CHEMICAL
RAW MATERIALS

WORLÉE
seit 1851

ABC OF RAW MATERIALS

Our product overview

Top-quality raw materials and innovative solutions

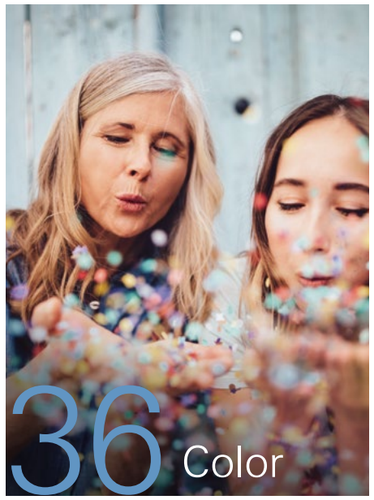
"Our raw materials are important building blocks for the success of our customers," states Reinhold von Eben-Worlée, shareholder of the Worlée Group.

As a supplier, refiner and producer, Worlée supplies customers all over the world with high-quality chemical, natural and cosmetic raw materials. Our drive for increased sustainability, our innovative strength and our creativity in finding individual solutions is what sets us apart from the rest. The highest quality standards, comprehensive technical expertise and an intuitive feel for trends and market developments make us a trustworthy and reliable partner for your success.

Our over 170 years of experience in the industry along with countless product innovations serve us well as we tirelessly strive to optimise existing products and processes. Among other things, we already produce many of our binders on the basis of renewable raw materials. Indeed, we continually work to keep moving in this direction.

Sustainable thinking and action is a fundamental focus area for us. For example, thanks to our progressive energy, emissions and resource management, we have already won the VCI Nord Responsible Care Award several times, and we were also the first company in our industry to be awarded the title of "Climate Protection Company."

Content



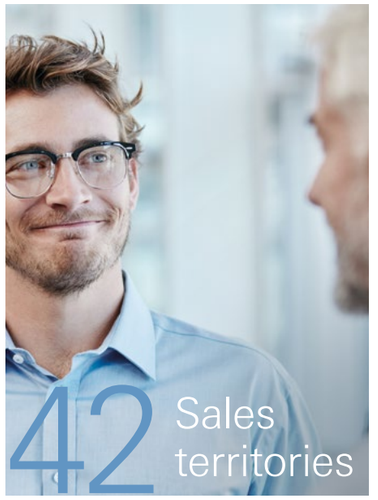


TABLE OF CONTENTS

ADDITIVES

BINDERS

COLOR

Additives

For endless possibilities

A as in additives. In the ABCs of chemical raw materials, these take first place, though mostly the opposite is true in formulations. Our auxiliary and additive agents, referred to collectively as additives, are used in products only in small quantities, but their effect is that much the greater.

Our comprehensive range of additive products for use in paints, coatings, adhesives and construction chemistry cover an equally broad spectrum of functions as they work to enhance the properties of your end products.

Additives

A | WorléeAdd

Silicone additives for improving surface properties in solvent-based paint systems

Type	Appearance	Form of delivery [%]	Addition [%]	Main uses/principal characteristics	TSCA	DSL
WorléeAdd 312	Clear, low viscous liquid		0,1–1,0	Especially for decorative paints, eliminates cell structure and brush marks, improves flow, mar resistance and slip, specially designed for aromatic free decorative paints	✓	✓
WorléeAdd 315	Clear to yellow liquid	approx. 30	0,5–1,0	Additive for water and solvent-based paints, improving mar resistance and slip, flow and gloss, anti-cratering agents	✓	✓
WorléeAdd 327	Clear, low viscous liquid	approx. 10	0,1–1,5	Improves wetting of plastic and aluminium substrates, increases mar resistance and slip, avoids cratering	✓	✓
WorléeAdd 3545	Colourless liquid	approx. 20	0,2–1,0	For solvent-based coatings, improves deairing, levelling, mar resistance, slip and gloss, reduces orange peel and cratering, also suitable for curtain coatings, thermostable in stoving systems	✓	✓
WorléeAdd 373 N	Colourless, low viscous liquid	approx. 100	0,2–1,0	Additive with multifunctional properties, used in solvent-based coatings mainly to achieve surface smoothness and mar resistance, at the same time it works as antifoam agent and avoids surface imperfections, for architectural coatings	✓	✓
WorléeAdd 429	Colourless liquid	approx. 10	0,2–1,0	For improving the efficiency of matting agents in solvent-based silk gloss decorative paints, additionally improvement of flow and scratch resistance, deairing	✓	✓
WorléeAdd 3585	Colourless to slightly amber liquid	approx. 3	0,1–0,5	Multifunctional additive to improve slip, leveling, scratch resistance and surface wetting	✓	✓

*calculated on total formulation

A | WorléeAdd

Corrosion inhibitors

Type	Appearance	Form of delivery [%]	Addition [%]	Main uses/principal characteristics	TSCA	DSL
WorléeAdd 456	Colourless to slightly yellowish liquid	approx. 30	0.5–2.0	Nitrit-free anti-flash rust agent and corrosion inhibitor for aqueous paints and lacquers	✓	
WorléeAdd 458	Colourless liquid	approx. 38	0.5–2.0	Nitrit-free anti-flash rust agent for aqueous paints and lacquers	✓	

*calculated on total formulation

A | WorléeAdd
Silicone additives for improving surface properties in aqueous paint systems

Type	Appearance	Form of delivery [%]	Addition [%]	Main uses/principal characteristics	TSCA	DSL
WorléeAdd 327	Clear, low viscous liquid	approx. 20	0.1–1.5	Improves wetting of plastic and aluminium substrates, increases mar resistance and slip, avoids cratering	✓	✓
WorléeAdd 330	Clear, slightly yellowish, low viscous liquid	approx. 10	0.3–0.5	For stoving systems to improve overspray take of in wet in wet applications	✓	✓
WorléeAdd 351	Turbid, creamy, still flowing liquid	approx. 70 in butylglycol	0.1–1.0	High molecular silicone additive for ourstanding slip, mar resistance and antiblockings	✓	✓
WorléeAdd 352	Turbid, creamy, free-flowing liquid	approx. 70 in propylenglycol	0.1–1.0	High molecular silicone additive for outstanding slip, mar resistance and antiblocking	✓	✓
WorléeAdd 3410	Clear to yellowish, low viscous liquid	approx. 50	0.2–1.5	Silicone-based surface wetting additive for aqueous paint and lacquers	✓	
WorléeAdd 3440	Clear to yellowish, low viscous liquid	100	0.1–1.0	Silicone-based high performance surface wetting additive for aqueous paint and lacquers	✓	
WorléeAdd 3520	Turbid, creamy, free-flowing liquid	approx. 77 in water	0.1–1.0	High molecular silicone additive to improve slip, mar resistance and antiblocking	✓	✓
WorléeAdd 3585	Colourless to slightly amber liquid	100	0.01–0.5	Multi functional additive to improve flow, levelling, surface slip and surface wetting	✓	✓

*calculated on total formulation

A | WorléeAdd
Cobalt-free catalysts

Type	Appearance	Form of delivery [%]	Addition [%]	Main uses/principal characteristics	TSCA	DSL
WorléeAdd 2100	Colorless liquid	50	2–4	Acid catalyst for use in silane-modified binders. Provides fast through-drying, improved through-drying and very good long-term stability.	✓	✓
WorléeAdd 2110	Colorless liquid	50	2–4	Acid catalyst for use in silane-modified binders. Provides fast through-drying, improved through-drying and very good long-term stability Long-term stability.	✓	✓

*calculated on total formulation

A | WorléeAdd
Adhesion promoters

Type	Appearance	Form of delivery [%]	Addition [%]	Main uses/principal characteristics	TSCA	DSL
WorléeAdd 480 N	Clear, colourless liquid	approx. 70	1.0–5.0	Special epoxy ester to improve the adhesion of aqueous baking enamels and polyurethane systems on metallic substrates	✓	✓
WorléeAdd 484	Colourless to light yelllow liquid	approx. 75	1.0–5.0	Special polyester resin for improving adhesion of solvent-based two component PU and stoving paints on metals substrates, improves elasticity and flow, NMP-free	✓	✓
WorléeAdd 487	Colourless to light yellow, clear to slightly turbid liquid	75–80	1.0–3.0	Special adhesion promoter for solventbased systems for air drying and oven cured systems. Does not contain n-methyl-2-pyrrolidone	✓	

*calculated on total formulation

A | WorléeAdd
Defoamers for non-aqueous systems

Type	Appearance	Form of delivery [%]	Addition [%]	Main uses/principal characteristics	TSCA	DSL
WorléeAdd 370	Colourless, low viscous liquid	approx. 10	0.03–0.5	Fluor silicone-based defoamer and deairing agent for solvent-based paints and inks of different compositions as well as EP-coatings	✓	✓
WorléeAdd 372	Colourless, low viscous liquid	approx. 5	0.05–0.8	Fluor silicone-based defoamer and deairing agent for solvent-based and high solid coatings., especially for decorative paints	✓	✓
WorléeAdd 6235	Clear liquid	approx. 6.5	0.5–2.0	Highly effective silicone defoamer for reactive thicklayer systems based on epoxy resins	✓	
WorléeAdd 6236	Clear to slightly turbid liquid	approx. 12 in Exxsol D 220/240	0.5–1.0	Highly effective silicone defoamer especially suitable for solvent-free PU-coatings	✓	✓

A | WorléeAdd
Defoamers for aqueous systems

Type	Appearance	Form of delivery [%]	Addition [%]	Main uses/principal characteristics	TSCA	DSL
WorléeAdd 628	Slightly turbid liquid	approx. 66	0.1–1.0	Silicone-based defoamer solution for aqueous formulations	✓	✓
WorléeAdd 6223	Slightly turbid, yellowish liquid	approx. 50	0.1–1.0	Silicone-based, silica containing defoamer compound for aqueous systems	✓	✓
WorléeAdd 6226	Colourless viscous liquid	100	0.1–1.0	Silicone-based, silica containing defoamer for aqueous formulations, very good grinding defoaming	✓	✓
WorléeAdd 6410	White thixotropic liquid	approx. 27	0.1–1.0	Silicone-based, silica containing defoamer emulsion for aqueous formulations, very good grinding defoaming, very easy incorporation; especially for PU, PU-hybrid and alkyd emulsions	✓	
WorléeAdd 6420	White thixotropic liquid	approx. 26	0.1–1.0	Silicone-based, silica containing defoamer emulsion for printing inks and overprint varnishes	✓	✓

A | WorléeAdd
Additives for paints and lacquers – Miscellaneous

Type	Appearance	Form of delivery [%]	Addition [%]	Main uses/principal characteristics	TSCA	DSL
WorléeAdd 412	Colourless liquid	approx. 65	0.5–1.0	Solvent-free compatibility agent for easier incorporation of driers into water-based alkyd emulsion paints	✓	✓
WorléeAdd 425	Clear, yellowish liquid	approx. 51	0.2–1.5	Silicone-free additive, imparts an equal structure to coil coatings which contains wax, improves degassing, reduces popping, also for clear coats	✓	✓
WorléeAdd 428	Clear, low viscous liquid	approx. 10	3.0–6.0	Silicone-free additive for structured coil coatings without wax addition, for achieving orange peel effect, improves degassing	✓	
WorléeAdd 781	Clear, medium viscous liquid	100	0.1–2.0	Silicone-free additive for solvent-based, solvent-free and water-based systems to improve levelling, flexibility and adhesion, two component- PU-coatings of high film thickness show reduced blistering	✓	
WorléeAdd 4220	Slightly y ellowish liquid	approx. 50	0.2–0.8	Cationic surface active additive for increasing the conductivity of electrostatic sprayable paint systems, low addition	✓	
WorléeAdd 4415	clear to slightly turbid, yellow-brownish tobrown, low viscosity liquid brown, low viscosity liquid	approx. 65 in solvent mixture	0.1–5.0	Oxime-free anti-skin agent with pigment wetting properties for use in solventborne air- and oven-drying alkyd systems.	✓	
WorléeAdd FR 5000	White powder	min. 98	approx. 10	Halogen free flame retardant based on encapsulated phosphoric compounds for water-based polymer dispersions and solvent-based polymer binders	✓	✓
WorléeAdd 8905	Colourless liquid	15	5	Silicone-free acrylate flow control agent for solventborne systems, prevents surface defects at the same time, especially suitable for coil coatings	✓	✓

