation and optimizing industrial structure. Our business covers polyurethanes, petrochemicals, performance chemicals, and emerging materials. The industries include homeware and furniture, sports and leisure, automobiles and transportation, building and construction, electronics and electrical appliances, personal care, and green energy.

Wanhua Chemical has built up ten key production complexes in Yantai, Penglai, Ningbo, Sichuan, Fujian, Zhuhai and Ningxia in China, and Hungary, Czech Republic, which are integrated with complete supporting facilities. To provide our customers worldwide with competitive products and comprehensive solutions, Wanhua has established R&D centers in Yantai, Ningbo, Shanghai, and Beijing in China, as well as in Spain and Hungary, set up subsidiaries and offices in more than ten countries and regions across Asia, Europe, the United States, etc.

Wanhua Chemical (America) Co., Ltd., headquartered in Newtown Square, Pennsylvania, USA, is a leading chemical corporation serving various sectors including homeware, furniture, automotive, transportation, construction, and renewable energy. As a key supplier, we play a pivotal role in supplying essential raw materials to these industries.

Wanhua Chemical will take "Advancing Chemistry, Transforming Lives" as the first mission, we are committed to providing customers with stable, high-quality, competitive products and efficient services, and to being a responsible supplier and industry leader. We will continue to innovate in the field of chemical new materials, lead the development of the industry, and create a better life for mankind!

### Global Network





## Business Scope

Polyurethane				
• Isocyanate		• Polyether polyol		
Petrochemicals				
• Ethylene	• HDPE	• NPG	• MMA	• BD
• EO	• PVC	• AA	• PO	• MTBE
• MEG	• Propane	• GAA	• PP	• TBA
• SM	• Propylene	• MA	• Butane	• IB
• LLDPE	• NBL	• BA	• IBT	• DIBE
Performance Chemicals				
• Silicone	• Home & Personal Care	• Specialty Isocyanate		
• Rubbers & Plastics	• EOD	• Specialty Amines and Intermediates		
• Water-based Resins	• Membrane Material	• Aroma/Nutritional		
Emerging Materials				
• Battery Materials	• Electronic Materials	• 3D Printing Materials		

## Awards & Honors

Signing of the Universal Declaration on Safety at the 17th World Congress on Safety and Health

National Environmentally Friendly Engineering Project

Attended and delivered a keynote speech at the 2nd United Nations Environment Assembly

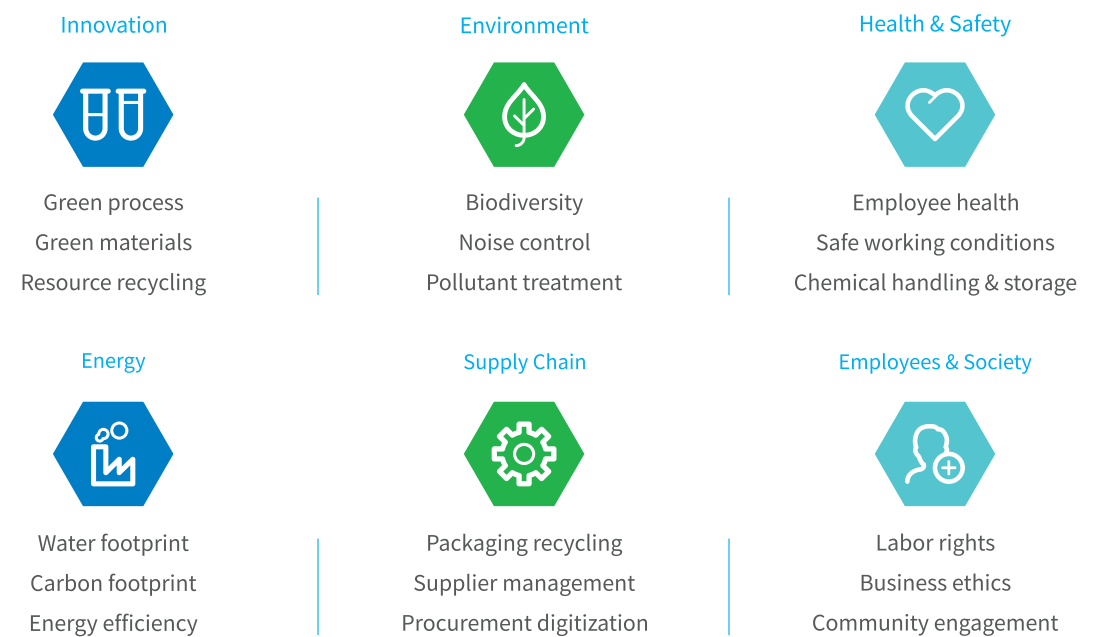
Join the Carbon Information Disclosure Program (CDP)

