

# **TABLE OF CONTENTS**

IADLE OF CONTENTS		Filament Winding & Pultrusion Systems Hand Lay-up, Infusion & Injection Systems, RTM Prepreg Matrix Systems Adhesives for Composites	12 12 13 13
COMPANY INTRODUCTION	3	<b>EPOXY SYSTEMS FOR CONSTRUCTION &amp; FLOORING</b>	14
		Coating Systems	14
EDOVY DECINO		– Impregnation & Primers	
EPOXY RESINS		<ul> <li>Industrial Floor Topcoats</li> </ul>	
		- Transparent Lacquers	
BASIC EPOXY RESINS	4		
Epoxy Resins	4	Flooring Systems	14
Unmodified Liquid Epoxy Resins	5	- Decorative Flooring	
Semi-Solid Epoxy Resins	5	- Industrial & Anti-static Floors	
Unmodified Solid Epoxy Resins	5	<ul> <li>Binders for Stone Carpet</li> </ul>	
Cycloaliphatic Epoxy Resins	5	Binders for Polymerconcrete & Polymermortar	15
MODIFIED EPOXY RESINS	6	Adhesives for Construction	15
		Adilesives for construction	13
Modified Calid Epoxy Resins	6	ODEOLAL ADDITIVEO	
Modified Solid Epoxy Resins	6	SPECIAL ADDITIVES	
Epoxy Resins – Solution Brominated Epoxy Resins	6	DECIDOL®	17
Epoxy Resins for Waterborne Systems	7		
Epoxy Resins for Waterborne Systems Epoxy Resins based on BPA/F	7	ALKYD & ROSIN RESINS	
Lpoxy resilis based on DFA/1	,		10
HARDENERS	16	Binders for Industrial Coatings	19
REACTIVE DILUENTS	16	Binders for Decorative Coatings Binders for Adhesives	20-21 21
	. •	Binders for Printing Inks	21
CDECIALTY EDOVY CVCTEMO		biliders for Filitting links	21
SPECIALTY EPOXY SYSTEMS		HVDDOVIDEO	
	2	HYDROXIDES	
EPOXY SYSTEMS FOR ELECTRO & ELECTRONICS	9	Sodium & Potassium Hydroxide	22
Insulators, Bushings, Switchgear	9		
Instrument & Distribution Transformers	9	CHLORINE PRODUCTS & OTHER	
Outdoor Applications	9		00
Prefilled Systems	10	Allylchloride	23
Low Voltage Casting, Encapsulating and Potting Special Casting Systems	10 10	Epichlorohydrin Hydrochloric Acid	23 23
Adhesives for Electro	10	Perchlorethylene	23
Pigment Pastes	11	Sodium Hypochlorite	23
Supplementary Products	11	Triethylamin Trihydrofluoride	23
oupplementary i roducto	11	methylamin mnyaronaonae	20

**EPOXY SYSTEMS FOR COMPOSITES** 

12

12



#### **COMPANY INTRODUCTION**

SPOLCHEMIE, a distinguished chemical company based in the Czech Republic, holds a significant position within the European market. With a rich history dating back to 1856, we are recognized as one of the leading manufacturers of synthetic resins in Europe. Our extensive product portfolio includes epoxy resins, specialty epoxy systems, alkyd resins, hydroxides, chlorine derivatives and other chemical products. Our products find wide-ranging applications across various industries among others: automotive, construction, energy, electronics, and pharmaceuticals, underscoring our commitment to innovation, quality and sustainability.

#### **R&D AND INNOVATIONS**

Spolchemie's growth has been thrived by focusing on innovative chemical products and technologies that aligns with global trends and customer needs. Our dedicated research teams in Ústí nad Labem collaborate closely with our production and business divisions to swiftly and effectively respond to unique demands.

Our research covers important areas: our resin team works on systems for composites, paints, coatings, and construction, and our inorganics team specializes in chlorine derivatives. Our research institute in Pardubice features state-of-the-art facilities and offers independent certification and analysis through its accredited labs.