A | Special-Primer
1 component primers for polyolefinic substrates

Type	Appearance	Form of delivery [%]	Application	Main uses/principal characteristics	TSCA	DSL
Special-Primer PP 3200 W	Low viscous, beige cream coloured liquid	approx. 30 in water	Application diluted with water to 10% solids content by spraying, dipping or printing	Aqueous adhesion promoter based on especially modified, low chlorinated polypropylene for PP, polyolefinic blends and with restrictions for PE	✓	✓
Special-Primer PP 5130	Colourless to yellowish, clear	approx. 2.5 in xylene approx. 5 in xylene	Application as 2.5% solution	Adhesion promoter for polypropylene for subsequent painting, printing, sticking, batteries, packaging film, heels, toys, foils etc.	✓	✓
Special-Primer PP 7550	Colourless to yellowish, clear	approx. 5 in xylene	Application as 2.5% solution	Same as PP 5130, with improved adhesion promotion on different PP substrates	✓	✓
Special-Primer PP 7560	Colourless to yellowish, clear	approx. 10 in xylene	Application as 2.5% solution	Same as PP 5130, with improved adhesion promotion on different PP substrates	✓	✓
Special-Primer PP 7580	Colourless to yellowish, clear	approx. 2.5 in xylene	Application as 2.5% solution	Adhesion promoter for untreated polypropylene for subsequent painting, printing, sticking, for batteries, heels, toys, foils, garden furniture etc., best adhesion properties	✓	✓

Binders

For strong cohesion

B as in Binders. Their mission: to form a cohesive whole. As soon as our binders get to work, there is no escape in the truest sense of the word for the other substances involved in your paints, coatings or adhesives. Binders are therefore one of the most important building blocks for your end products.

Our binders not only cover a wide variety of applications areas, but they also offer great potential for more sustainable chemistry. We are already producing many binders on the basis of renewable raw materials. Indeed, we continually work to keep moving in this direction.

Binders

B | WorléeCryl

Acrylic resins, solvent- or waterbased, containing hydroxyl groups

Type	OH-content on solids [%]	Flash point DIN EN 22719 [°C]	Viscosity 20 °C, del.form, Brookf., ISO 2555 [mPa·s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeCryl A 1135	3.5	approx. 23	3,000–4,000 Viscosity, Rheometer, 20 °C, C 35/1°, 250 s^{-1}	60 in xylene	Acrylate copolymer for the manufacture of industrial coatings with very good resistance against water and other agents	✓	
WorléeCryl A 1218	1.8	approx. 26	5,000–7,000	50 in BuAc	High reactivity and long pot life, for fast drying wood and furniture lacquers, CAB compatible	✓	✓
WorléeCryl A 1220	2.0	approx. 26	1,000–2,000	60 in BuAc	Acrylate copolymer for the manufacture of high quality plastic coatings	✓	
WorléeCryl A 1320	2.0	approx. 26	2,000–3,000	50 in BuAc	For high quality wood and furniture lacquers, good initial drying	✓	✓
WorléeCryl A 2114	1.4	35–40	2,000–4,000	60 in arom. HC 155–180	For quick drying industrial coats with high gloss and good stability	✓	✓
WorléeCryl A 2116	1.6	approx. 47	2,000–2,500	60 in arom. HC 155–180	For fast drying industrial paint with good gloss, also for decorative paint – in combination with WorléeThix A 2125 – for effect finishes	✓	
WorléeCryl A 2126	2.6	approx. 23 approx. 25	1,000–3,000	60 in xylene 60 in BuAc	Can be crosslinked with aliphatic polyisocyanates to formulate two component systems for metal, wood and plastics, the aliphatic system shows excellent hardness, good chemical resistance and a good outdoor durability	✓	
WorléeCryl A 2130	3.0	approx. 25	3,500–7,000	60 in X/BuAc/ arom. HC 155–180	For two component industrial paints with good mechanical propertties and high gloss with good outdoor durability	✓	
WorléeCryl A 2141	4.1	approx. 26	25,000–35,000	70 in BuAc	For high quality air- and forced drying paints on metal, wood and plastics	✓	
WorléeCryl A 2210	1.0	approx. 47	17,000–22,000	60 in arom. HC 155–180	For very fast drying primers and fillers with very good adhesion properties on different substates, also usable as a one component system	✓	✓
WorléeCryl A 2230 W	3.0	50–55	Viscosity: max. 6,000 (Rheometer, 20 °C, C 60/2°, 30 s^{-1})	44 in water/ solvent blend	Water emulsified hydroxyacrylate for the production of exterior resistant isocyanate cross-linked two component top coats with outstanding drying properties, film hardness and gloss	✓	
WorléeCryl A 2241 W	4.1	50–55	max. 25,000	45 in water/ solvent blend	Water emulsified hydroxyacrylate for the production of isocyanate crosslinked exterior resistant two component top coats which exhibit long potlife, high gloss and good adhesion properties	✓	
WorléeCryl A 2313	1.3	approx. 46	80–150 s DIN 53211-4	60 in arom. HC 155–180	For quick drying 2C primars and top coats	✓	✓
WorléeCryl A 2335	3.5	approx. 25	4,000–6,000	60 in X/BuAc/ arom. HC 155-180 (2:1:1)	For formulating high quality air- and forced drying top and clear coats, fast hardness development and very good adhesion for different metals	✓	
WorléeCryl A 2445	4.5	approx. 25 approx. 49	3,000–5,000 8,000–12,000	60 in X/BuAc/ arom. HC 155–180 60 in arom. HC 155–180	For high quality industrial and machine paints; also for car repair finishes	✓	✓
WorléeCryl A 3160	6.0	25–30	2,000–3,000	60 in BuAc/ MPA	Acrylate copolymer for the manufacture of high quality, especially resistant top coats	✓	
WorléeCryl A 5125 W MF	approx. 2.5		max. 2,000 Rheometer, 20 °C, C 60/2°, 5 s^{-1}	42 in water	A water emulsified hydroxyacrylate for the production of isocyanate cross-linked two component top coats which exhibit long pot-life and good adhesion properties; formulated without organic solvents	✓	

B | WorléeCryl
Acrylic resins, solvent-based, thermoplastic

Type	Flash point DIN EN 22719 [°C]	Flow time 20 °C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeCryl L 241	approx. 60	80–120 (40% in isop. HC 170–200)	60 in isop. HC 170–200	Neutral low odour acrylic resin, mainly for wall and ceiling paints, very good insulating coat for nicotine, chimney and water spots, for chlorine free formulations, without plasticizer	✓	
WorléeCryl L 2380	35–40	Viscos. Rheometer, 20 °C, C 35/1°, 500 s^{-1} max. 1.000 mPa·s, de.l form	50 in dearom. HC 160–200	Physically drying thermoplastic acrylic resin for different coating systems improving hardness and gloss	✓	✓
WorléeCryl L 2580	approx. 68	Viscos, Rheometer, 23 °C, C 60/2°, 50 s^{-1} 3.000–7.000 mPa·s	70 in isop. HC 170–200	Neutral, soft, low odour acrylic resin mainly used or wall and ceiling paints, low VOC, very good insulating coat for nicotine, chimney and water spots	✓	✓
WorléeCryl L 2822	approx. 40 approx. 23	Viscos. Rheometer, 23 °C, C60/2°, 50 s^{-1}, DIN EN ISO 3219, 5,000–10,000 mPa·s Viscos. Rheometer, 23 °C, C 60/2°, 50 s^{-1}, del. form DIN EN ISO 3219 8.000–10.000 mPa·s	70 in dearom. HC 160–200 75 in xylene	Self crosslinking thermoplastic acrylic copolymer to be used as resin of addition in low VOC industrial paints to improve drying and film surface hardness	✓	

B | WorléeCryl
Acrylic resins, water-based dispersions, solutions

Type	Monomer	Non volat. content DIN EN ISO 3251 [%]	pH value DIN 53785	Density DIN 51757 [g/cm³]	MFT [°C]	Viscosity 20 °C, del. form Brookfield, ISO 2555 [mPa·s]	Main uses/principal characteristics	TSCA	DSL
WorléeCryl 7107	Methacrylic copolymer emulsion	40	7.2–8.0	1.07	> 95	max. 500	As mixing component universally suitable for improving film hardness, sandability, blocking resistance and stackability	✓	✓
WorléeCryl 7120	Styrene acrylic emulsion	49	8.2–9.0	1.09	15	200–800	Corrosion inhibiting primers on different metals (e.g. iron, aluminium), good weather resistance	✓	✓
WorléeCryl 7135	Styrene acrylic emulsion	42	7.5–8.5	1.04	39	max. 1,000	Top coats on metal, wood, plastics (PS, ABS), also for temporary anti-corrosive primers on metal, can be combined with water-thinnable alkyd resins	✓	✓
WorléeCryl 7137	Styrene acrylic emulsion	42	7.5–8.5	1.04	28	max. 200	Allround emulsion for top coats on plastic, metal, wood and for corrosion inhibit- ing primers with very good adhesion on steel and low water absorption	✓	✓
WorléeCryl 7158	Styrene acrylic copolymer emulsion	49	7.5–8.0	1.06	5	max. 500	Self-crosslinking styrene modified acrylic emulsion for primers with excellent results in corrosion protection tests	✓	
WorléeCryl 7177	Core-shell-dispersion	45	7.0–8.0	1.06	5	< 500	Core-shell-dispersion for the production of solvent-free decorative paints and glazings	✓	✓
WorléeCryl 7186 MF	Pure acrylic emulsion	46	8.0–9.0	1.06	56	max. 500	Very hard polymer improving the surface properties like hardness, sanding and blocking resistance in water soluble lacquer systems. Very good compatibility with WorléeCryl 7177	✓	✓
WorléeCryl 7189	Methacrylic copolymer emulsion	49	7.0–8.0	1.08	16	max. 200	For the production of primers, flagstone- and building adhesives. High initial adhesion and very fast setting, excellent compatibility with alkali and cement, high flexibility	✓	✓
WorléeCryl 7410	Pure acrylic	45	8.0–9.0	1.06	39	max. 500	Self-crosslinking acrylic polymer for the formulation of aqueous furniture lacquers with good resistance against household chemicals	✓	✓

B | WorléeCryl
Acrylic resins, water-based dispersions, solutions

Type	Monomer	Non volat. content DIN EN ISO 3251 [%]	pH value DIN 53785	Density DIN 51757 [g/cm³]	MFT [°C]	Viscosity 20 °C, del. form Brookfield, ISO 2555 [mPa·s]	Main uses/principal characteristics	TSCA	DSL
WorléeCryl 7450	Pure acrylic emulsion	45	7.0–8.0	1.06	0	max. 500	Good blocking stability, in combination with PU-dispersionn. Parquet lacquers and top coats for wood can be formulated	✓	✓

B | WorléeCryl
Acrylic resins, water-based dispersions, solutions, emulsions

Type	Monomer	Non volat. content DIN EN ISO 3251 [%]	pH value DIN 53785	Density DIN 51757 [g/cm³]	MFT [°C]	Viscosity 20 °C, del. form Brookfield, ISO 2555 [mPa·s]	Main uses/principal characteristics	TSCA	DSL
WorléeCryl 7520	Acrylic emulsion	50	8.5–9.0	1.05	14	1,600–2,400	For manufacturing dispersion paints for indoor and outdoor application and coloured quartz sand plaster	✓	✓
WorléeCryl 7940	Acrylate copolymer emulsion	50	8.3–8.7	1.07	0	1,000–2,000	Excellently suitable for the manufacture of dispersion paints for indoor and outdoor application	✓	
WorléeCryl 8025	Pure acrylic solution	25	8.0–9.0	1.02		200–800	For production of roller coatings and primers on wood	✓	✓
WorléeCryl CH-X-2158	Pure acrylic dispersion	~61	5.5–6.5	~1.05	0	100–1,500	Special binders for production of thermal insulating coatings based on WorléeShield technology (e.g safe-touch, anti-condensation, insluation), easy incorporation of voluminous insulation fillers such as hydrophobic aerogels, high elasticity (CH-X-2159 > CH-X-2158) even at low temperatures, good water resistance and adhesion to various substrates, combination of both binders with WorléeAdd 8905 allows sprayable coatings, crackfree even in thick films, optional flame retardant properties with WorléeAdd FR 5000 (see page 12)	✓	✓
WorléeCryl CH-X-2159	Pure acrylic dispersion	~59	5.5–6.5	~1.06	0	150–2,500		✓	✓