Ecovadis Gold Medal Certification for the Second Consecutive Year

National Outstanding Engineering Team



We drive to achieve a more sustainable future

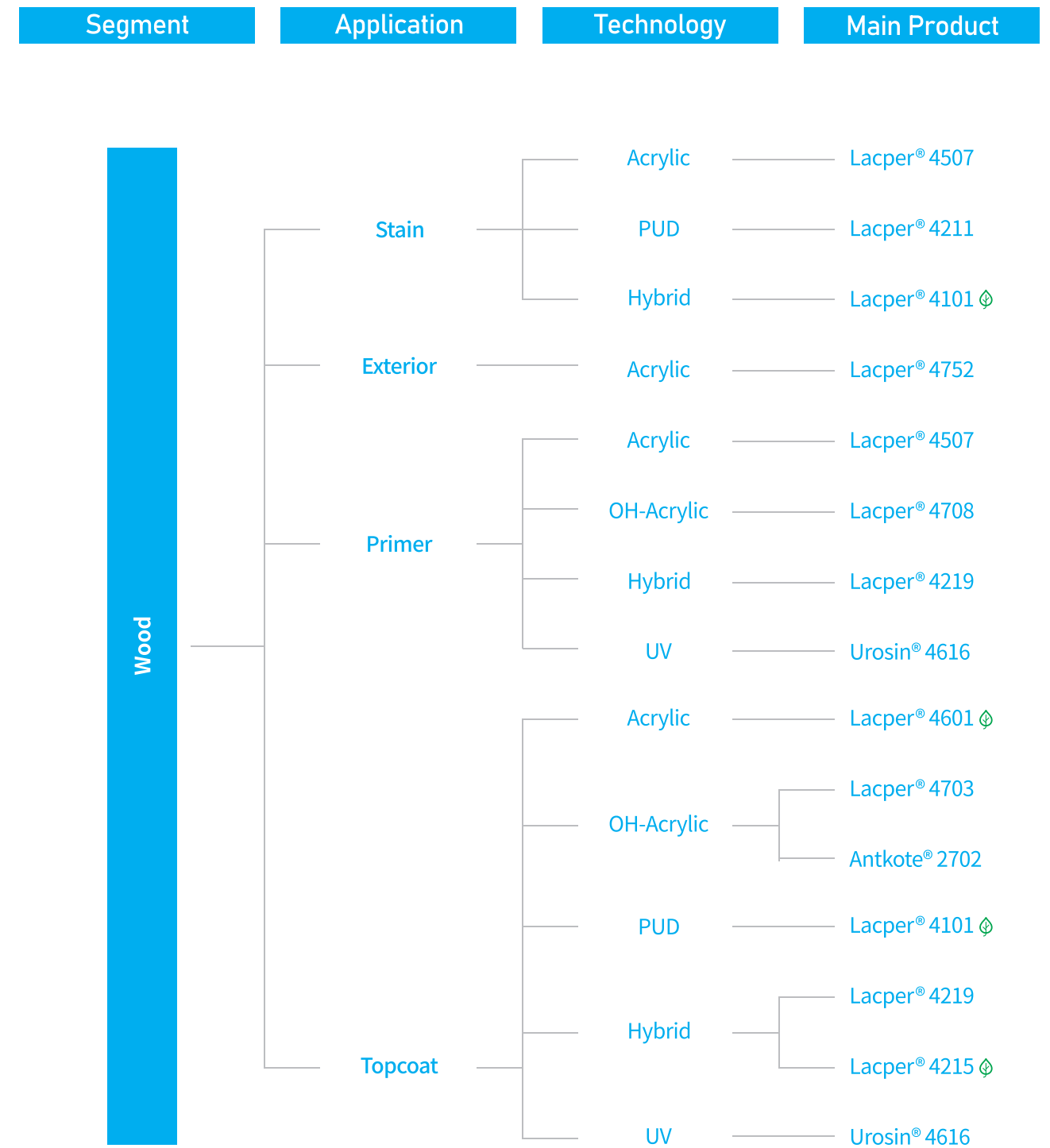




# Catalog for coatings

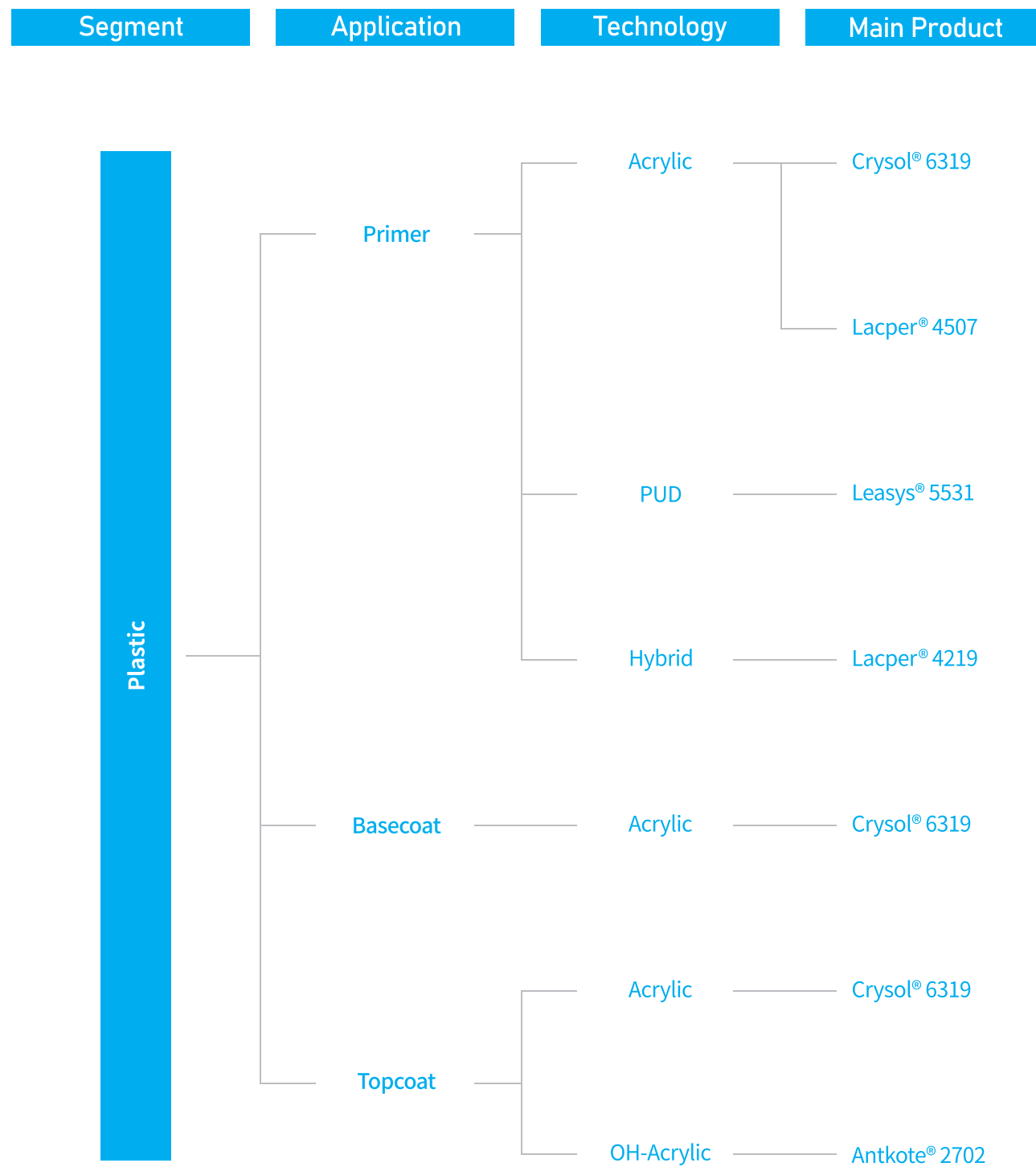
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# Wood selection guide