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, at SPOLCHEMIE, believe that systematic and effective prevention and mitigation of harm to the environment and humans together with developing modern and environmentally friendly technologies is key for future sustainable development not only of our company but also of the society as a whole. We feel a responsibility to protect the climate and nature and we respond to demands of our customers who are looking for more sustainable and environmentally friendly solutions. We strive to ensure that our activities are in line with the principles of sustainable development and Responsible Care principles.



# BASIC EPOXY RESINS

Our **EnviPOXY®** product range offers significant advantages in terms of quality and environmental benefits. It is the only low molecular epoxy resin produced in Europe with a maximum renewable content of 33,5% (calculated value).

A cradle-to-gate life cycle assessment (LCA) of both epoxy production processes confirmed that the conventional route from propylene has significantly higher environmental impacts. Compared to the propylene route, **the carbon footprint of our environmentally friendly epoxy production from glycerine is lower by 65%,** consumes less energy, and has lower eutrophication and acidification potential.



Using our  $EnviPOXY^{\otimes}$  can contribute to climate protection and reduce environmental impact of your product.



Product	Viscosity (Pa.s, 25°C)	Epoxy index (mol/kg)	EEW (g/mol)	Hydrolyzable chlorine (%)	Colour (APHA, Gardner*)	Application	Description
EPOXY RESINS -	EnviPOXY®   o	NLY TOP SELECTE	ED PRODUCTS				
EnviPOXY® 520	12,0-14,5	5,21-5,50	182-192	max. 0,03	max.100	Modifications, adhesives, composites	BPA type, low CO <sub>2</sub> footprint
EnviPOXY® 525	10,0-12,0	5,29-5,59	179-189	max. 0,03	max.100	Modifications, adhesives, composites	BPA type, low CO <sub>2</sub> footprint
EnviPOXY® 210 X 75	5,0-12,0	2,0-2,3	445-500		max.1*	High performance 2K coating materials such as anticorrosion primers, baking coatings	75% solution in xylene, <b>low CO<sub>2</sub> footprint</b>
EnviPOXY® 130	0,3-0,62	1,25-1,43	700-800		max.100	Powder coatings	Medium molecular weight "3-type" epoxy resin, ${\bf low~CO_2~footprint}$