B | WorléeCryl

Acrylic resins, water-based dispersions and solutions for printing inks and OPV's

Type	Monomer	Non volat. content DIN EN ISO 3251 [%]	pH value DIN 53785	Density DIN 51757 [g/cm³]	MFT [°C]	Viscosity 20 °C, del. form Brookfield, ISO 2555 [mPa·s]	Main uses/principal characteristics	TSCA	DSL
WorléeCryl 8025	Acrylic resin solution	25	8.0–9.0	1.02		200–800	General purpose	✓	✓
WorléeCryl 8025 M	Acrylic resin solution MEA-neutralized	25	8.0–9.0	1.02		200–800	Solvent-free pigment pastes	✓	
WorléeCryl 8040	Acrylic resin solution water/IPA 2:1	40	8.0–9.0	1.02		2,500–3,000	General purpose	✓	✓
WorléeCryl 8043	Acrylic resin solution water/IPA 2:1	40	8.0–9.0	1.01		3,000–4,000	For high pigment concentrations	✓	
WorléeCryl 8060	Acrylic resin solution	40	8.0–9.0	1.04		max. 2,000	Solvent-free, high solid resin	✓	✓
WorléeCryl 8222	Styrene copolymer dispersion	40	8.0–8.5	1.06	0	3,000–5,000	For matt overprint varnishes	✓	✓
WorléeCryl 8263	Styrene acrylate dispersion DMEA-neutralized	52	8.5–9.5	1.06	0	300–800	Heat resistance, high gloss	✓	
WorléeCryl 8273	Styrene acrylate dispersion	45	7.5–8.5	1.06	50	max. 1,000	High gloss OPV´s	✓	✓
WorléeCryl 8290	Styrene acrylate dispersion	45	8.0–8.5	1.07	70	400–600	High gloss, fast drying, excellent block- and water resistance	✓	✓
WorléeCryl 8470	Acrylic resin solution, DMEA-neutralized	25	8.0–9.0	1.04		< 500	Cross linkable with melamine resin	✓	
WorléeCryl 8545	Acrylate dispersion	50	4.0–6.0	1.06	3	50–300	For blister lacquers	✓	✓

B | WorléeDex

Starch copolymer dispersions for printing inks and OPV´s

Type	Monomer	Non volat. content DIN EN ISO 3251 [%]	pH value DIN 53785	Density DIN 51757 [g/cm³]	MFT [°C]	Viscosity 20 °C, del. form Brookfield, ISO 2555 [mPa·s]	Main uses/principal characteristics	TSCA	DSL
WorléeDex 1177	Starch copolymer dispersion	40	3.0–5.0	1.06	28	< 800	Ammonia and amine free	✓	✓
WorléeDex 1182	Starch copolymer dispersion	50	7.5–9.0	1.04	28	< 300	For thin papers, ammonia and amine free	✓	✓

B | WorléeKyd

Alkyd resins, solvent-based, short-oil, air-drying

Type	Oil [%] in approx.	Oil type	Phth. anhyd. [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeKyd AC 2550	25	Drying vegetable fatty acids	17	max. 5 (50% in ws 135–175) max. 5 (50% in dearom. HC 140–165)	max. 10	Viscosity Rheometer, 20 °C, C 35/1°, 250 s^{-1} 3.000–8.000 mPa·s 200–260 (50% in dearom. HC 140–165)	60 in ws 135–175 60 in dearomat. HC 140–165	Is mainly recommended for very fast drying primers and top coats	✓	
WorléeKyd AC 2551	25	Drying vegetable fatty acids	17	max. 5 (50% in xylene)	max. 10	90–150 (50% in xylene)	60 in xylene	Is mainly recommended for very fast drying primers and top coats	✓	
WorléeKyd AC 2943	29	Drying vegetable fatty acids	approx. 19	max. 5 (50% in xylene) max. 5 (50% in BuAc)	max. 12	30–60 (50% in xylene) 30–60 (50% in BuAc)	75 in xylene 75 in BuAc	Especially suitable for quick-drying low VOC primers, ensures a wide Adhesion on different substrates, a very good recoatability and good anti-corrosive properties.	✓	
WorléeKyd L 138	38	Linseed and tung oil	30	max. 10 (50% in xylene)	max. 15	250–300 (50% in xylene)	60 in xylene	Phenolic mod., for fast drying primers and top coats, putties and fillers	✓	
WorléeKyd LH 3702	38	Linseed and tung oil	25	max. 10 (40% in dearom. HC 160–200)	max. 20	100–130 (40% in dearom. HC 160–200)	50 in dearom. HC 160–200	Dearomatic base and top coats, air-drying	✓	
WorléeKyd MH 38	39	Mixed fatty acids and tung oil	38	max. 15 (50% in xylene)	max. 25	140–170 (50% in xylene)	60 in xylene	Primers and top coats, good elasticity and resistance properties	✓	✓

B | WorléeKyd

Alkyd resins, solvent-based, short-oil, air-drying

Type	Oil [%] in approx.	Oil type	Phth. anhyd. [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeKyd MH 42	42	Drying vegetable fatty acids	24	max. 15 (50% in ws 135–175) max. 15 (50% in dearom. HC 140–165)	max. 20	120–150 (50% in ws 135–175) 50–70 (40% in dearom. HC 140–165)	60 in ws 135–175 60 in dear-om. HC 140–165	Primers and topcoats, "Laroflex" (BASF) com-patibility	✓	✓
WorléeKyd MH 439	39	Mixed fatty acids	32	max. 10 (50% in xylene) max. 10 (50% in ws 135–175/ Methoxy propanol)	max. 25	100–130 (50% in xylene) 140–170 (50% in ws 135–175/ Methoxy propanol)	60 in xylene 60 in ws 135–175/ Methoxy propanol	Phenolic-modified, fast drying primers and top coats, "Laroflex" (BASF) compatibility	✓	✓
WorléeKyd S 3001	30	Drying vegetable fatty acids	35	max. 10 (50% in xylene/ Methoxy propanol) (8:2)	max. 12	max. 12 20–35 (50% in xylene/ Methoxy propanol)	75 in xylene/ Methoxy propanol (8:2)	Low viscous, fast drying alkyd resin for manufac-turing low VOC industrial primers and top coats	✓	
WorléeKyd SM 340	40	Drying vegetable fatty acids	30	max. 10 (50% in xylene)	max. 20	130–170 (50% in xylene)	60 in xylene	Fast drying primers and top coats, good elastici-ty, good resistance prop-erties	✓	✓
WorléeKyd SM 400	34	Drying vegetable fatty acids	30	max. 10 (50% in xylene)	max. 20	90–110 (50% in xylene)	60 in xylene	Fast drying primers and paints with excellent dur-ability, with amino resins reactive stoving eTypels with good stability, "Laroflex" (BASF) com-patibility	✓	✓
WorléeKyd SM 426	26	Drying vegetable fatty acids	40	max. 10 (50% in xylene)	max. 15	90–110 (50% in xylene)	60 in xylene	Very fast drying alkyd resin for air- and forced drying primers and top coats	✓	✓
WorléeKyd SM 433	33	Drying vegetable fatty acids	38	max. 10 (50% in xylene)	max. 15	max. 15 60–80 (50% in xylene)	60 in xylene	Fast drying primers and top coats, high solids, low thermoplasticity, partial "Laroflex" (BASF) compatibility	✓	
WorléeKyd TT 3502	35	Drying vegetable fatty acids	24	max. 15 (60% in xylene)	max. 20	60–70 (60% in xylene)	80 in xylene	Low viscous, fast drying-alkyd resin for low VOC industrial primers	✓	
WorléeKyd V 298	38	Linseed oil/ Wood oil	25	max. 10 (40% in ws 135–175)	max. 20	90–130 (40% in ws 135–175)	55 in ws 135–175	Fast drying primers, very good elasticity and dura-bility, dilutable with white spirit	✓	✓
WorléeKyd V 925064	33	Special vegetable fatty acids	38	max. 10 (50% in xylene)	max. 20	55–70 (50% in xylene)	60 in xylene	Suitable for the produc-tion of stoving primers and top coats. When us-ing highly reactive amino resins, in order to im-prove the storage stabili-ty of e.g. Alcohols are recommended	✓	

B | WorléeKyd

Alkyd resins, solvent-based, medium-oil, air-drying

Type	Oil [%] in approx.	Oil type	Phth. anhyd. [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal cha-racteristics	TSCA	DSL
WorléeKyd B 845	45	Special fatty acids	25	max. 10 (40% in ws 145–195) max. 10 (del. form)	max. 15	80–100 (40% in ws 145–195) 5,500–8,000 mPa·s (Rheometer 20 °C, C 35/1°, 100 s^{-1})	55 in ws 145–195 70 in xylene	Fast drying radiator paints, automotive and machinery refinishing enamels with good gloss, Laroflex (BASF) compatibility	✓	
WorléeKyd B 850 U	45	Special fatty acids	17	max. 10 (40% in ws 145–195)	max. 15	80–120 (40% in ws 145–195)	50 in ws 145–195/ xylene	Extremely fast drying, ure-thane-modified, for prim-ers and topcoats, good re-coatability	✓	✓
WorléeKyd B 4901	49	Cotton oil	24	max. 10 (40% in dearomat. HC 160–200)	max. 12	Viscosity, Rheometer, 20 °C, C 35/1°, 250 s^{-1} 3.500–6.500 mPa·s	50 in dearomat. HC 160–200	Fast drying, for air- and forced drying industrial, vehicle and machine paints as well as dearomat. do-it yourself and radiator paints	✓	✓
WorléeKyd B 4901 nv	49	Cotton oil	24	max. 10 (55% in dearomat. HC 160–200/ methoxy-propanol 3/1)	max. 12	max. 10 (55% in dearomat. HC 160–200/ methoxy-propanol 3/1)	75 in dearomat. HC 160–200/ methoxy-propanol 3/1)	Fast drying, for air- and forced drying industrial, vehicle and machine paints as well as dearomat. do-it yourself and radiator paints	✓	✓
WorléeKyd DS 4005	40	Special vegetable fatty acids	17	max. 5 (60% in dearomat. HC 160–200/ methoxy-propanol 2:1)	max. 15	Viscosity Rheometer, 20 °C, C 35/1°, 50 s^{-1} 16,000–45,000 mPa·s	80 in dearomat. HC 160–200/ methoxy-propanol 2:1	Low viscous, short oil, silicone modified alkyd resin; it is suitable for the production of high quality top- and one layer coats; paints on basis WorléeKyd DS 4005 show good drying and through drying, high permanent elasticity, good adhesion on different sub-strates and high outdoor resistance; in addition these paints enable a good corrosion protection	✓	
WorléeKyd BS 830	45	Special fatty acids, silicone modified	17	max. 10 (50% in ws 145–195) max. 10 (50% in isop. HC 170–200) max. 10 (50% in dearomat. HC 160–200)	max. 15	55–70 (50% in ws 145–195) 170–220 (50% in isop. HC 170–200) 120–150 (50% in dearomat. HC 160–200)	60 in ws 145–195 60 in isop. HC 170–200 60 in dearo-mat. HC 160–200	Silicone-modified alkyd resin for high quality industrial and maintenance paints with very good drying properties, high gloss retention and corrosion resistance	✓	