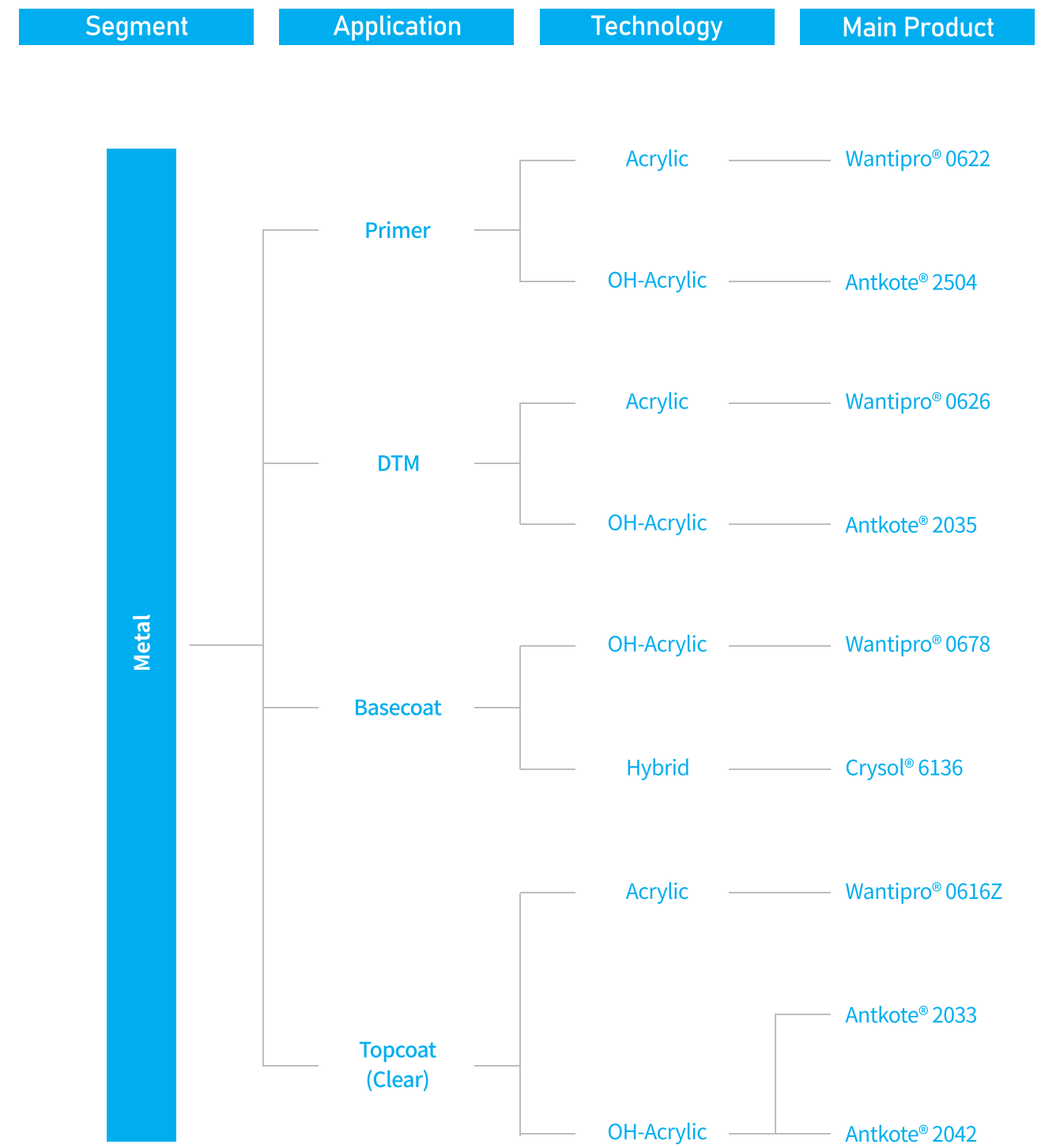




## Plastic selection guide



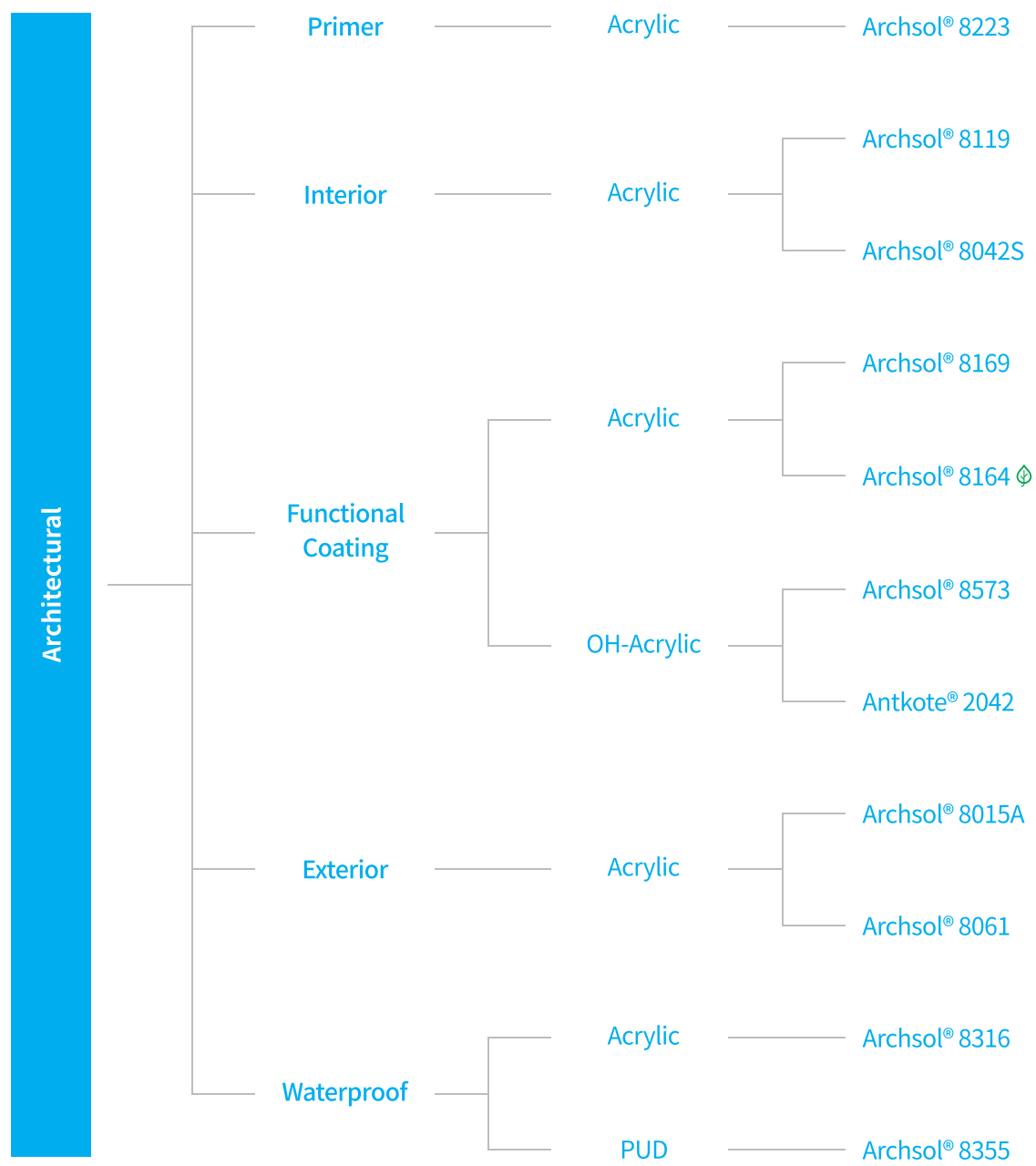
## Metal selection guide



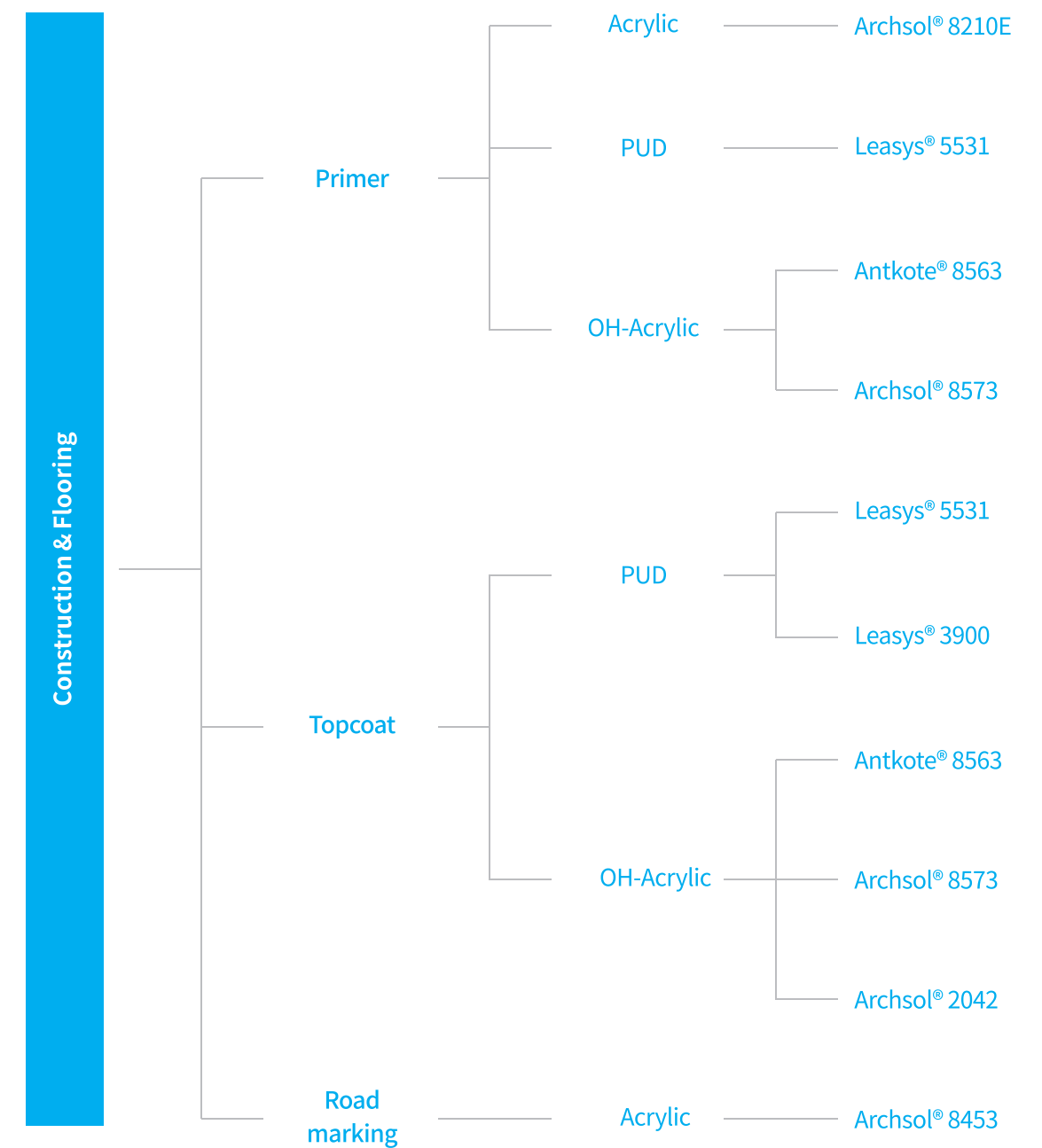