Product	Viscosity (Pa.s, 25°C)	Epoxy index (mol/kg)	EEW (g/mol)	Hydrolyzable chlorine (%)	Colour (APHA, Gardner*)	Application	Description
UNMODIFIED LI	QUID EPOXY	RESINS					
CHS-EPOXY® 510	12,5-16,0	5,18-5,46	183-193	max. 0,03	max.200	Modifications, adhesives, composites	BPA type, low tendency to crystallize
CHS-EPOXY® 520	12,0-14,5	5,21-5,50	182-192	max. 0,03	max.100	Modifications, adhesives, composites	BPA type
CHS-EPOXY® 525	10,0-12,0	5,29-5,59	179-189	max. 0,03	max.100	Modifications, adhesives, composites	BPA type
CHS-EPOXY® 525 LA	10,0-12,0	5,30-5,50	182-189	max. 0,03	max.100	Modifications, adhesives, composites	BPA type with low α-glycol content
CHS-EPOXY® 530	8,0-10,0	5,38-5,68	176-186	max. 0,03	max.100	Modifications, adhesives, composites	BPA type
CHS-EPOXY® 590	3,0-5,5	5,70-6,06	165-175	max. 0,03	max.100	Modifications, adhesives, composites	BPF type
SEMI-SOLID EP	<b>OXY RESINS</b>						
CHS-EP0XY® 301		2,7-3,3	300-370		-	Hot casting, solventborne coatings, prepregs	BPA type semisolid epoxy resin
CHS-EPOXY® 411	0,5-0,81	3,9-4,2	238-256		max.100	Hot casting, solventborne coatings, prepregs	BPA type semisolid epoxy resin
UNMODIFIED S	OLID EPOXY I	RESINS					
CHS-EP0XY® 030	2,6-6 <sup>2</sup>	0,25-0,45	2 220-4 000		max.100	Can and coil coatings etc.	High molecular weight "9-type" epoxy resin
CHS-EPOXY® 030 HV	6-82	0,26-0,44	2 273-3 846		max.100	Can and coil coatings etc. with higher viscosity than CHS-EPOXY 030	High molecular weight "9-type" epoxy resin
CHS-EPOXY® 050	1,6-2,6 <sup>2</sup>	0,50-0,65	1 550-2 000		max.100	Can and coil coatings etc.	High molecular weight "7-type" epoxy resin
CHS-EPOXY® 070	1,7-2,6 <sup>2</sup>	0,61-0,74	1 350-1 640		max.100	Can and coil coatings etc.	High molecular weight "6-type" epoxy resin
CHS-EPOXY® 112	0,5-1,02	0,95-1,11	900-1 050		max.100	Powder coatings	Medium molecular weight "4-type" epoxy resin
CHS-EPOXY® 121	0,4-0,82	1,11-1,25	800-900		max.100	Powder coatings	Medium molecular weight "3, 5-type" epoxy resin
CHS-EPOXY® 130	0,3-0,62	1,25-1,43	700-800		max.100	Powder coatings	Medium molecular weight "3-type" epoxy resin
CHS-EPOXY® 141	0,30-0,552	1,43-1,54	650-700		max.100	Powder coatings	Low molecular weight "2, 5-type" epoxy resin
CHS-EPOXY® 160	0,25-0,452	1,54-1,67	600-650		max.100	Powder coatings	Low molecular weight "2-type" epoxy resin
CHS-EPOXY® 171	0,20-0,352	1,67-1,82	550-600		max.100	Powder coatings, solventborne coatings	Low molecular weight "1, 5-type" epoxy resin
CHS-EPOXY® 211	0,15-0,252	1,82-2,22	450-550		max.100	Solventborne coatings	Low molecular weight "1-type" epoxy resin
CYCLOALIPHA	TIC EPOXY R	ESINS					
CHS-EPOXY® 560	0,5-1,3	5,50-6,10			max.1*	Outdoor transformers, insulators, bushings etc.	Hexahydrophthalic acid diglycidyl ester