B | WorléeKyd

Alkyd resins, solvent-based, medium-oil, air-drying

Type	Oil [%] in approx.	Oil type	Phth. anhyd. [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeKyd BS 5005	50	Special vegetable fatty acids	15	max. 5 (50% in dearomat. HC 160–200)	max. 15	25–40 (50% in dearomat. HC 160–200)	80 in dearomat. HC 160–200	Low viscous, air-drying, silicone-modified alkyd resin for industrial and house paints, low VOC	✓	
WorléeKyd BSA 5015	49	Special vegetable fatty acids		max. 5 (60% in dearomat. HC 160–200)	max. 12	Viscosity, Rheometer, 20 °C, C 35/1°, 1 s-1 8,000–10,000 mPa·s	85 in dearomat. HC 160–200	Low viscous, air-drying, especially modified alkyd resin with good resistance properties for decorative and house paints, low VOC	✓	
WorléeKyd BT 5001	50	Special vegetable fatty acids	24	max. 10 (50% in dearomat. HC 160–200)	max. 12	60–70 (50% in dearomat. HC 160–200)	65 in dearomat. HC 160–200	Fast drying alkyd resin for low VOC house paints and dearomatized machine-, industrial and D.I.Y.-paints	✓	✓
WorléeKyd FC 555	55	Special fatty acids	16 18	max. 10 (40% in isop. HC 170–200) max. 10 (40% in dearomat. HC 160–200)	max. 10 max. 10	70–100 (40% in isop. HC 170–200) 35–50 (40% in dearomat. HC 160–200)	50 in isop. HC 170–200 55 in dearomat. HC 160-200	Fast drying, low odour and dearomatized radiator and D.I.Y.-paints with high gloss and good yellowing resistance	✓	
WorléeKyd S 351	51	Soya oil	23	max. 10 (40% in dearomat. HC 180–220) max. 10 (40% in dearomat. HC 180–220)	max. 15	130–170 (40% in dearomat. HC 180–220) 25–35 (40% in dearomat. HC 180–220)	50 in dearomat. HC 180–220 60 in dearomat. HC 180–220	White undercoatings, mat and semi gloss enamels with good flow properties	✓	✓
WorléeKyd S 351 nv	51	Soya oil	23	max. 10 (del. form)	max.15	9,000–16,000 mPa·s (Rheometer, 20 °C, C 35/1°, 100 s^{-1})	60 in isop. HC 170–200	Undercoatings, silk-gloss and mat enamels with good flow properties	✓	✓
WorléeKyd S 549	50	Soya oil	27	max. 10 (40% in ws 145–195) max. 10 (45% in ws 135–175)	max.15	50–65 (40% in ws 145–195) 100–130 (45% in ws 135–175)	55 in ws 145–195 55 in ws 135–175	Fast drying automotive and machinery refinishing enamels	✓	✓
WorléeKyd SO 554	55	Soya oil	15	max. 10 (40% in isop. HC 170–200)	max.10	max.10 70–100 (40% in isop. HC 170–200)	55 in isop. HC 170–200	Fast drying, low odour, dearomatized machinery ind. and D.I.Y. paints	✓	
WorléeKyd V 162	41	Special fatty acids	28	max. 10 (40% in ws 145–195)	max.20	Viscosity: 3,000–7,500 mPa·s (Rheometer, 20 °C, C 35/1°, 250 s^{-1})	55 in ws 145–195/ xylene	Extremely fast drying car refinishing, machinery and industrial paints with high gloss, good through drying	✓	✓
WorléeKyd V 162 nv	43	Special fatty acids	23	max. 10 (50% in ws 135–175)	max.10	130–150 (50% in ws 135–175)	60 in ws 135–175	Extremely fast drying car refinishing, machinery and industrial paints with high gloss, good through drying. High quality industrial, vehicle and car body	✓	✓
WorléeKyd V 543	50	Special fatty acids	24	max. 10 (40% in ws 145–195)	max.15	50–70 (40% in ws 145–195) 80–120 (40% in ws 145–195)	55 in ws 145–195/ xylene 55 in ws 145–195	Fast drying car refinishing, machinery and industrial paints with high gloss, good through-drying	✓	✓

B | WorléeKyd

Alkyd resins, solvent-based, long-oil, air-drying

Type	Oil [%] in approx.	Oil type	Phth. anhyd. [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeKyd AC 6030	60	Special vegetable fatty acids		max. 5 (70% in dearomat. HC 160–200)	max. 10	65–105 (70% in dearomat. HC 160–200)	85 in dearomat. HC 160–200	Acrylated alkyd resin with good and yellowing resistance, mainly for the use in low VOC house and decorative paints	✓	
WorléeKyd B 865	65	Cotton/ Soya	22	max. 10 (50% in ws 145–195)	max. 15	70–90 (50% in ws 145–195)	60 in ws 145–195	High quality house, decorative and D.I.Y.-paints with good flow, high gloss, good outdoor resistance	✓	✓
WorléeKyd B 865 nv	65	Special vegetable fatty acids	22	max. 10 (50% in dearomat. HC 160–200)	max. 15	40–50 (dearomat. HC 160–200)	65 in dearomat. HC 160–200		✓	✓
WorléeKyd B 868	68	Vegetable fatty acids	21	max. 10 (50% in dearomat. HC 160–200)	max. 15	20–40 (50% in dearomat. HC 160–200)	70 in dearomat. HC 160–200	High quality gloss paints, excellent brushability, gloss retention and good drying properties	✓	✓
WorléeKyd R 6048	68	Vegetable fatty acids		max. 10	max. 15	Viscosity: 2,500–6,500 mPa·s (Rheometer, 20 °C, C 35/1°, 250 s^{-1})	75 in dearomat. HC 160–200	Long-oil low-viscosity drying alkyd based on vegetable fatty acids for high quality air-drying gloss paints	✓	✓
WorléeKyd B 870	69	Vegetable fatty acids	21	max. 10 (60% in isop. HC 170–200) max. 10 (60% in dearomat. HC 160–200) max. 10 (60% in dearomat. HC 180–200)	max. 15	90–130 (60% in isop. HC 170–200) 60–80 (60% in dearomat. HC 160–200) 100–125 (60% in dearomat. HC 180–200)	75 in isop. HC 170–200 75 in dearomat. HC 160–200 75 in dearomat. HC 180–220	House paints with good brushability, high film build, good flow and excellent gloss retention	✓	✓
WorléeKyd E 55	63	Special fatty acids, urethane-modified	17	max. 10 (60% in ws 145–195) max. 10 (55% in dearomat. HC 160–200)	max. 10	200–300 (60% in ws 145–195) 50–80 (55% in dearomat. HC 160–200)	70 in ws 145–195 70 in dearomat. HC 160–200	In comb. with medium-oil alkyds for high quality car repair finishes and industrial paints	✓	✓
WorléeKyd L 7904	79	Linseed oil		max. 10 (del. form)	max. 15	Viscosity: approx. 100% 8,000–10,000 mPa·s (20 °C, Haake Rotovisko, C 35/1, D = 250 s^{-1})	approx. 100	High solid clear lacquers, wood glazings, and high solid primers	✓	✓
WorléeKyd L 8004	80	Linseed oil		max. 10 (del. form)	max. 15	30–40 (70% in dearomat. HC 160–200)	approx. 100	Very low viscous alkyd resin for wood impregnation and wood glazings	✓	✓
WorléeKyd P 151	64	Special fatty acids	22	max. 10 (80% in ws 145–195)	max. 10	130–190 (80% in ws 145–195)	approx. 100	Very low viscous, for high conc. pigment preparations, very good compatibility properties	✓	✓

B | WorléeKyd

Alkyd resins, solvent-based, long-oil, air-drying

Type	Oil [%] in approx.	Oil type	Phth. anhyd. [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeKyd RL 1290	90	Linseed oil		max. 15	max. 15	Viscosity: 500 mPa·s (Rheometer, 20 °C, C 35/1°, 250 s^{-1})	approx. 100	Extremely low viscous alkyd resin, especially suitable for the manufacture of low VOC and VOC-free parquet-, terrace- and maintenance oils and also of wood stains and glazings; it shows especially very good penetration, permanent elasticity and weather resistance	✓	✓
WorléeKyd RS 2174	74	Special fatty acids		< 10	max. 6	Viscosity: < 750 mPa·s (Rheometer, 20 °C, C 35/1°, 250 s^{-1})	solvent-free	Combination resin for other alkyd resins, improving penetration, decreasing viscosity, VOC reduction, sole binder for wood care and coating products	✓	✓
WorléeKyd S 6400 hv	63	Soya oil	26	max. 10 (50% in dearomat. HC 160–200) max. 10 (50% in dearomat. HC 180–220)	max.12	120–150 (50% in dearomat. HC 160– 200) 120–150 (50% in dearomat. HC 180–220)	60 in dearomat. HC 160–200 60 in dearomat. HC 180–220	Consumer, decorative, D.I.Y.- and anti-corrosive paints	✓	✓
WorléeKyd S 7304	73	Soya oil		max. 8 (del. form)	max.11	Viscosity: 47,000–55,000 mPa·s (20 °C, Haake Rotovisko, C 35/1°, D = 50 s -1)	approx. 100	Low viscous, air-drying, long-oil alkyd resin for decorative and house paints, low VOC	✓	✓
WorléeKyd SB 6401	64	Special fatty acids		max. 10 (70% in dearomat. HC 180–220	max.18	80–120 (70% in dearomat. HC 180–220)	90 in dearomat. HC 180–220	Low viscous, air-drying, long-oil alkyd resin for decorative and house paints, low VOC	✓	
WorléeKyd SC 965	65	Special vegetable fatty acids	22	max. 10 (50% in dearomat. HC 180–220)	max.15	35–50 (50% in dearomat. HC 180–220)	70 in dearomat. HC 180–220	High quality house paints, very good brushability, flow and levelling, high gloss	✓	✓
WorléeKyd SD 7003	70	Special vegetable fatty acids		max. 10 (60% in dearomat. HC 160–200)	max.15	Viscosity: 2.000–4.000 mPa·s (20°C, Rheometer, C 35/1°, 250 s^{-1})	85 in dearomat. HC 160–200	Low viscous, air-drying, long-oil alkyd resin for decorative and house paints, low VOC	✓	
WorléeKyd SD 8300	83	Special fatty acids		max. 10 (del. form)	max.15	Viscosity, Rheometer, 20 °C, C 35/1°, 100 s^{-1}: 3.000–6.000 mPa·s	approx. 100	Low viscous, air-drying, long-oil alkyd resin for decorative and house paints, low VOC, especially suitable as combination partner for other alkyd resins	✓	✓
WorléeKyd T 7800	78	Special vegetable fatty acids		< 10 (del. form)	max.15	Viscosity, Rheometer, 20 °C, C 35/1°, 100 s^{-1}: 6,500–12,000 mPa·s	approx. 100	Low viscous, air-drying, long-oil alkyd resin for house paints, glazings, D.I.Y.- and anticorrosive-paints	✓	

B | WorléeKyd

Alkyd resins, solvent-based, long-oil, urethane-modified

Type	Oil [%] in approx.	Oil type	Phth. anhyd. [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeKyd B 865 U	62	Vegetable fatty acids	16 15	max. 10 (50% in ws 145–195) max. 10 (50% in isop. HC 170–200) max. 10 (50% in dearomat. HC 180–220) max. 10 (50% in dearomat. HC 160–200)	max. 10	70–100 (50% in ws 145–195) 80–100 (50% in isop. HC 170–200) 80–100 (50% in dearomat. HC 180–220) 70–90 (50% in dearomat. HC 160–200)	55 in ws 145–195 55 in isop. HC 170–200 55 in dearomat. HC 180–220 55 in dearomat. HC 160–200	Urethane-modified, for wood varnishes, floor coatings and industrial primers and top coats	✓	✓
WorléeKyd B 865 U nv	62	Vegetable fatty acids	17	max. 8 (50% in dearomat. HC 180–220)	max. 10	45–60 (50% in dearomat. HC 180–220)	60 in dearomat. HC 180–220	Urethane-modified, for wood varnishes, floor coatings and industrial primers and top coats	✓	✓
WorléeKyd S 5703	57	Soya oil fatty acids	21	max. 5 (45% in ws 145–195) max. 8 (50% in dearomat. HC 180–200) max. 10 (del. form)	max. 10	Viscosity: 5,000–7,000 mPa·s (Lff.,20 °C, DIN 53015) 40–55 (45% in dearomat. HC 160–200) Viscosity, Rheometer, 50% in dearomat. HC 180–220, 20 °C, C 35/1°, 250 s^{-1}, 2,000–5,000 mPa·s	55 in ws 145–195 55 in dearomat. HC 160–200 55 in dearomat. HC 180–220	Aliphatic urethane-modified alkyd resin, use as B 865 U with better yellowing resistance	✓	
WorléeKyd S 6003	60 59	Soya oil fatty acids	19 16 18	max. 10 (del. form) max. 10 (del. form) max. 10 (40% in dearomat. HC 180–220)	max. 5	Viscosity, Rheometer, 20°C, C 35/1°, 500/s^{-1}, 1,500–6,000 mPa·s Viscosity, Rheometer, 20°C, C 20/2°, 80/s^{-1}, 1,700–3,500 mPa·s 30–50 (40% in dearomat. HC 180–220)	51 in dearomat. HC 160–200 50 in isop. HC 150–180 50 in dearomat. HC 180–220	Use as B 865 U with faster drying and harder film properties	✓	
WorléeKyd S 6003 hv	59	Soya oil fatty acids	18	max. 10 (40% in dearomat. HC 160–200)	max. 5	30–40 (40% in dearomat. HC 160–200)	50 in dearomat. HC 160–200	Use as S 6003 with even faster drying	✓	
WorléeKyd SD 6403	64	Soya oil fatty acids	12	max. 6 (del. form)	max. 10		55 in dearomat. HC 160–200	Special urethane-modified alkyd resin with good adhesion properties e.g. for renovation coatings on UV parquet sealers	✓	✓

