

ALKYD & ROSIN RESINS

COMPANY INTRODUCTION

The SPOLCHEMIE company has been a key player in the European chemical industry for 166 years. Its success has been achieved through the excellent and profound knowledge of our R&D teams and the constant development of our production facilities. 90% of our production takes place in facilities built after the year 2004. Our own production units are subject to strict European legislation and very high technical standards.

R&D AND INNOVATIONS

From our very beginnings, our success has come from the innovation and development of new materials and chemicals in compliance with our customers' requirements and with developments in the global industry. Our in-house research teams based directly at Spolchemie in Ústí nad Labem are closely linked to the company's production and business division – this means being able to respond to our customers' individual needs faster, more flexibly, and more efficiently.

Our resin research and development team develops systems for composites, paints, and the building industry. Our inorganics research and development team focuses on the development of chlorine derivatives. Our own research institute in Pardubice features state-of-the-art research facilities and offers independent certification, analyses, and measurements for customers via its own accredited laboratories. Spolchemie Technical Service provides flexible performance based on customer requirements.

The trends in our research and development focus strongly on the utilisation of environmentally friendly and renewable resources, while production focuses on special sophisticated systems of alkyd and epoxy resins.

SUSTAINABILITY CONCEPT

We focus on the production of materials with a positive impact on the environment. We are constantly working to minimize the adverse effects of industrial manufacturing in the communities where we live and work. As a member of the Chemical Industry Association of the Czech Republic, we are one of the first companies in the Czech Republic to have dedicated itself to the principles of Responsible Care.



Photo: SPOLCHEMIE Office Building (1930)



Photo: Epoxy Resin Production Plant - Epispol (2007)

ALKYD & ROSIN RESINS

We have over 70 years of tradition as a manufacturer of alkyd resins produced using fusion technology (aromatic free products). Our wide-ranging product portfolio includes long, medium, and short oil alkyds which are either waterborne (CHS-HYDROSPOL®), solventborne, high solid, or solvent-free (CHS-ALKYD®).

In addition to the standard assortment of solventborne alkyds, our portfolio includes the following types of sustainable and environmentally friendly alkyds:

- **Bio-based alkyds with up to 92 % of bio-components**
- **Solvent-free binders and high-solid alkyds**
- **Waterborne alkyds**

Our R&D teams work hard on to develop products that add real value to your business. This effort has resulted in a portfolio of special tailor made alkyd resins with exceptional properties; these alkyd resins have proven high-performance properties while respecting aesthetic, protective, and application requirements.



Product	Oil length (%)	Type of Oil or FA	Solvent	Viscosity (Pa.s, 23 °C)	Non-volatile content (%)	Acid value (mg KOH/g)	Colour (I ₂ mg/100 cm ³)	Description
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BINDERS FOR INDUSTRIAL COATINGS