## Architecture selection guide

Segment    Application    Technology    Main Product



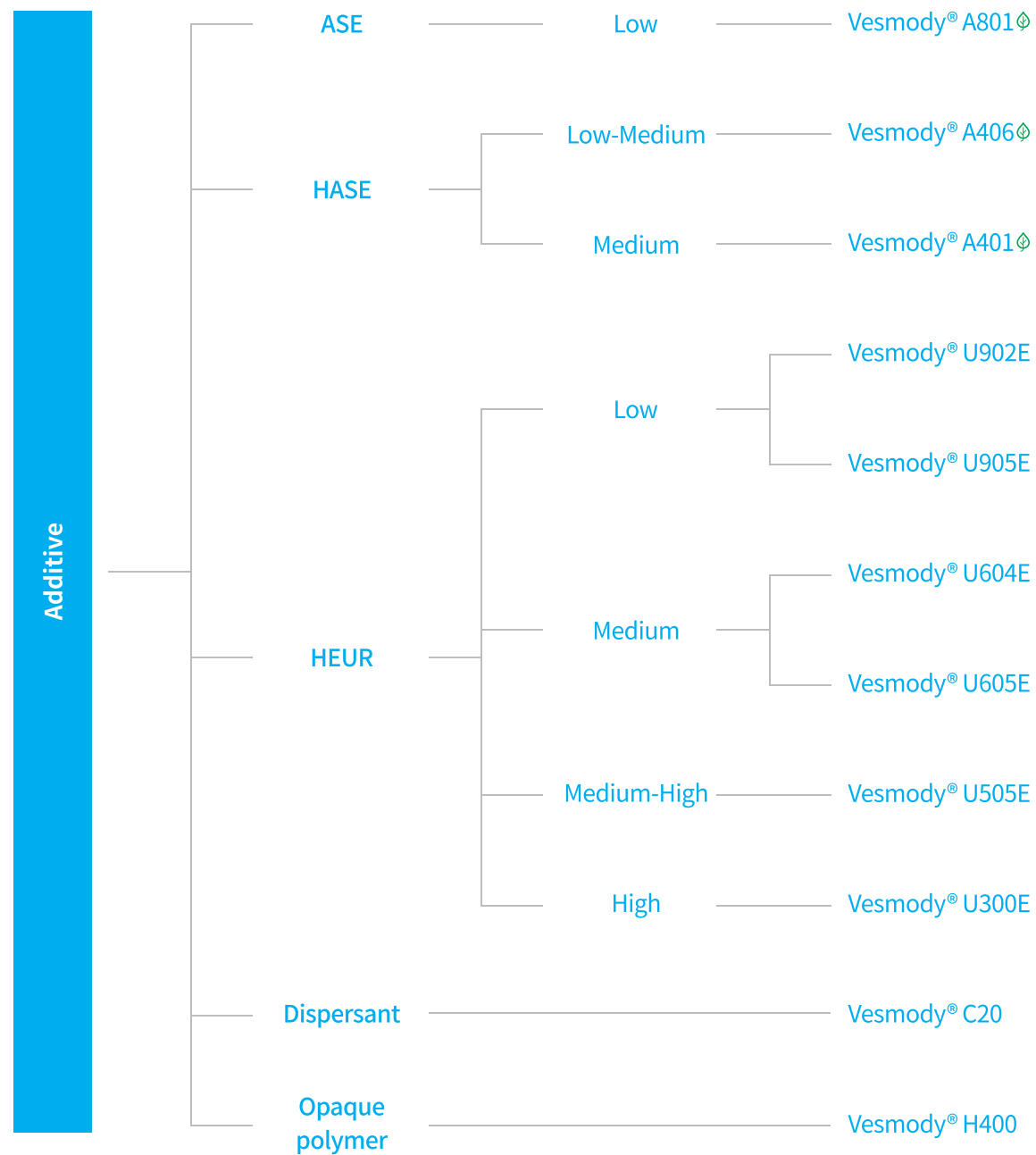
Segment    Application    Technology    Main Product