B | WorléeKyd

Alkyd resins, solvent-based, long-oil, urethane-modified

Type	Oil [%] in approx.	Oil type	Phth. anhyd. [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeKyd SD 6803	68	Special vegetbale fatty acids		max. 10 (60% in dearomat. HC 160–200) max. 10 (60% in dearomat. HC 180-220)	max. 15	Viscosity, Rheometer, 20 °C, C 35/1°, 250 s^{-1}, 7000–10,000 mPa·s Viscosity, Rheometer, 20 °C, C 35/1°, 250 s^{-1}, 7,000–10,000 mPa·s	75 in dearomat. HC 160–200 75 in dearomat. HC 180–220	Low viscous, urethane alkyd resin for decorative and house paints, low VOC, especially suitable as combination partner to improve drying, through drying and hardness	✓	
WorléeKyd V 5241 U	81	Linseed oil		max. 6 (del. form)	max. 3	Viscosity: 10,000–15,000 mPa·s (Lff., 20 °C, DIN 53015)	approx. 100	Low viscous, oil-modified polyurethane for high-solid environmentally friendly coating systems	✓	✓

B | WorléeKyd

Alkyd resins, solvent-based, stoving/reactive/NC-combination

Type	Oil [%] in approx.	Oil type	Phth. anhyd. [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeKyd C 628	28	Saturated fatty acids	47	max. 10 (50% in xylene)	max. 15	40–60 (50% in xylene)	70 in xylene	High quality non yellowing stoving enamels, NC-and PU-coatings, colourless and pigmented, OH-content (on solids) 2.0–2.4%	✓	
WorléeKyd C 632 M	32	Specially modified fatty acids	37	max. 10 (50% in BuAc)	max. 18	40–60 (50% in BuAc)	65 in BuAc	NC-lacquers with properties as acid curing systems but without formaldehyde, aromatic free, hydroxyl-content (on solids) 2.7–3.3%	✓	
WorléeKyd C 640	38	Saturated fatty acids	37	max. 10 (50% in xylene)	max. 15	40–60 (50% in xylene)	60 in xylene	NC-lacquers with fast solvent release, good yellowing resistance and recoatability for paper and wood	✓	✓
WorléeKyd C 641	42	Saturated fatty acids	32	max. 10 (60% in BuAc)	max. 15	60–80 (50% in BuAc)	80 in BuAc	High quality NC-lacquers and one compo- nent acid curing finishes with high film build and fast solvent release, forwood, foil and paper	✓	✓
WorléeKyd CD 32	32	Special fatty acids	48	max. 8 (45% in xylene)	25–40	80–130 (45% in xylene)	60 in xylene	In combination with suitable amino resins for very reactive primers and top coats with good storage stability, crosslinking with isocyanate is also possible, OH-content (on solids) 2.6–3.0%	✓	
WorléeKyd M 932	32	Vegetable fatty acids	38	max. 10 (40% in xylene)	max. 18	40–60 (40% in xylene)	60 in xylene	Stoving primers and topcoats with high reactivity and good mechanical properties. Excellent viscosity stability, stoving cond. 100–140 °C	✓	
WorléeKyd RM 232	32	Conjug. and saturated fatty acids	37	max. 10 (50% in xylene)	max. 15	100–120 (50% in xylene)	60 in xylene	Enamel basecoats and topcoats with medium reactivity and good mechanical properties, curing conditions: 30 min/ 130 °C or 10min/160 °C	✓	✓
WorléeKyd SH 380	38	Special fatty acids	34	max. 10 (60% in BuAc)	max. 15	90–110 (60% in BuAc)	70 in BuAc	Highly reactive SH lacquers, good elasticity, durability and sufficient pot life, NC-compatible, NCO-crosslinkable	✓	✓
WorléeKyd SM 400	34	Drying vegetable fatty acids	30	max. 10 (50% in xylene)	max. 20	90–110 (50% in xylene)	60 in xylene	In combination with amino resins for high reactive stoving primers and top coats	✓	✓

B | WorléeKyd

Alkyd resins, solvent-based, stoving/reactive/NC-combination

Type	Oil [%] in approx.	Oil type	Phth. anhyd. [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeKyd SM 426	26	Drying vegetable fatty acids	40	max. 10 (50% in xylene)	max. 15	90–110 (50% in xylene)	60 in xylene	In combination with amino resins for high reactive stoving primers and top coats	✓	✓
WorléeKyd T 735	36	Tall oil	35	max. 10 (50% in xylene)	max. 15	60–70 (50% in xylene)	60 in xylene	Stoving primers and topcoats with medium reactivity and good mechanical properties, curing conditions: 10 min/160 °C or 30 min/130 °C	✓	

B | WorléeThix

Alkyd resins, acrylic resins, solvent- or water based, thixotropic

Type	Oil [%] in approx.	Oil type	Phth. anhyd. [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Viscosity, optical	Form of delivery [%]	TSCA	DSL
WorléeThix A 1420		2.0% OH-content		approx. 1 (del. form)	max. 12	Thixotropic soft gel	50 in BuAc	✓	
WorléeThix A 2125		2.5% OH-content		max. 1 (del. form)		Thixotropic gel	50 in xylene	✓	
WorléeThix A 2126		approx. 2.3% OH-content approx. 2.6% OH-content		approx. 1		Thixotropic gel	60 in xylene 60 in 1-met oxy-2-propyl acetate 60 in BuAc	✓	
WorléeThix A 2313		1.3% OH-content		approx. 1 (del. form)		Thixotropic soft gel	60 in aromat. HC 155–180	✓	
WorléeThix D 46	40			max. 10 (del. form)	max. 4	Thixotropic soft gel	50 in xylene	✓	
WorléeThix L 7904	79	Linseed oil	18	max. 10 (del. form)	max. 15	Thixotropic strong gel	94 in xylene	✓	
WorléeThix L 8050	80	Linseed oil fatty acids		max. 10 (del. form)	max. 15	Thixotropic soft gel	100	✓	
WorléeThix MH 439	39	Special fatty acids	32	max. 10 (del. form)	max. 25	Thixotropic strong gel	60 in xylene	✓	
WorléeThix S 6357	64	Soya oil	24	max. 6 (del. form)	max. 15	Thixotropic gel	40 in ws 180–210 40 in dearomat. HC 180–220	✓	
WorléeThix S 6358	64	Soya oil	24	max. 6 (del. form)	max. 15	Thixotropic gel	50 in dearomat. HC 180–220	✓	

B | WorléeThix

Alkyd resins, solvent based, thixotropic

Type	Oil [%] in approx.	Oil type	Phth. anhyd. [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Viscosity, optical	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeThix S 6657	63	Soya oil fatty acids	19	max. 10	max. 15	Thixotropic soft gel	60 in dearomat. HC 180–220	Thixotropic long oil alkyd is especially suitable for the manufacture of anticorrosive primers, decorative and building paints as well as for thick layer wood glazings	✓	
WorléeThix S 6658	66	Special fatty acids	20	max. 10	max. 15	Thixotropic soft gel	70 in dearomat. HC 180–220	Thixotropic long oil alkyd alkyd for the manufacture of anticorrosive primers, decorative and building paints as well as especially wood glazings	✓	
WorléeThix SD 6051	60	Special fatty acids	23	max. 10 (del. form)	max. 15	Thixotropic gel Thixotropic gel	55 in dearomat. HC 160–200 55 in dearomat. HC 180–220	As V 747, but with improved resistance against polar substances	✓	✓
WorléeThix 670 hs	61	Special mixed fatty acids	21	max. 10 (del. form)	max. 15	Thixotropic gel	70 in dearomat. HC 160–200 70 in dearomat. HC 180–220	Thixotropic long-oil alkyd for primers, fillers, gloss and silk gloss coatings, low VOC	✓	✓
WorléeThix V 727	63	Special mixed fatty acids	23	max. 10 (del. form)	max. 15	Thixotropic gel	52 in ws 180–210 52 in isop. HC 170–200 52 in dearomat. HC 180–220	Thixotropic long oil alkyd for undercoats, gloss and silk gloss paints, wall paints, as well as wood stain and rust protection paints	✓	
WorléeThix V 747	64	Special fatty acids	23	max. 7 (del. form)	max. 15	Thixotropic gel	52 in isop. HC 170–200 52 in dearomat. HC 180–220	Thixotropic long-oil alkyd for primers, mat wall and silk gloss paints and thixotropic glossy decorative and protective house paints	✓	
WorléeThix V 800	62	Special mixed fatty acids	18	max. 10 (del. form) max. 6 (del. form)	max. 10	Thixotropic gel Thixotropic soft gel	50 in dearomat. HC 160–200 40 in isop. HC 170–200	Thixotropic, urethane-modified long-oil alkyd for thick layer coatings, wood glazings and lacquers, temperaturestable and resistant against polar solvents	✓	

B | WorléeSol E

PU-modified alkyd emulsions, water-thinnable

Type	Oil [%]	Acid value DIN EN ISO 3682 [mgKOH/g]	pH value DIN 53785	Viscosity, Rheometer, 20 °C, C 60/2°, 5 s^{-1} [mPa·s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeSol E 150 W	44	max. 30	7.0–8.0	50–1,500	40 in water	Medium-oil alkyd emulsion for high gloss decorative, D.I.Y.- and industrial-paints, most versatile type	✓	✓
WorléeSol E 330 W	33	15–20	7.5–8.5	max. 10,000	40 in water	Short-oil alkyd emulsion for (drier-free based) anticorrosive primers and top coats	✓	✓
WorléeSol E 530 W	53	max. 38	7.0–8.5	max. 10,000	40 in water	Medium-oil alkyd emulsion for fast drying wood paints and lacquers	✓	✓
WorléeSol E 927 W	27	max. 30	6.8–7.5	max. 10,000	40 in water	Short-oil alkyd emulsion for fast curing wood coatings of all types (also drier-free)	✓	✓
WorléeSol SE 420 W	42	max. 30	7.0–8.5	max. 5,000	40 in water	Medium-oil silicone modified alkyd emulsion for high gloss paint systems (also decorative) with excellent outdoor resistance	✓	

B | WorléeSol NW

Alkyd emulsions, water-thinnable

Type	Oil [%]	Density DIN 51757 [g/cm^3]	Viscosity Rheometer, 20 °C, C 60/2°, 5 s^{-1} [mPa·s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeSol NW 474	74	1.013	max. 1,500	60 in water	Amine and co-solvent-free alkyd emulsion for wood impregnations and wood protecting paints, also suitable as a co-binder to improve open time and filling properties of decorative paints	✓	✓
WorléeSol NW 521	26	1.040	max. 1,000	40 in water/ propylenglycol/ Dowanol PnB	Short-oil alkyd emulsion for the production of air-drying, cobalt free decorative paints	✓	✓