	CHS-ALKYD® F 261 X 60	26	Vegetable drying oil	X	2,0–3,0	59,0–61,0	max.8	max.5	Fast-drying universal alkyd, excellent corrosion protection and mechanical properties, high hardness, low yellowing
	CHS-ALKYD® AKS 261 X 60	26	Vegetable drying oil	X	1,0–3,0	58,0–62,0	max.10	max.7	Acrylated alkyd, super fast-drying, superior corrosion resistance, low yellowing, improved flexibility
🔥	CHS-ALKYD® AL 3964	28	Linoleic rich FA, DCO	BuGB	13,0–18,0 ⁸	69,0–71,0	38–42	max.8	Water reducible alkyd, primers, topcoats and one-layer coatings (air dry, force dry, baking with melamine resins)
🔥	CHS-ALKYD® AL 3220	32	Coconut	M	0,9–1,5 ⁹	74,0–76,0	max.10	max.10	Stoving alkyd resin, wood and metal low yellowing coatings
🔥	CHS-ALKYD® C 351 E 75	39	FA	E	3,5–4,5	73,5–76,5	max.7	max.10	Stoving alkyd resin, for baking or nitrocellulose coatings
	CHS-ALKYD® TU 341 X 60	34	TOFA, DFA	X	2,0–5,0	58,0–62,0	max.7	max.8	High performance anticorrosive coatings
	CHS-ALKYD® AL 3701	37	TOFA	X	1,9–2,5	59,0–61,0	13–18	max.15	Lift resistant primer (air dry, force dry, baking), anticorrosive and rust resistant coatings, topcoats and one-layer application, as putties and fillers. High hardness
	CHS-ALKYD® S 401 X 55	40	Vegetable drying oil	X	0,8–1,2	53,5–56,5	max.7	max.8	Economic primers and anticorrosive coatings
	CHS-ALKYD® S 401 X 60	40	Vegetable drying oil	X	2,0–4,0	58,5–61,5	max.7	max.7	Economic primers and anticorrosive coatings
	CHS-ALKYD® S 471 WX 55	47	Vegetable drying oil	WX	2,9–5,3	53,5–56,5	max.5	max.8	Economic primers and anticorrosive coatings, for fast overcoating primers
	CHS-ALKYD® S 471 X 60	47	Vegetable drying oil	X	0,8–1,7	58,0–62,0	max.6	max.8	Economic primers and anticorrosive coatings
	CHS-ALKYD® S 472 X 60	47	Vegetable drying oil	X	1,7–2,1	58,0–62,0	max.6	max.8	Economic primers and anticorrosive coatings, faster drying than CHS-ALKYD S 471
NEW	CHS-ALKYD® S 475 X 70	47	Vegetable drying oil	X	2,0–5,5	68,0–72,0	max. 10	max.12	Anticorrosion primers with low VOC content
NEW	CHS-ALKYD® S 475 NN 65	47	Vegetable drying oil	NN	4,0–9,0	64,0–66,0	max. 10	max.15	Solventborne non-aromatic primers , anticorrosive coatings and one-layer coatings
	CHS-ALKYD® S 491 W 55	49	Vegetable drying oil	W	2,5–5,5	54,0–56,0	max.6	max.8	Economic primers and anticorrosive coatings
	CHS-ALKYD® TU 497 S 57	49	TOFA	S	1,5–4,0	55,5–58,5	max.4	max.8	Fast drying & corrosion resistant, weathering resistance and outstanding adhesion, primers & single-layer coatings for iron and light metals
	CHS-ALKYD® M 552 WX 60	55	Linseed	WX	0,45–0,95	58,5–61,5	max.7	max.10	Lift resistant alkyd modified by novolac rosin resin, improved adhesion and chemical resistance, anticorrosion primers
	CHS-ALKYD® SU 621 N 50	62	Vegetable drying oil	N	0,5–2,0	48,5–51,5	max.7	max.7	Fast-drying urethanised alkyd, aromatic content less than 1%
	CHS-ALKYD® SU 632 N 60	63	Vegetable drying oil	N	0,9–1,5	57,0–59,0	max.2	max.10	Fast drying, outstanding hardness and mar resistance, excellent mechanical properties and weather-resistance, wood & metal
	CHS-ALKYD® SU 632 NN 55	63	Vegetable drying oil	NN	0,8–1,6	55,0–57,0	max.2	max.10	Fast drying, outstanding hardness and mar resistance, excellent mechanical properties and weather-resistance, wood & metal, aromatic content less than 1%
	CHS-ALKYD® SU 671 W 60	67	Vegetable drying oil	W	2,0–4,0	58,0–62,0	max.1	max.8	Fast-drying urethanised alkyd for coatings with high hardness
🔥	CHS-ALKYD® AL 2460	72	Linseed	NN	0,2–0,4	69,0–71,0	32–40		Binder for foundry sand moulds

🔥 low VOC

Product Notes: **1** Viscosity of 70% solution in butylglycol/ 25°C, **2** Viscosity of 40% solution in butylglycol/25°C, **3** In a solution, **4** Recommended mixing ration with filler, **5** Viscosity at 25°C (Brookfield), **6** System (part A:B) has to be mixed with water in the recommended correct ration - see Application Sheet, **7** System (part A:B) can be filled with additional filler in the recommended correct ratio - see Application Sheet, **8** Viscosity (Pa.s, 25°C), **9** Viscosity (Pa.s, 20°C), **10** 50% Xylene solution, **11** In time of loading, **12** Depends on technology used, (pbw) parts by weight.

Product	Oil length (%)	Type of Oil or FA	Solvent	Viscosity (Pa.s, 23 °C)	Non-volatile content (%)	Acid value (mg KOH/g)	Colour (I ₂ mg/100 cm ³)	Description
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BINDERS FOR DECORATIVE COATINGS