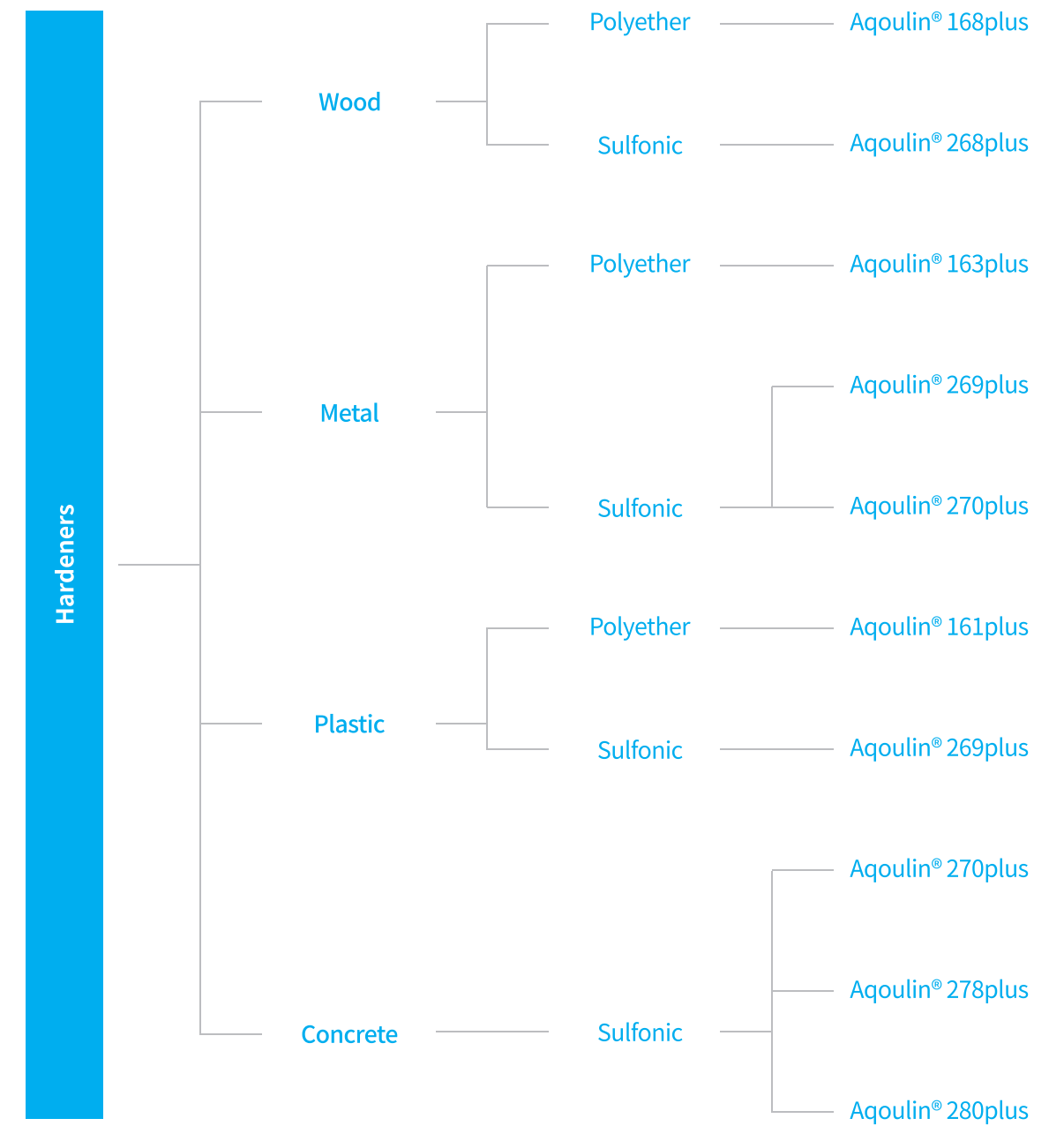
## Additive selection guide

Segment	Technology	Shear rate	Main Product
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## Hardener selection guide

Segment	Application	Technology	Main Product
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## Construction coating

### Interior & Exterior Wall coatings & Road marking Paints



Product	Chemistry	Solids (%)	MFFT (°C)	Viscosity (mPa.s)	pH	Application	Key Features
Archsol® 8015A	Styrene acrylic	52±1	<2	<700	7.5-8.5	Exterior	Good mechanical property, excellent low temperature elongation and early water resistance.
Archsol® 8042S	Styrene acrylic	50±1	18	300-5000	6.5-8.0	Interior	Aqueous styrene-acrylate copolymer for building coatings.
Archsol® 8042E	Styrene acrylic	50±1	18	300-5000	6.5-8.0	Interior	Low odor, Ammonia free version of Archsol® 8042S.
Archsol® 8119	Styrene acrylic	48±1	28	100-1200	7.0-9.0	Interior	Outstanding scrub resistance in high PVC paint. Excellent filler loading capability.
Archsol® 8164	Pure acrylic	52±1	<5	50-1000	7.0-9.0	Interior	Odorless, low VOC, good stain resistance, excellent formaldehyde purification efficiency.
Archsol® 8169	Styrene acrylic	48±1	2	10-1000	7.5-9.5	Interior	Odorless, low VOC, good stain resistance, excellent formaldehyde purification efficiency, good stability.
Archsol® 8210E	Pure acrylic	30±1	0	≤500	7.0-9.0	Exterior	Low odor, Ammonia free, Nano particle size, outstanding penetrability. Excellent salting-out & alkali resistance.
Archsol® 8223	Styrene acrylic	44±1	32	200-2500	7.0-9.0	Exterior	Excellent masking tape resistance; excellent efflorescence resistance.
Archsol® 8061	Pure acrylic	50±1	21	50-1000	7.0-9.0	Exterior	Excellent outdoor durability, outstanding DPUR. Good colorant compatibility.
Archsol® 8061E	Pure acrylic	50±1	21	50-1000	7.0-9.0	Exterior	Low odor, Ammonia free version of Archsol® 8061.
Archsol® 8453	Pure acrylic	50±1	20	50-800	8.0-10.0	Road marking	Used in road marking paints, fast dry/ Fast dry-to-no-pickup and resistance to early rain showers under a wide range of climatic conditions.



## Construction coating Waterproofing Coatings

Product	Chemistry	Solids (%)	MFFT (°C)	Viscosity (mPa.s)	pH	Application	Key Features
Archsol® 8316	Styrene acrylic	55±1	<2	500-1500	7.0-9.0	Cementitious	No formaldehyde added. excellent mechanical property and water resistance.
Archsol® 8355	PUD	50±1	-	10-1000	6.0-9.0	Waterproof PUD	Excellent mechanical property and flexibility. Good acid and alkali resistance. Suitable for interior and exterior waterproof coatings.

## Construction coating Flooring coating-1K&2K PU

### 1K

Products	Chemistry	Solids (%)	pH	Tensile strength (Mpa)	100% Elongation modulus (Mpa)	Elongation at break (%)	Application	Features
Leasys® 3900	PUD	38±1	7.0-9.0	35	16	300	Topcoat	Good hardness/toughness balance. High abrasion resistance. Excellent chemical, black heel mark and scuff resistance & Scratch resistance.
Leasys® 5531	PUD	35±1	7.0-9.0	60	12	400	Sportive flooring coating	Small particle size, good solvent stability and good film formation.
Archsol® 8210E	Pure acrylic	30±1	7.0-9.0	-	-	-	Penetration primer, bonding to concrete floor	Odorless, low VOC.

### 2K PU

Product	Chemistry	Solids (%)	OH content% (on solid)	Viscosity (mPa.s)	pH	MFFT (°C)	Features
Archsol® 8573	OH-PA emulsion	40	4.80	≤500	7.0-8.0	13	Pencil hardness is 2H, excellent chemical resistance, wear resistance and anti-graffiti property, for matt effect.
Archsol® 8563	OH-PA dispersion	50	3.80	50-4000	7.0-8.0	0	Low solvent content, excellent stain resistance and anti-graffiti property, high gloss.
Antkote® 2042	OH-PA dispersion	46	4.20	50-2500	7.0-9.0	47	Higher hardness and good in comprehensive performance.