B | WorléeSol

Alkyd resins, water-thinnable, air-drying and low bake

Type	Oil [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Density DIN 51757 [g/cm³]	Viscosity, Rheometer, 20 °C, C 60/2°, 200 s⁻¹	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeSol 07 A	37	max. 10	35–45 (50% in BG)	1.03	18,000–35,000* mPa·s	75 in BG/sec. butanol 1:1	Air-drying and low bake industrial primers and top coats, low viscous, very fast dust free drying, early water resistance	✓	
WorléeSol 30		max. 15	max. 20 (pH 4–5) (50% in water)	1.02	500–1,200 mPas	100	Water-soluble modified linseed oil type, readily reducible with water, for printing inks, as additive for latex paints, tinting and artist colours and pigment pastes	✓	✓
WorléeSol 31 A	90	max. 10 (del. form)	85–115	0.99	350–900 mPas	45 in water/ BG 80:20	Water-dispersible linseed oil polymer, readily reducible with water for in- and outdoor stains and wood preservatives, extremely good penetration and outdoor resistance	✓	✓
WorléeSol 31 C	90	10	90–140	1.0	1,000–2,000 mPas	45 in water/ PnB 8:2	Water-dispersible linseed oil polymer, readily reducible with water for in- and outdoor stains and wood preservatives, extremely good penetration and outdoor resistance	✓	✓
WorléeSol 37	90	max. 15	55–80	0.998	230**	59 in water/ BG	Modified linseed oil polymer for wood protection systems, excellent penetration and weather resistance on different woods and long term elasticity	✓	✓
WorléeSol 61 A	30	max. 10 (50% in BG)	35–45	1.06	70–90** (50% in BG)	75 in BG/sec. butanol 1:1	Air-drying and low bake industrial primers and top coats, very fast drying, excellent corrosion resistance	✓	

* Rheometer, 20 °C, C35/1°, 50 s⁻¹ **Flow time 20°C DIN 53211-4 [s]

B | WorléeSol

Alkyd resins, water-thinnable, air-drying and low bake

Type	Oil [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Density DIN 51757 [g/cm³]	Flow time 20°C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeSol 61 E	30	max. 10 (50% in BG)	35–50	1.07	50–70 (50% in BG)	75 in ethoxy propanol	Air-drying and low bake industrial primers and top coats, very fast drying, excellent corrosion resistance	✓	
WorléeSol 61 F	30	max. 10 (50% in PnB)	40–50	1.05	70–90 (50% in PnB)	70 in Dowanol PnB	Air-drying and low bake industrial primers and top coats, very fast drying, excellent corrosion resistance	✓	
WorléeSol 61 P	30	max. 10 (del. form)	35–45	1.06	6,000-20,000** mPa·s (23 °C)	60 in water/ BG/sec. butanol	61 version fully neutralized with ammonia	✓	
WorléeSol 65 A	30	max. 10 (45% in BG)	30–40	1.05	50–70 (45% in BG)	70 in solvent mix: BG/ sec. butanol/ Dowanol PnB	Air-drying and low bake industrial primers and top coats, very fast drying, early water resistance, suitable for agricultural machinery paints	✓	✓
WorléeSol 68 A	32	max. 10 (50% in BG)	35–45	1.07	50–100 (50% in BG)	75 in BG	Silicone-modified alkyd resin for air-drying and stoving systems with excellent weather, heat and humidity resistance	✓	
WorléeSol 84 C	30	max. 10 (del. form)	6.7–8.5	1.06	1,000–20,000*	44 in water/ BG (1,0%) (DMEA neutr.)	For waterborne stoving systems, high gloss, good mechanical properties, total cosolvent content < 1%	✓	
WorléeSol 85 A	30	max. 10 (del. form)	6.7–8.5	1.06	6,000–20,000***	43 in water/ BG (5,5%) (DMEA neutr.)	As WorléeSol 84, but more reactive	✓	

*Rheometer, 20 °C, C 60/2°, 30 s⁻¹ **Brookfield ISO 2555 ***Rheometer, 20 °C, C 60/2°, 5 s⁻¹

B | WorléePol

Polyester, water-thinnable, oil-free, saturated

Type	Acid value DIN EN ISO 3682 [mgKOH/g	Color DIN ISO 4630, Gardner	OH content on solids [%]	Density DIN 51757 [g/cm³]	Viscosity 20 °C, del. form [mPa·s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléePol 191	45–60	max. 10 (50% in BG)	approx. 4.3	1.10	45–70 (50% in BG, DIN 53211-4/ 20 °C	80 in BG	Branched saturated polyester resin for waterborne industrial stoving systems	✓	
WorléePol 194	48–58	clear to slightly opaque	approx. 3.7	1.075	< 20,000**	40 in water + BG (2,1%)	Branched saturated polyester resin for waterborne stoving primers, fillers and top coats with low voc. pH =7.5–8.5, very reactive	✓	
WorléePol 808	max. 25	max. 3 (del. form)	approx. 7.0	1.20	15,000–25,000* (25 °C)	100	Low viscous, with high reactivity, for amine free water-based stoving paints on metal, aluminium foil, paper and plastics, also suitable for printing inks	✓	
WorléePol V 450	max. 15	max. 3 (del. form)	approx. 8.5	1.18	500–700* (25 °C)	90 in water	Similar to WorléePol 808 but higher reactivity, better stability, higher water tolerance and lower viscosity, also suitable for printing inks	✓	

*DIN 53015 **Rheometer, 20 °C, C 35/1°, 25 s⁻¹

B | WorléePol

Polyester/ether-polyols, solvent-free, saturated

Type	Viscosity 23 °C, del. form. DIN 53015 [mPa·s]	OH value DIN EN ISO 4629 [mgKOH/g]	Acid value EN ISO 3682 [mgKOH/g]	Water content DIN 51777, Teil 1, Karl Fischer [%]	Main uses/principal characteristics	TSCA	DSL
WorléePol 165	3,000–4,000	150–170	max. 2	max. 0.2	WorléePol 165 is a low viscous and solvent-free branched polyol with ester and ether groups and is mainly used for the formulation of solvent-free coatings, sealings and adhesives in combination with modified polyisocyanates	✓	✓
WorléePol 230	2,500–3,500	220–240	max. 2	max. 0.2	WorléePol 165 is a low viscous and solvent-free branched polyol with ester and ether groups and is mainly used for the formulation of solvent-free coatings, sealings and adhesives in combination with modified polyisocyanates	✓	✓
WorléePol 1181/03	1,700–2,700 (25 °C)	310–350	max. 2	max. 0.1	Saturated low viscous polyester resin, due to its wide compatibility suitable for various systems, e.g. as modifying component for solvent and water-based isocyanate and amino resin crosslinking coatings to improve flexibility, flow, chemical and mechanical resistance and to increase solids content, corresponds to FDA § 175.300	✓	
WorléePol 1181/09	1,500–3,000 (25 °C)	310–350	max. 2	max. 0.1	Saturated low viscous polyester resin, due to its wide compatibility suitable for various systems, e.g. as modifying component for solvent and waterbased isocyanate and amino resin crosslinking coatings to improve flexibility, flow, chemical and mechanical resistance and to increase solids content, excellent weather resistance	✓	

B | WorléePol

Polyester, solvent-based, saturated

Type	OH value DIN EN ISO 4629 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Acid value EN ISO 3682 [mgKOH/g]	Color DIN ISO 4630, Gardner	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléePol 6631	8.0	20,000–30,000 mPa·s (Lff, Brookfield, ISO 2555)	max. 3	max. 3	67 in methoxy propylacetate	Saturated type for air-drying two pack PU-coatings	✓	✓

B | WorléeDur

Epoxy esters, solvent-based drying

Type	Oil [%] in approx.	Oil type	EP-resin [%]	Color DIN ISO 4630, Gardner	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Form of delivery [%]	Main uses/principal characteristics	TSCA	DSL
WorléeDur D 46	40	Conj. fatty acids	60	max. 10 (50% in xylene)	max. 4	200–250 (50% in xylene)	60 in xylene	High quality zinc rich and anti corrosive paints, air-drying and stoving primers and top coats, fast air-drying and excellent water resistance	✓	
WorléeDur MF 45	40	Tall oil/ tung oil	60	max. 20 (50% in xylene)	max. 6	200–250 (50% in xylene)	60 in xylene	Zinc rich and anti corrosive paints with excellent water resistant and rust preventing, good brushability	✓	✓
WorléeDur D 6311	63	specially modified		max. 10 (Delivery form)	max. 2	3.000–4.000 mPa·s Viscosity, Rheometer 20 °C, C 35/1°, 100 s^{-1} 3.000–4.000 mPa·s Viscosity, Rheometer 20 °C, C 35/1°, 100 s^{1} 3.500–5.000 mPa·s Viscosity, Rheometer 20 °C, C 35/1°, 500 s^{1}	60 in entaro-mat. KW 140–165 Viscosity 60 in ws 145–195 60 in dearo-mat. KW 160–200	Universal anti-corrosion primers, adhesion primers and one-coat paints, very good adhesion on problematic substrates	✓	

B | WorléeFen

Rosin-based hard resins, phenol-modified

Type	Melting point Capillary method [°C]	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Color DIN ISO 4630, Gardner	M.O.T. [%]	Main uses/principal characteristics	TSCA	DSL
WorléeFen F 105	90–110	15–25	20–30 (50% in ws 145–195)	max. 10 (50% in ws 145–195)	300	General purpose type for alkyd-based paints and primers, low viscous resin giving excellent gloss and rub resistance on cold set inks	✓	✓
WorléeFen F 130	120–140	15–25	120–170 (60% in xylene)	max. 10 (60% in xylene)		Cold cut modifying resin for paints with good drying properties and high gloss	✓	✓

B | WorléeSin

Rosin-based maleic resins and rosin esters

Type	Melting point Capillary method [°C]	Acid value DIN EN ISO 3682 [mgKOH/g]	Flow time 20 °C DIN 53211-4 [s]	Color DIN ISO 4630, Gardner	Main uses/principal characteristics	TSCA	DSL
WorléeSin GM 201	95–120	20–25	25–50 (50% in ws 145–195)	max. 8 (50% in ws 145–195)	General purpose resin for modification of oil, alkyds and paints based up on them, as a cold cut or to be polymerised with oils and alkyds	✓	✓
WorléeSin GM 203	100–125	20–25	25–50 (50% in ws 145–195)	max. 8 (50% in ws 145–195)	General purpose resin for modification of oil, alkyds and paints based up on them, as a cold cut or to be polymerised with oils and alkyds	✓	✓
WorléeSin PM 200	95–115	15–25	20–40 (50% in ws 145–195)	max. 8 (50% in ws 145–195)	Low viscosity penta esterified resin for gloss improvement for house and industrial paints and dispersing media for pigment pastes and preparations	✓	
WorléeSin PM 202	100–125	15–20	30–60 (50% in ws 145–195)	max. 8 (50% in ws 145–195)	Penta esterified general purpose resin for decorative, do-it-yourself and industrial paints, also used for furniture adhesives	✓	✓
WorléeSin MK 223	90–110	40–50	80–120 (60% in BuAc)	max. 8 (60% in BuAc)	With castor oil plasticized, for NC-lacquers with very good solvent release and sandability	✓	
WorléeSin MS 265	155–190	190–220	15–25 (50% in ethanol)	max. 8	For alcohol and water-based paints and lacquers, flexo and gravure inks, overprint varnishes, compatible with acrylic polymers and NC, soluble in water after neutralization, FDA 175.105, 175.300	✓	✓