	CHS-ALKYD® F 261 X 60	26	Vegetable drying oil	X	2,0–3,0	59,0–61,0	max.8	max.5	Fast-drying universal alkyd, excellent corrosion protection and mechanical properties, high hardness, low yellowing
	CHS-ALKYD® AKS 261 X 60	26	Vegetable drying oil	X	1,5–5,0	58,0–62,0	max.10	max.7	Acrylated and styrenated alkyd, super fast-drying, superior corrosion resistance, low yellowing, improved flexibility
	CHS-ALKYD® S 401 X 55	40	Vegetable drying oil	X	0,8–1,2	53,5–56,5	max.7	max.8	Economic primers and anticorrosive coatings
	CHS-ALKYD® S 401 X 60	40	Vegetable drying oil	X	2,0–4,0	58,5–61,5	max.7	max.7	Economic primers and anticorrosive coatings
	CHS-ALKYD® S 471 WX 55	47	Vegetable drying oil	WX	2,9–5,3	53,5–56,5	max.5	max.8	Economic primers and anticorrosive coatings, for fast overcoating primers
	CHS-ALKYD® S 471 X 60	47	Vegetable drying oil	X	0,8–1,7	58,0–62,0	max.6	max.8	Economic primers and anticorrosive coatings
	CHS-ALKYD® S 472 X 60	47	Vegetable drying oil	X	1,7–2,1	58,0–62,0	max.6	max.8	Economic primers and anticorrosive coatings, faster drying than CHS-ALKYD S 471
NEW	CHS-ALKYD® S 475 X 70	47	Vegetable drying oil	X	2,0–5,5	68,0–72,0	max. 10	max. 12	Anticorrosion primers with low VOC content
NEW	CHS-ALKYD® S 475 NN 65	47	Vegetable drying oil	NN	4,0–9,0	64,0–66,0	max. 10	max. 15	Solventborne non-aromatic primers , anticorrosive coatings and one-layer coatings
	CHS-ALKYD® S 491 W 55	49	Vegetable drying oil	W	2,5–5,5	54,0–56,0	max.6	max.8	Economic primers and anticorrosive coatings
	CHS-ALKYD® TU 497 S 57	49	TOFA	S	1,5–4,0	55,5–58,5	max.4	max.8	Fast drying & corrosion resistant, weathering resistance and outstanding adhesion, primers & single-layer coatings for iron and light metals
	CHS-ALKYD® T 501 WX 55	50	TOFA	WX	1,2–2,0	53,5–56,5	max.8	max.7	Maleinised fast-drying alkyd
	CHS-ALKYD® M 552 WX 60	55	Linseed	WX	0,45–0,95	58,5–61,5	max.7	max.10	Lift resistant alkyd modified by novolac rosin resin, improved adhesion and chemical resistance, anticorrosion primers
	CHS-ALKYD® ST 551 NN 50	55	Vegetable drying oil	NN	THIXO-TROPIC	48,5–51,5	max.8	slight opacity	High thixotropy alkyd, aromatic content less than 1% , flash point over 61 °C, polyamide type
	CHS-ALKYD® S 621 W 60	62	Vegetable drying oil	W	1,1–2,3	58,5–61,5	max.7	max.7	Outdoor durability, wood coatings
	CHS-ALKYD® SU 621 N 50	62	Vegetable drying oil	N	0,5–2,0	48,5–51,5	max.7	max.7	Fast-drying urethanised alkyd, aromatic content less than 1%
	CHS-ALKYD® S 622 N 60	62	Vegetable drying oil	N	3,7–4,7	58,5–61,5	max.7	max.7	Outdoor durability, universal, aromatic content less than 1%
	CHS-ALKYD® S 623 NN 50	62	Vegetable drying oil	NN	0,31–0,56	48,5–51,5	max.5	max.10	Alkyd resin for lacquers and wood stains, interior/exterior applications
	CHS-ALKYD® S 623 NN 60	62	Vegetable drying oil	NN	2,5–6,5	60,0–62,0	max.7	max.10	Universal alkyd resin, aromatic content less than 1%
	CHS-ALKYD® SU 632 N 60	63	Vegetable drying oil	N	0,9–1,5	57,0–59,0	max.2	max.10	Fast drying, outstanding hardness and mar resistance, excellent mechanical properties and weather-resistance, wood & metal
	CHS-ALKYD® SU 632 NN 55	63	Vegetable drying oil	NN	0,8–1,6	55,0–57,0	max.2	max. 10	Fast drying, outstanding hardness and mar resistance, excellent mechanical properties and weather-resistance, wood & metal, aromatic content less than 1%
💧	CHS-ALKYD® S 651 N 70	65	Vegetable drying oil	N	5,5–9,5	68,0–72,0	max. 7	max. 8	Air-drying enamels, lacquers and wood stains for outdoor application
💧	CHS-ALKYD® S 652 NN 70	65	Vegetable drying oil	NN	9,0–11,0	68,0–72,0	max.7	max.8	Outdoor durability, aromatic content less than 1% , flash point over 61 °C
💧	CHS-ALKYD® S 653 W 70	65	Vegetable drying oil	W	12,0–14,0	69,0–71,0	max.7	max.8	Air-drying high molecular weight alkyd with outdoor resistance in white spirit

💧 low VOC

Product Notes: **1** Viscosity of 70% solution in butylglycol/ 25°C, **2** Viscosity of 40% solution in butylglycol/25°C, **3** In a solution, **4** Recommended mixing ration with filler, **5** Viscosity at 25°C (Brookfield), **6** System (part A:B) has to be mixed with water in the recommended correct ration - see Application Sheet, **7** System (part A:B) can be filled with additional filler in the recommended correct ratio - see Application Sheet, **8** Viscosity (Pa.s, 25°C), **9** Viscosity (Pa.s, 20°C), **10** 50% Xylene solution, **11** In time of loading, **12** Depends on technology used, (pbw) parts by weight.