## Wood coating

### Interior furniture & cabinet



Product	Solid (%)	Viscosity (mPa.s)	pH	MFFT (°C)	OH content% (on solid)	Chemistry	Main feature
Lacper® 4906	40±1	10-200	7.0-9.0	44	/	Acrylic emulsion	Good chemical resistance, good compatibility, good hardness, excellent film-forming property.
Lacper® 4501	40±1	10-200	7.0-9.0	32	/	Acrylic emulsion	Good chemical resistance, good sandability and blocking resistance. Good comprehensive property.
Lacper® 4507	40±1	10-500	7.0-9.0	35	/	Acrylic emulsion	Excellent clarity, good wood warming, fast film hardness development, excellent chemical resistance.
Lacper® 4511	40±1	10-500	7.0-9.0	16	/	Acrylic emulsion	Excellent clarity, wide adhesion, fast drying and early blocking resistance.
Lacper® 4601	40±1	10-1000	7.0-9.0	32	/	Acrylic emulsion	39% biobase content, good clarity, fast hardness development, good chemical resistance.
Lacper® 4219	40±1	10-500	7.0-9.0	48	/	Acrylic modified PU dispersion	Fast hardness development and high hardness, excellent stacking resistance.
Lacper® 4211	40±1	10-200	7.0-9.0	47	/	Acrylic modified PU dispersion	Solvent free, excellent film-building, good flexibility, good adhesion.



## Wood coating

### Interior furniture & cabinet



Product	Solid (%)	Viscosity (mPa.s)	pH	MFFT (°C)	OH content% (on solid)	Chemistry	Main feature
Lacper® 4101	35±1	10-500	7.0-9.0	49	/	Oil modified PUD	BB content 31%, Good wetting ability on wood substrates, fast film hardness development, good compatibility with alcohol.
Urosin® 4616	37±1	10-500	7.0-9.0	-	/	Aliphatic urethane acrylate dispersion	Excellent clarity, good chemical resistance, easy to matt.
Lacper® 4708	40±1	10-2500	7.0-9.0	47	1.6	Hydroxyl acrylic emulsion	High hardness, fast film hardness development, good film clarity, excellent chemical resistance.
Lacper® 4703	40±1	10-1000	7.0-9.0	54	2.2	Hydroxyl acrylic emulsion	Faster hardness established, high gloss and higher building up, excellent resistance to chemical.
Antkote® 2702	45±1	50-3000	7.0-9.0	-	3.9	Hydroxyl acrylic secondary dispersion	No 100# solvent oil, used in 2K bright white/varnish system, high gloss, building up, hardness.
Lacper® 4166	35±1	100-2000	7.0-9.0	-	3	Hydroxyl polyurethane dispersion	High gloss and film building, excellent leveling ability, high film hardness, excellent compatibility with PU/PA/OH-PA.
Leasys® 3102	35±1	200-1200	6.0-10.5	-	/	Anionic aliphatic polyester-polyurethane dispersion	Self matt resin, haptic effect, free of organic solvent, heavy metal.

## Wood coating

### Exterior & Joinery



Product	Solid (%)	Viscosity (mPa.s)	pH	MFFT (°C)	OH content% (on solid)	Chemistry	Main feature
Lacper® 4571	40±1	1000-6000	7.0-9.0	24	/	Acrylic emulsion	Solvent free, good early water resistance, outdoor weather resistance, wide bonding.
Lacper® 4572	42.5±1	10-500	7.0-9.0	7	/	Acrylic emulsion	Good blocking resistance, good water resistance, non yellowing, good adhesion, good flexibility.

## Parquet

Product	Solid (%)	Viscosity (mPa.s)	pH	MFFT (°C)	OH content% (on solid)	Chemistry	Main feature
Lacper® 4211	40±1	10-200	7.0-9.0	47	/	Acrylic modified PU dispersion	Solvent free, excellent film-building, good flexibility, good adhesion.
Leasys® 3900	38±1	20-1000	7.0-9.0	-	/	Anionic aliphatic polyester-polyurethane dispersio	High gloss, yellowing resistance, good abrasion resistance, good flexibility.
Leasys® 5531	35±1	20-300	7.0-9.0	10	/	Anionic aliphatic polyester-polyurethane dispersio	High gloss, yellowing resistance, good abrasion resistance, good flexibility.
Lacper® 4215	40±1	10-500	7.0-9.0	47	/	Fatty acid modified PUD	25% Bio-based. High hardness & scratch resistance. Very good wood wetting property. Excellent chemical resistances & black heel mark resistance.
Urosin® 4616	37±1	10-500	7.0-9.0	-	/	Aliphatic urethane acrylate dispersion	Excellent clarity, good chemical resistance, easy to matt.
Urosin® 4620	40±1	10-500	7.0-9.0	-	/	Aliphatic urethane dispersion	Physical dry before UV cure, high hardness, good chemical resistance.



## Industrial coating

### Light duty

Product	Solid (%)	Viscosity (mPa.s)	pH	MFFT (°C)	OH content% (on solid)	Chemistry	Main feature
Wantipro® 0612	43±1	10-200	7.0-9.0	37	/	Acrylic emulsion	Good gloss and hardness, chemical resistance.
Wantipro® 0616Z	40±1	10-300	7.0-9.0	48	/	Acrylic emulsion	Excellent weather ability and anti-cracking.
Wantipro® 0620	45±1	10-200	7.0-9.0	55	/	Acrylic emulsion	Fast hardness development, anti-blocking.
Wantipro® 0622	46±1	1500-4500	7.0-9.0	23	/	Acrylic emulsion	High gloss, good mechanical stability.
Wantipro® 0626	47±1	100-1500	7.0-9.0	37	/	Acrylic emulsion	High gloss, salt spray resistance.
Wantipro® 0628	48±1	10-2000	7.0-9.0	24	/	Acrylic emulsion	Excellent flash rust resistance and stability in high PH system.

### 2K PU for ACE/Commercial vehicles

Product	Solid (%)	Viscosity (mPa.s)	pH	MFFT (°C)	OH content% (on solid)	Chemistry	Main feature
Antkote® 2032	45±1	50-3000	7.0-9.0	35	3.3	Hydroxyl acrylic dispersion	Excellent appearance and polyisocyanates compatibility, good comprehensive performance.
Antkote® 2033	46±1	50-1850	7.0-9.0	32	3.3	Hydroxyl acrylic dispersion	Standard, balanced performance.
Antkote® 2035	43±1	50-2500	7.0-9.0	48	3	Hydroxyl acrylic dispersion	Excellent polyisocyanates compatibility and weathering resistance.
Antkote® 2042	46±1	50-2500	7.0-9.0	47	4.2	Hydroxyl acrylic dispersion	Higher hardness and good in comprehensive performance.
Antkote® 2702	45±1	50-3000	7.0-9.0	47	3.9	Hydroxyl acrylic dispersion	Fast dry, excellent appearance and polyisocyanates compatibility.