B | WorléeCop

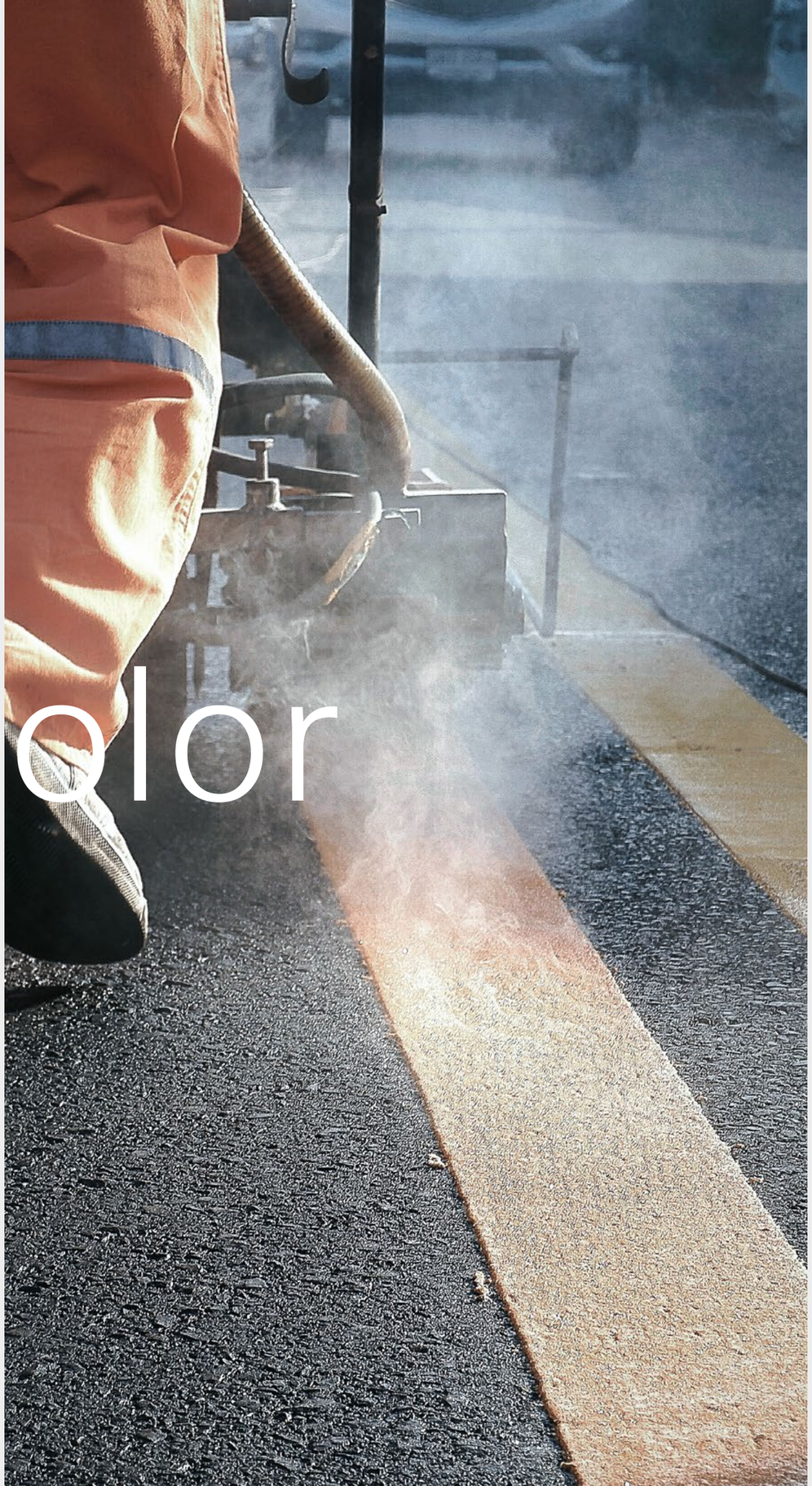
Styrene-butadienecopolymer

Type	Solids	Viscosity [mPas]	pH value [mPa·s]	Main uses/principal characteristics	TSCA	DSL
WorléeCop 100	50.0 ± 1.0	50–400	8.0–8.6	Binding agent in aqueous anticorrosive automotive coatings where resistance against pebble/gravel is required, often in combination with water soluble or water-thinnable resins	✓	✓

Color

For a world filled with color

C as in Color. What would the world be without color? Since time immemorial, pigments of all sorts have helped shape our lives and our culture. Color often fulfils particular functions, but above all, they affect us humans on an emotional level that would be unimaginable for other chemical raw materials. Color can enhance the essential nature of your end products in many ways. Along with wood shades and fluorescent colors, we offer a comprehensive range of colouring products from masterbatch granulates to colored carbon blacks to colorful glass flakes for a wide variety of applications.



Color

C | WorléeTransoxid W

Water-based transparent iron oxide and carbon black preparations

Type	C.I.	Pigment content [%] approx.	pH value approx.	VOC [g/l] approx.	Density [g/cm³] approx.	Viscosity [mPa·s]	Applications/Properties	TSCA	DSL
WorléeTransoxid W red	PR 101	40	8–10	< 50	1.45	approx. 600	Transparent, water-based iron oxide preparations and carbon black pastes for wood stains	✓	✓
WorléeTransoxid W yellow	PY 42	40	8–10	< 50	1.43	400–800		✓	✓
WorléeBlackpaste W	PBI 7	40	7.5–9	< 5	1.21	approx. 1,500		✓	✓

C | WorléeTransoxid S

Solvent-based transparent iron oxide, carbon black and titanium dioxide preparations

Type	C.I.	Pigment content [%] approx.	VOC [g/l] approx.	Density [g/cm³] approx.	Viscosity [mPa·s]	Applications/Properties	TSCA	DSL
WorléeTransoxid S red	PR 101	39.0 ± 1	430–450	1.31	400–800	Transparent, solvent-based iron oxide and carbon black preparations for wood stains, MeKo-free	✓	✓
WorléeTransoxid S yellow	PY 42	39.0 ± 1	430–450	1.27	300–800		✓	✓
WorléeBlackpaste S	PBI 7	25.0 ± 2	420–440	1.01	500–1,500			
WorléeWhitepaste S	PW 6	65.0 ± 2	approx. 430	1.7	approx. 1,000		✓	✓

C | WorléeTransoxid SF-AK

Solvent-based transparent iron oxide, carbon black and titanium dioxide preparations

Type	C.I.	Pigment content [%] approx.	Density [g/cm³] approx.	Viscosity [mPa·s]	Applications/Properties	TSCA	DSL
WorléeTransoxid SF-AK Red	PR 101	30	1.06	1,200	Transparent iron oxide and carbon black preparations based on solvent-free binders for wood stains, MeKo-free	✓	✓
WorléeTransoxid SF-AK Yellow	PY 42	30	1.06	2,800		✓	✓
WorléeBlackpaste SF-AK	PG 7	15	1	1,500		✓	✓

C | WorléePaste S-AK

Solvent-based pigment preparations for wood stains

Type	C.I.	Pigment content [%] approx.	VOC [g/l] approx.	Density [g/cm³] approx.	Viscosity [mPa·s]	Applications/Properties	TSCA	DSL
WorléePaste S-AK 412	PV 23	20.0 ± 1	510	0.91	1,500	Solvent-based pigment preparations for the wood stain area, MeKo-free	✓	
WorléePaste S-AK 512	PB 15:2	20.0 ± 1	512	0.91	1,500		✓	✓
WorléePaste S-AK 610	PG 7	20.0 ± 2	475	0.96	1,800		✓	✓

C | WorléeQuarzsand AS

Electroconductive quartz

Type	Color	Electrical resistance [ohm]	Particle size [mm]	TSCA	DSL
WorléeQuarzsand AS 0104	Black	< 500	0.1–0.4	✓	✓
WorléeQuarzsand AS 0408	Black	< 500	0.4–0.8	✓	✓

We are committed to forward-looking and prudent environmental protection and to preventive and comprehensive occupational health and safety as a corporate goal.

We are convinced that the natural goods water, air and soil must be treated carefully as a part of our responsible business practices. In this way, the ecosystem in which we live can be preserved as the basis of life for future generations as well. This particularly applies to the economical and efficient use of energy and natural resources.

We stand by our responsibility to provide safe and secure production, storage and transport. We ensure that our products are handled conscientiously along the entire value-added chain.

We are mindful that our corporate mission statement is both a commitment and a responsibility. All Worlée-Chemie employees are obliged to observe our principles of conduct and management. With their own objectives and personal practices, our managers and employees all work equally to implement our mission statement into their everyday work and to further develop our company.

Compliance with human rights due diligence is a matter of course for our company. We believe that integrity, fairness, responsibility and a high level of transparency form the basis for a trustful and long-term business relationship.

Our suppliers further down the supply chain are expected to adhere to these principles as well and to accept our code of conduct for suppliers or to present equivalent guidelines.

The sustainability factors that guide our product evaluations and development

Sustainable product development has been with us for a very long time. Even without legal or social pressure, we have always felt driven to be able to offer better and more durable products and solutions for a wide range of applications. The development of high-quality products in cooperation with our customers remains our top priority.

Over the decades, with the development of different resin technologies based on a variety of raw materials, we have been able to gather a great deal of experience regarding how to increase product sustainability from different perspectives. Sustainable product development must ultimately benefit the environment and society, but economic aspects also have to be considered. The entire supply chain must benefit. Our established development processes already take many of these aspects into consideration and are effective in making resins and additives increasingly sustainable. For example, we can take factors into account such as the renewable raw material content, the proportion of secondary raw materials, regionality and longevity, the hazard potential of our products and the competition of our raw materials with the food industry.

With our creative departments in research, development and application technology, we are technologically well positioned for further orientation toward more sustainable products in cooperation with our customers and partners. Every new development is related to sustainability factors such as climate change and resource conservation.

The integrated management systems that guide our work

MANAGEMENT SYSTEM CERTIFICATION
DNV·GL
ISM = ISO 9001 = ISO 14001
OHSAS 18001 = ISO 50001

ISO 9001: Quality management system
ISO 45001: Occupational health and safety managment system
ISO 14001: Environment managemnt system
ISO 50001: Energy managment system

Since 1851, the year our company was founded, the principle of sustainability including its three core themes of economy, ecology and social issues has been at the centre of our corporate philosophy. As a family company, Worlée-Chemie is dedicated to social and societal responsibility as well as fair treatment of its business partners and employees.

Sales

We are there for you around the world

Global distribution network. Our trade in coating resins goes all the way back to the origins of the Worlée Group. To this day, the area of trade and distribution, in addition to the development and manufacture of our own products, remains an essential part of our company. With subsidiaries and sales partners on all five continents, we are a market presence around the world.

No matter what your location or whether you order our own raw materials or trade products, the sophisticated transport and logistics processes of our international delivery network ensure that your products always reach their destination punctually and dependably.

Sales territories DACH

DACH

1

VB-Hamburg (D)
Worlée-Chemie GmbH,
VB-Hamburg,
22113 Hamburg
vb-ham@worlee.de
phone: +49 40 733 33 26 50

2

VB-West (D)
Worlée-Chemie GmbH,
VB-West
44575 Castrop-Rauxel
vbwest@worlee.de
phone: +49 23 05 35 41 20

3

VB-South & Austria (D/A)
Worlée-Chemie GmbH,
VB-Süd-Ost,
63897 Miltenberg
vbsued@worlee.de
phone: +49 93 71 94 81 90

4

SOLINT AG (CH)
SOLINT AG
Bereich Chemie
CH 5400 Baden
info@solint.ch
phone: +41 562 66 50 75

Sales organisation Europe

Europe

Belgium
E.H. Worlée & Co. B. V.
worlee@worlee.nl
phone: +31 356 56 14 24

Bulgaria
Petrex OOD,
Simeon Petrov
spetrov@petrex.bg
phone: +359 28 58 47 77
mobile: +359 888 20 31 97

Denmark
Worlée-Chemie GmbH
Annika Almstedt
aalmstedt@worlee.de
phone: +49 415 35 96 48 34

Germany
Hamburg
Worlée-Chemie GmbH,
Zentrale, ChemieHandel
Verwaltung Zentral-
und Osteuropa
handel@worlee.de
phone: +49 40 733 33 25 00

Lauenburg
Worlée-Chemie GmbH,
Kunstharzfabrik/Verkauf
service@worlee.de
phone: +49 41 53 59 60

Lübeck
Worlée-Chemie GmbH
Polymerfabrik
service@worlee.de
phone: +49 451 61 97 40

Estonia
Celego Eesti Oü,
Richard Sederholm
richard.sederholm@celego.fi
mobile: +358 405 90 34 05
Tel. +358 93 48 69 00

Finland
Brenntag Nordic OY
Petter Daniellson
petter.danielsson@brenntag-
nordic.com
phone: +358 400 26 08 10

France
Worlée-Chemie GmbH
Elsa Sens
esens@worlee.de
phone: +33 6 38 76 87 58

Greece
Worlée-Chemie GmbH
c/o Papadimitracopoulos
Brothers
Maria Ignatiadou
m.ignatiadou@
megararesins.com
phone: +30 69 37 15 71 39