Product	Oil length (%)	Type of Oil or FA	Solvent	Viscosity (Pa.s, 23 °C)	Non-volatile content (%)	Acid value (mg KOH/g)	Colour (I ₂ mg/100 cm ³)	Description
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BINDERS FOR DECORATIVE COATINGS

	CHS-ALKYD® SU 671 W 60	67	Vegetable drying oil	W	2,0–4,0	58,0–62,0	max.1	max.8	Fast-drying urethanised alkyd for coatings with high hardness
🔹	CHS-ALKYD® S 670 NN 75	67	Vegetable drying oil	NN	2,5–3,5	74,0–76,0	max.7	max.10	Soya bean oil fatty acids based alkyd, flash point over 61 °C, air drying top-coats for exterior, wood and metal surfaces
🔹	CHS-ALKYD® SUR 735 NN 80	73	Vegetable drying oil	NN	6,5–8,5	78,5–81,5	max.4	max.10	High solid alkyd resin, fast-drying, good hardness, gloss retention and weather-resistance, wood & metal
NEW 🔹	CHS-ALKYD® ST 790 NN 75	79	Vegetable drying oil	NN	SOFT THIXO-TROPIC GEL	74,0–76,0	max.25	slight opacity	Medium and long oil alkyd coatings with low VOC content especially for wood application
🔴	CHS-ALKYD® AL 8000	80	Linoleic rich FA		1,5–3,0 ⁹	97,0–100	max.10	max.30	Solvent-free alkyd resin, low yellowing.
🔹	CHS-ALKYD® SU 830 N 85	83	Vegetable drying oil	N	2,5–3,5	83,5–86,5	max.10	max.8	High solid urethanised alkyd, low VOC content and excelent drying, for production of woodstains coating and paints for wood treatment.
🔴	CHS-ALKYD® TRI 841	84	TOFA, DCO		2,5–3,5	97,0–100	max.10	max.16	Solvent-free alkyd, fast-drying & outdoor durability, low yellowing.
🔴	CHS-ALKYD® S 830	83	Vegetable drying oil		3,0–4,0	97,0–100	max.10	max.7	Solvent-free good drying alkyd, super flexible, improved UV stability, interior/exterior use and wood coatings
🌿🔴	CHS-ALKYD® TI 870	87	TOFA		2,2–3,2	97,0–100	max.8	max.15	Solvent-free alkyd, low yellowing, high bio content , wood coating.
🌿💧	CHS-HYDROSPOL® D 870	87	TOFA	V	0,01–0,1	49,0–53,0	max.8	milky white	Solvent-free fast-drying waterborne alkyd, high bio content , improved UV stability, for wood applications
🌿🔴	CHS-ALKYD® LM 920	92	Linoleic rich FA		2,2–3,2	97,0–100	max.8	max.10	Solvent-free super-fast drying alkyd, high bio content , superflexible, excellent UV resistance, high hydrophobicity, optimal for exterior applications
NEW 🌿💧	CHS-HYDROSPOL D 920	92	Linoleic rich FA	V	0,01–0,1	49,0–53,0	max 8	milky white	Solvent-free fast-drying waterborne alkyd, high bio content , excellent UV stability, for wood applications

BINDERS FOR ADHESIVES

ABIESTER® 90					100	max.20	max.20 ¹⁰	Ester based rosin resin, coatings, hot melt adhesives & printing inks
ABIFEN® 125 D					100	max.25	max.20 ¹⁰	Novolac resin modified with rosin, coatings, adhesives & tyres
ABIMAL® 125					100	max.40	max.20 ¹⁰	Ester based rosin resin, coatings, printing inks, fast-drying, gloss, light durability & weather resistance

BINDERS FOR PRINTING INKS

🔴	CHS-ALKYD® AL 6400	64	Linseed		62–82	100	4–15		Production of typographic inks
🔴	CHS-ALKYD® AL 7310	75	Vegetable drying oil		38–48	100	4–10	max.25	Production of offset inks (heatset, sheet offset & metal inks)

🌿 high BIO content 🔹 low VOC 💧 water-borne 🔴 solvent-free

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Registered Trade Marks

ABIESTER® ABIFEN® ABIMAL® ENVIPOXY® EPOSTYL® CHS-ALKYD® CHS-EPODUR® CHS-EPOXY® CHS-HYDROSPOL® SADURIT® TELALIT® VEROBOND®



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