## Industrial coating

### Baking coating

Product	Solid (%)	Viscosity (mPa.s)	pH	MFFT (°C)	OH content% (on solid)	Chemistry	Main feature
Antkote® 2504	44±1	500-6500	7.0-9.0	/	4.2	Hydroxyl acrylic dispersion	Excellent flexibility, adhesion, chemical resistance, weather resistance, suitable for pigmented primer and topcoat.
Antkote® 2057	37±1	10-8000	7.0-9.0	/	2.6	Hydroxyl acrylic dispersion	Excellent orientation of aluminum powder, High gloss, High thixotropy, Excellent water resistance, suitable for pigmented topcoat and vanish.
Wantipro® 0678	26±1	100-500	6.0-7.5	/	1.2	Hydroxyl acrylic emulsion	High thixotropy, Excellent orientation of metallic pigment, Fast drying, High hardness, suitable for metallic paint.
Antkote® 2365	50±2	5000-15000	7.5-9.5	/	2.8	Water soluble hydroxyl acrylic copolymer	Good resistance to liquor, alcohol and boiling water. High gloss and hardness. Good recoatability.
Antkote® 2367	50±2	3000-9000	7.5-9.5	/	3.8	Water soluble hydroxyl acrylic copolymer	Excellent adhesion to glass. High gloss and good hardness. Good resistance to chemical, boiling water, liquor and alcohol.

### Plastic/3C

Product	Solid (%)	Viscosity (mPa.s)	pH	MFFT (°C)	OH content% (on solid)	Chemistry	Main feature
Crysol® 6319	40±1	10-200	7.0-9.0	>90	/	Acrylic emulsion	Good adhesion to various plastic substrates, Good alcohol resistance, Hard and high gloss, Recommended for silver paint
Antkote® 2702	45±1	50-3000	7.0-9.0	47	3.9	Hydroxyl acrylic dispersion	Excellent appearance and polyisocyanates compatibility



## Industrial coating

### Liquid Applied Sound Damping

Product	Solid (%)	Viscosity (mPa.s)	pH	Tg (°C)	Chemistry	Main feature
Antamp® 0656	50±1	10-300	7.0-9.0	5	Acrylic emulsion	Excellent damping effect at room temperature, excellent construction performance and good performance of resisting bulge.
Antamp® 0657	53±1	10-800	7.0-9.0	20	Acrylic emulsion	Excellent damping effect at high temperature, can be mixed to improve the high temperature compound damping factor.
Antamp® 0658	50±1	100-1500	7.0-9.0	3	Acrylic emulsion	Excellent damping effect at room temperature, good workability and wide damping temperature range.

### Glass fiber sizing PUD

Product	Solid (%)	Viscosity (mPa.s)	pH	100% Modulus Mpa	Hydrophilic character	Main feature
Glisiz® 3136	35±1	10-500	6.0-9.0	2.5-3.5	Nonionic type	Excellent hydrolysis resistance. PUD film former with additional crosslinking function.
Glisiz® 3137	50±1	10-3500	6.0-9.0	1.8-2.5	Anionic and nonionic type	Universal product with balanced properties for various application, Food contact acc. to EU 10/2011.
Glisiz® 3238	45±1	10-500	6.0-9.0	1.8-2.3	Anionic and nonionic type	Universal product with balanced properties for various application.
Glisiz® 3239	40±1	10-3000	6.0-8.0	7.5-8.3	Anionic and nonionic type	High modulus, Low thermal yellowing, Excellent hydrolysis resistance. Food contact acc. to EU 10/2011.
Glisiz® 3240	35±1	10-500	6.0-9.0	2.5-3.5	Anionic and nonionic type	Universal product with balanced properties for various application.

## Hydrophilic Polyisocyanate

### Hydrophilic Polyisocyanate Plus



Product	NCO content (%)	Viscosity (mPa.s)	Color (Apha)	Modification	HDI Monomer (%)	Key Features	Metal	Wood	Plastic	Wall	Concrete	Glass
Aquolin® 161plus	18.5	2000-4000	<60	Polyether	<0.1	HDI based water dispersable polyisocyanate for use in waterborne coatings and adhesive products.	X		X			
Aquolin® 163plus	17.5	1500-3500	<60	Polyether	<0.1	HDI based water dispersable polyisocyanate for use in waterborne coatings and adhesive products with good flexibility.	X	0	X			
Aquolin® 168plus	16.2	2000-5000	<60	Polyether	<0.1	HDI based water dispersable (hydrophilic) polyisocyanate for use in waterborne coatings for its clarity, high gloss, good outdoor durability and long potlife.	0	X	0			
Aquolin® 268plus	20.5	5000-7000	<80	Sulfonic	<0.1	HDI based water dispersable (hydrophilic) polyisocyanate for use in waterborne coatings for its high gloss and body and good water resistance.	0	X	0	X		
Aquolin® 270plus	21.5	1500-3500	<80	Sulfonic	<0.1	HDI based water dispersable (hydrophilic) polyisocyanate for use in waterborne coatings and adhesive for high gloss.	X	X	X	0	0	X
Aquolin® 278plus	22.5	1500-3500	<80	Sulfonic	<0.1	HDI based water dispersable (hydrophobic) polyisocyanate for use in waterborne coatings. Hardener can be used without adding solvents and gives egg-shell gloss (especially in emulsion coatings).	0	0		X	X	
Aquolin® 269plus	19.3	500-2000	<80	Sulfonic	<0.1	HDI based water dispersable (hydrophilic) polyisocyanate for use in waterborne coatings to give highest gloss, body and water resistance. Hardener can be used without adding additional solvent.	X	X	X	0	0	X
Aquolin® 280plus	19.2	<1000	<80	Sulfonic	<0.1	HDI based water dispersable (hydrophobic) polyisocyanate for use in waterborne coatings. Hardener can be used without adding solvents and will give lower gloss due to its hydrophobicity.	X	0	0	X	X	