Great Britain
E.H. Worlée & Co. (UK) Ltd.
sales@worlee.co.uk
phone: +44 17 82 71 46 14

Ireland
E.H. Worlée & Co. (UK) Ltd.
sales@worlee.co.uk
phone: +44 17 82 71 46 14

Italy
Worlée Italia S.R. L.
worlee@worleeitalia.it
phone: +39 02 28 04 03 79

Croatia/Slovenia
Kemoteks, Nenad Kostic
nenad.kostic@zg.t-com.hr
mobile: +385 98 78 26 71

Latvia/Lithuania
UAB Celego LT,
Vytautas Vyskupaitis
vytautas.vyskupaitis@celego.eu
mobile: +370 67 85 07 77

Luxembourg
E.H. Worlée & Co. B. V.
worlee@worlee.nl
phone: +31 356 56 14 24

**North Macedonia/
Kosovo/Albania/
Bosnia Herzegovina**
INTELKOM DOO,
Dragan Simovski
dragan.simovski@intelkom.mk
mobile: +389 70 23 37 23

Netherlands
E.H. Worlée & Co. B. V.
worlee@worlee.nl
phone: +31 356 56 14 24

Norway
Harald Mathisen A/S
Hans Christian Moen
hcmoen@mathisen.no
phone: +47 22 40 59 40

Poland
Worlée-Chemie GmbH,
Marek Kolodziej
mkolodziej@worlee.de
mobile: +48 660 53 84 47

Portugal
Mapril S.A.
José Riberio
tintas@mapril.com
phone: +351 220 30 43 00

Romanian
M.R. Chimtrade S.R.L.,
Mircea Radulescu
mircearadulescu@mrchimtrade.ro
mobile: +40 744 38 28 63

Sweden
Brenntag Nordic AB,
Siavash Darzi
Siavash.darzi@brenntag-
nordic.com
phone: +46 (0) 40 28 73 68

Serbia
INTELKOM DOO,
Dragan Simovski
dragan.simovski@intelkom.mk
mobile: +389 70 23 37 23

Spain
Montse Solà
msola@worlee.es
phone: +34 937 78 11 86

Czech Republic/Slovakia
3P-Chem, Ing Petr Torma
torma@3p-chem.cz
mobile: +420 730 89 07 54

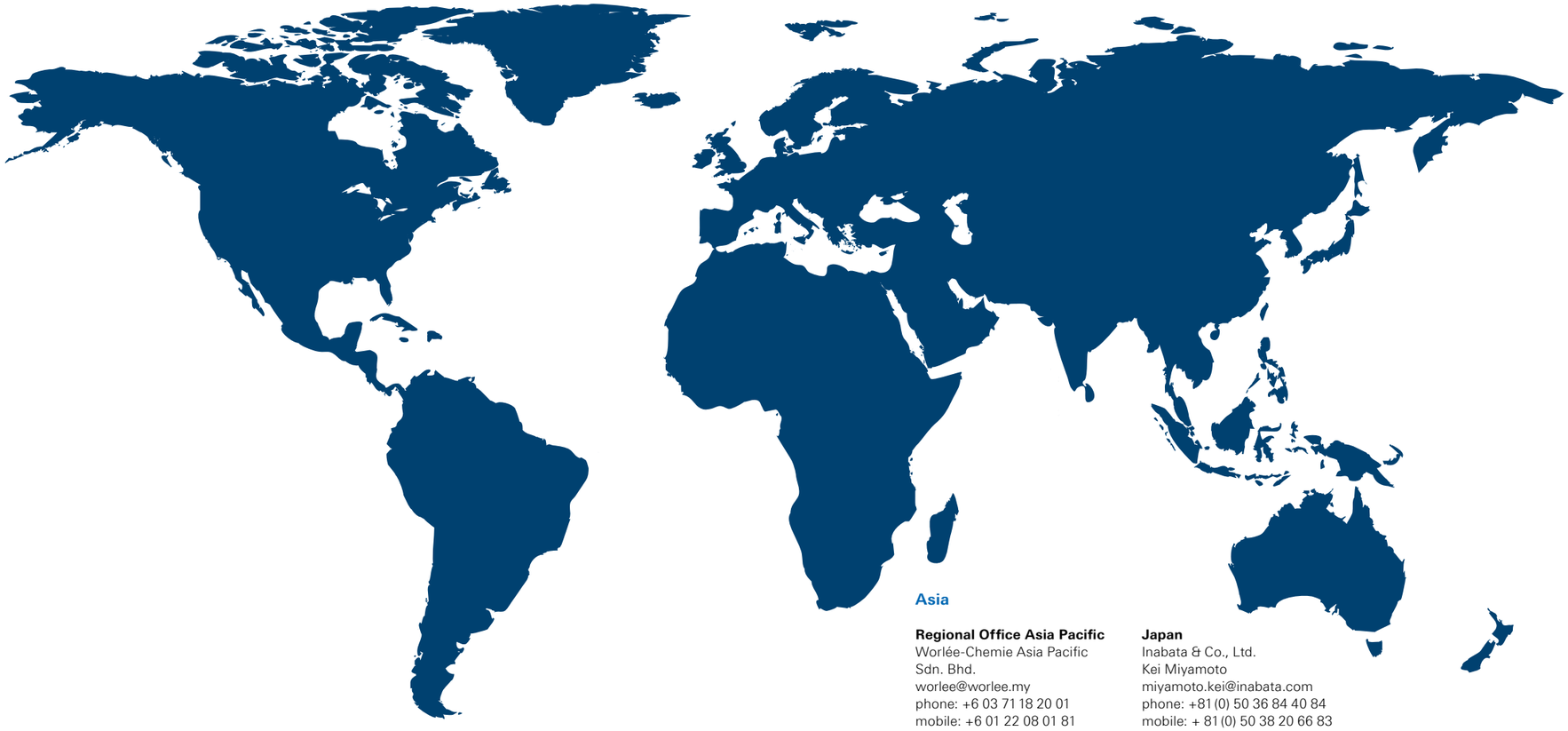
Turkey
Kar Kimya San.ve Tec. Ltd. Sti.
info@karkimya.com.tr
phone: +90 21 63 17 65 30

Hungary
BESTCHEM Hungária Kft,
Zsolt Tóth, Bela Vörös
zsolt.toth@bestchem.hu,
bela.voros@bestchem.hu
mobile: +36 30 207 20 72
mobile: +36 30 858 99 76

Ukraine
Admirality Trans Ltd
a.matvienko@worlee.com.ua
info@worlee.com.ua
phone: +38 0 676 24 37 03

Cyprus
Panaska Trading Co Ltd.
Yiannos Pirishis (Mech.Eng.)
yiannos@panaska.com
phone: +357 22 48 65 94

Sales organisation worldwide



America

Brazil
Adexim Comexim
tecnica@adexim-comexim.com.br
phone: +55 1139 66 31 55

Chile
M. Vorwerk Comercio Global Ltda.
Catalina Vorwerk
cvorwerk@mvorwerk.cl
phone: +59 22 07 34 80

Canada
Azelis Canada, Inc.
info@azelisamericas.ca
phone: +1 800 387 39 43

Mexico
Moca y Compañia S.A. de C.V.
Sergio Vasquez
svasquez@mocayco.com.mx
phone: +1 155 55 33 01 03

USA Mid & Western Region, British Columbia
TRiiSO
Jack Clennon
jclennon@tri-iso.com
phone: +1 909 626 48 55

USA Eastern Region
Van Horn, Metz & Co., Inc.
info@vanhornmetz.com
phone: +1 610 828 45 00

Africa

Egypt
African Chemicals S.A.E.
Bassant Ahmed
bassant.ahmed@africanchemicals.com
phone: +202 275 087 40

Morocco
Adeis
info@adeis.com
phone: +212 522 59 35 70/80

Russian Federation

InterChemMet (CC GRAN) LLC
Mr. Nikolai Konkin
nk@ccg78.com
phone: +7 812 612 99 69
mobile: +7 931 359 41 69

Asia

Regional Office Asia Pacific
Worlée-Chemie Asia Pacific Sdn. Bhd.
worlee@worlee.my
phone: +6 03 71 18 20 01
mobile: +6 01 22 08 01 81

China
Worlée (Shanghai) Trading Co. Ltd.
Shanghai Technical Center
worlee@worlee.cn
phone: +86 21 62 47 25 46
mobile:+ 86 135 85 66 78 78

India
Worlée-Chemie India Private Limited
sales.india@worlee.in
phone: +91 (0) 22 61 21 49 43/44/45

Indonesia
PT Octa Ming Global
Ary Talim
ary@octaming.com
phone: +62 21 54 22 10 02
mobile: +62 81 61 85 74 90

Israel
Orom Colorants Ltd.
main@orom.co.il
phone: +972 3 938 45 77

Japan
Inabata & Co., Ltd.
Kei Miyamoto
miyamoto.kei@inabata.com
phone: +81 (0) 50 36 84 40 84
mobile: + 81 (0) 50 38 20 66 83

Jordan
Target Chemicals Est.
Ayman Ismail
Ayman@targetchemicals.com
phone: +962 795 55 89 91

Korea
Rexchem Corporation
Sun Min Kim
smkim@rexchem.com
phone: +82 245 462 10
mobile: +82 10 5269 9578

Lebanon
Med and Trade
medandtrade@outlook.com
phone: +961 189 47 22/25

Malaysia
Entire Concept Sdn Bhd
Steven Tan
sales@eckem.com
phone: +6 03 51 22 1335/1615
mobile: +6 012 326 06 08

Philippines
Chasechem Industries Inc.
Albert Tio
atio@chasechemicals.com
phone: +63 2551 0366/0368
mobile: + 63 917 830 1668

Kingdom of Saudi Arabia
Chemtec
sales@chemtecinc.com
phone: +966 2 2843432/284 34 33

Singapore
Segachemie Pte. Ltd.
Jeremy Ong
jeremy@segachem.sg
phone: +65 68 44 13 69
mobile: + 65 9182 9333

Sri Lanka
Tradekem (Pvt.) Ltd.
tradekem@panlanka.net
phone: +94 112 82 66 98/ 114 54 18 89

Taiwan
Neoway Chemicals Co., Ltd.
Helen
Weishowingwei@gmail.com
phone: +886 7 616 77 19

Thy-Word Enterprise Co., Ltd.
Carrey
Wangcarrey.wang0315@gmail.com
phone: +886 4 2263 6100
mobile: +65 9182 9333

Thailand
Alphani International Co., Ltd.
Tharworn T.
alphani@loxinfo.co.th
phone: +662 216 56 57
mobile: +66 8 14 08 82 10

Vietnam
An Thanh Pte
PHONG Cao Xuan
sales@anthanh.net
phone: +84 8 38 34 96 36
mobile: + 84 9 13 71 16 98

United Arab Emirates
Applied Technology
Joshy Clement
joshy@imeatech.com
phone: +971 65 31 49 99
phone: +971 65 57 48 00

Australia

Endeavour Chemicals & Plastics
Darren Spies
darren@endeavourcp.com.au
Tel.: +61 733 56 59 23
mobile: +61 438 64 98 67

New Zealand

ASCC Limited
Stephen Taylor
staylor@ascc.net.nz
Tel.: +64 9 966 24 47

WORLÉE
seit 1851

CHEMICAL RAW MATERIALS
NATURAL RAW MATERIALS
COSMETIC RAW MATERIALS

Worlée-Chemie GmbH
Grusonstraße 26
D-22113 Hamburg
phone: +49 (0)40 733 330
fax: +49 (0)40 733 332 450

Resin factory/Sales
Worléestraße 1
D-21481 Lauenburg/Elbe
phone: +49 (0)4153 5960
fax: +49 (0)4153 536 49
service@worlee.com

www.worlee.com

RESPONSIBLE CARE®
OUR COMMITMENT TO SUSTAINABILITY

DNV·GL
ISM=ISO 9001=ISO 14001
OHSAS 18001=ISO 50001

KLIMASCHUTZ UNTERNEHMEN
DIE KLIMASCHUTZ- UND ENERGIEINITIATIVE DER DEUTSCHEN WIRTSCHAFT