## Additive



Product	Type	Shear rate	Solid content (%)	Active (%)	Viscosity (mPa.s)	Solvent	pH	Key Features
Vesmody® A401	HASE	Medium	30	30	<100	Water	2-4	Hydrophobically modified alkali swellable thickener designed to give medium shear rate viscosity. It improves gloss and levelling and anti-splash property. It has good compatibility in many coatig types. 20% bio-based.
Vesmody® A406	HASE	Low-Medium	30	30	<100	Water	2-4	Hydrophobically modified alkali swellable thickener designed to give low to medium shear rate viscosity. It supports scrub and water resistance and has good thermal stability. 20% bio-based.
Vesmody® A801	ASE	Low	29	29	<100	Water	2-4	Alkali swellable thickener to improve low shear rate viscosity (e.g. avoid settlement). It has high thickening efficiency and good thixotropic behavior as well as thermal stability. 20% bio-based.
Vesmody® U300E	HEUR	High Shear	20	20	3000-8000	Water	6-7	Nonionic urethane rheology modifier suitable for any waterborne coating, perpared with Unicap™ technolgy, in high shear rate viscosity. It gives excellent flow and levelling. It supports water and alkali resistance and can be used in wide pH range.
Vesmody® U505E	HEUR	Medium-High	40		3000-8000	DBGE/Water	6-7	High solid nonionic urethane rehology modifier for medium to high shear rate viscosity. It allows to formulate an excellent balance between flow and sag properties and supports water and alkali resistance.
Vesmody® U604E	HEUR	Medium	25	15	12000-17000	Water	6-7	Nonionic urethane rheology modifier suitable for any waterborne coating, efficient pseudoplastic behavior, in medium shear rate viscosity. It gives excellent levelling, sag water and alkali resistance. Can be used in wide pH range and is very stable in combination with all kind of colorants.
Vesmody® U605E	HEUR	Medium	40	40	30000-38000	DBGE/Water	6-7	High solids nonionic urethane rheology modifier suitable for any waterborne coating, efficient pseudoplastic behavior, in medium shear rate viscosity. It gives excellent levelling, sag water and alkali resistance. Can be used in wide pH range and is very stable in combination with all kind of colorants.
Vesmody® U902E	HEUR	Low	35	20	15000-20000	Water	6-7	Nonionic urethane rheology modifier suitable for any waterborne coating, efficient pseudoplastic behavior, in medium shear rate viscosity. It gives excellent levelling, sag water and alkali resistance. Can be used in wide pH range and is very stable in combination with all kind of colorants.
Vesmody® U905E	HEUR	Low	40	40	30000-38000	DBGE/Water	6-7	High solids nonionic urethane rheology modifier suitable for any waterborne coating, efficient pseudoplastic behavior, in medium shear rate viscosity. It gives excellent levelling, sag water and alkali resistance. Can be used in wide pH range and is predominantly used in pigmented systems.
Vesmody® C20	Dispersant		42		≤1000		6.0-8.0	Sodium salt of polymeric carboxylic acid.It can be used for a wide variety of coating formulations. Very low foaming dispersant and high efficient to disperse mineral slurries.
Vesmody® H400	Opaque polymer		31		≤1000		7.0-9.0	Acrylic copolymer emulsion to provide the opacity of emulsion paints. Offers partial replacement of TiO <sub>2</sub> and lowers TiO <sub>2</sub> demand, optimize the formulation cost. Enhance paint scrub resistance and stain removability. Wide formulation latitude.





## Aliphatic isocyanate — HDI Trimer

Product	Solvent	Solid content (%)	NCO (%)	Viscosity (25°C, mPa.s)	Color (Pt-Co)	Residual Monomer (%)	Key Features
Wannate® HT-100 Plus	none	100	21.7-22.2	2500 ± 750	≤40	<0.1	General purpose HDI trimer polyisocyanate.
Wannate® HT-100A	none	100	21.5-22.5	2550 ± 750	≤40	<0.1	FDA approval version of Wannate® HT-100.
Wannate® HT-90BPlus	BA	90	19.5-20.1	500 ± 150	≤40	<0.1	Diluted version of Wannate® HT-100.
Wannater® HT-90BSPlus	BA/SN (1:1)	90	19.5-20.1	500 ± 150	≤40	<0.1	Diluted version of Wannate® HT-100.
Wannate® HT-75BPlus	BA	75	16.0-17.0	80 ± 20	≤40	<0.1	Diluted version of Wannate® HT-100.
Wannate® HT-168BS	BA/SN (1:1)	68	14.5-15.3	<100	≤40	<0.1	Diluted version of Wannate® HT-100.
Wannate® HT-790BPlus	BA	90	17.3-18.3	1800 ± 700	≤40	<0.1	Fast drying, high functionality.
Wannate® HT-600Plus	none	100	22.5-23.5	1200 ± 300	≤40	<0.1	Low viscosity.
Wannate® HT-3100Plus	none	100	21.7-22.7	800 ± 200	≤40	<0.1	Low viscosity.
Wannate® HT-500	none	100	22.5-24.5	700 ± 300	≤40	<0.5	Low viscosity.
Wannate® HT-400	none	100	21.1-22.5	160 ± 60	≤40	<0.3	Urethdione/Dimer.
Wannate® HT-300	none	100	19.0-21.0	450 ± 250	≤40	<0.4	Allophonate.
Wannate® HTBL-175S	SN	75	≈11.1 (blocked)	3250 ± 750	≤60	<0.1	MEKO Blocked.
Wannater® HTBL-275MS	MPA/SN	75	≈10.9 (blocked)	3500 ± 1000	≤100	<0.1	DMP Blocked.

Regular grades (meaning non-Plus) are available in other regions than Europe



## Aliphatic isocyanate — IPDI Trimer

Product	Solvent	Solid content (%)	NCO (%)	Viscosity (25°C, mPa.s)	Color (Pt-Co)	Residual Monomer (%)	Key Features
Wannate® IT-100	none	100			≤40		Powder granulate IPDI trimer polyisocyanate.
Wannate® IT-170S	SN	70	11.6-12.4	600 ±300	≤60	<0.5	Diluted version of Wannate® IT-100.
Wannate® IT-170B	BA	70	11.6-12.4	2000 ±1000	≤60	<0.5	Diluted version of Wannate® IT-100.
Wannater® ITBL-460S	SN	60	≈ 7 (blocked)	2000 ±1000	≤100	<0.5	Capro blocked and diluted version of Wannate® IT-100.

## Aromatic isocyanate — TDI Adduct

Product	Solvent	Solid content (%)	NCO (%)	Viscosity (25°C, mPa.s)	Color (Pt-Co)	Residual Monomer (%)	Key Features
Wannate® TL-75E	Ethylacetate	75	12.9-13.7	1500 ±500	≤0.2	<0.5	General purpose TDI-TMP adduct polyisocyanate; good adhesion to various surface; air drying capability; used for 2K polyurethane coating and adhesives.

## Aromatic isocyanate — TDI Trimer

Product	Solvent	Solid content (%)	NCO (%)	Viscosity (25°C, mPa.s)	Color (Pt-Co)	Residual Monomer (%)	Key Features
Wannate® TT-150E	Ethylacetate	51	7.2-7.6	250 ±100	≤1.0	<0.5	Quick drying, low viscous TDI trimer polyisocyanate.
Wannate® TT-150B	Butylacetate	51	7.2-7.6	115 ±35	≤2.0	<0.5	Faster drying, low viscous TDI trimer polyisocyanate.
Wannate® TT-350E	Ethylacetate	51	7.7-8.3	1300 ±500	≤1.0	<0.5	Rapid drying TDI polyisocyanate.
Wannate® TT-350B	Butylacetate	51	7.7-8.3	375 ±75	≤2.0	<0.5	Fastest drying TDI trimer polyisocyanate.

## Specialty amine — Specialty amine

Product	Type	Purity (%)	Color (Hazen)	Moisture content (%)	Key Features
Wanamine® IPDA	Amine	>99.7	<15	≤0.2	Amine functional curing agent for epoxy-based systems such as flooring, heavy-duty and protection coatings.
Wanamine® H <sub>12</sub> MDA	Amine	>99.0	<50	≤0.1	Cost efficient amine functional curing agent for balancing properties of epoxy-based systems such as flooring, heavy-duty and protection coatings.

## Acrylic Monomer — Acrylic Monomer

Product	Type	Purity (%)	Inhibitor MEHQ (ppm)	Color (Hazen)	Moisture content (%)	Key Features
Wanamine® HEMA-98	Acrylic	>98	200	<30	≤0.1	OH functional methacrylic monomer for production of functional polymers for contact lenses, super absorbent resins, adhesives, thermosetting, light-curing coatings, automotive OEM (Refinish) and industrial coatings.