## **MODIFIED EPOXY RESINS**

Product	Viscosity (Pa.s, 25 °C)	Epoxy index (mol/kg)	EEW (g/mol)	Hydrolyzable chlorine (%)	Colour (APHA, Gardner*)	Application	Description
MODIFIED LIQU	IID EPOXY I	RESINS					
CHS-EPOXY® 324	20,0-60,0	3,0-3,4	294-333		max.300	Adhesives for metals, wood, ceramics	Epoxy resin modified with a non-phthalate, non- reactive plasticizer
CHS-EPOXY® 455	2,0-4,0	4,3-4,8	208-232		max.100	Adhesives, civil engineering and composites	Epoxy resin modified with a non-phthalate, non-reactive plasticizer
CHS-EPOXY® 474	0,3-0,6	4,5-4,9	204-223		max.100	Composites, coatings, applications in civil engineering, casting compounds	Epoxy resin modified with mono-functional reactive
CHS-EPOXY® 498	0,5-0,7	4,8-5,1	196-208		max.100	Civil engineering, potting and impregnation	Epoxy resin modified with mono-functional reactive diluent
CHS-EPOXY® 512	2,5-4,1	4,3-4,8	208-233		max.100	Casting, composites, adhesives, construction (bonding agent for mortar, concrete and high chemical resistance compositions)	Epoxy resin modified with non-reactive modifier, flexibilized
CHS-EPOXY® 517	0,55-0,95	4,3-4,7	213-233		max.100	Casting, composites, adhesives, construction (bonding agent for mortar and concrete)	Epoxy resin modified with reactive diluent, flexibilized
CHS-EP0XY® 521	0,6-0,9	4,85-5,1	196-206		max.100	Composites, potting, solventless coatings, civil engineering	Epoxy resin modified with mono-functional reactive diluent
CHS-EPOXY® 531	1,5-2,3	5,5-5,7	175-182		max.100	Composites, solventless coatings and impregnations, construction (bonding agent for mortar, concrete and food industry compositions)	Epoxy resin modified with bi-functional reactive diluent
CHS-EPOXY® 582	0,64-0,72	5,8-6,1	165-173		max.100	Casting, composites, polymer concretes and mortans	Epoxy resin modified with bi-functional reactive diluent
CHS-EPOXY® 619	0,4-0,9	5,9-6,5	155-170	max. 0,2	max.100	High performance laminating, potting, solventless coatings and impregnation	Epoxy resin modified with tri-functional reactive diluent
MODIFIED SOLI	D EPOXY R	ESINS					
CHS-EPOXY® 112 4F0,5	0,5-1,02	1,05-1,11	900-950			Powder coatings	Modified by 0, 5% of flow control agent
CHS-EPOXY® 112 4F5	0,5-1,02	0,90-1,10	910-1 110			Powder coatings	Modified by 5% of flow control agent
CHS-EPOXY® 130 4F10	0,3-0,62	1,10-1,30	770-910			Powder coatings	Modified by 10% of flow control agent
CHS-EPOXY® 141 4F5	0,35-0,52	1,30-1,45	690-770			Powder coatings	Modified by 5% of flow control agent
CHS-EPOXY® 160 4F2,5	0,25-0,452	1,50-1,70	590-670			Powder coatings	Modified by 2, 5% of flow control agent
BROMINATED E	POXY RES	INS					
CHS-EPOXY® B 200 M 80	1,1-2,3	1,8-2,3	435-556	max. 0,1	max.1*	Prepregs for printed circuits boards, laminates	80% solution of brominated (21% wt.) medium molecular weight epoxy resin, dissolved in methyl ethyl ketone
CHS-EPOXY® B 201 M 80	1,5-2,0	2,3-2,5	400-435	max. 0,1	max.1*	Prepregs for printed circuits boards, laminates, UV blocking	80% solution of brominated (21% wt.) medium molecular weight epoxy resin, dissolved in methyl ethyl ketone

#### **EPOXY RESINS - SOLUTION**

CHS-EPOXY® 101 X 60	2,5-5,0				max.5*	Air-drying coatings, in the mixture with melamine- formaldehyde resins for the formulation of baking coatings	Fast air drying 60% solution of epoxy ester
CHS-EPOXY® 200 M 75	0-2,0	1,9-2,3	435-525	max. 0,015	max.1*	Production of prepreges	Solution in methylethylketone
CHS-EPOXY® 200 M 80	2,5-5,5	2,0-2,4	410-500	max. 0,015	max.1*	Production of prepreges	Solution in methylethylketone
CHS-EPOXY® 210 X 75	5,0-12,0	2,0-2,3	445-500		max.1*	High performance 2K coating materials such as anticorrosion primers, baking coatings	75% solution in xylene
CHS-EPOXY® 222 IX 60	0,2-0,4	1,8-2,3	430-555		max.3*	Anticorrosive paint in marine and railway industry, gas industry, insulation of building, sewage pipes and reservoirs	60% solution in solvent blend, flexibilized
CHS-EPOXY® 301 X 80	5,5-7,5	2,7-3,3	300-370		max.1*	High solid coatings, anticorrosion primers, baking lacquers, treatment of metal surfaces	80% xylene solution of BPA based semisolid epoxy resin
CHS-EPOXY® 411 X 80	0,6-0,8	3,9-4,2	238-256		max.100	High solid coatings, anticorrosion primers, baking lacquers	80% xylene solution of BPA based semisolid epoxy resin
CHS-EP0XY® 520 M 80	0,04-0,05	4,1-4,43	227-2443		max.300	High solid coatings, prepregs etc.	80% solution in methylethylketone

#### **EPOXY RESINS FOR WATERBORNE SYSTEMS**

۵	CHS-EPOXY® 160 V 55	0,1-1,0	1,25-1,80	555-800	boards, concrete, metals and other materials	Water dispersion of a medium molecular weight epoxy resin
•	CHS-EP0XY® 200 V 55	0,1-0,7	1,88-2,22	455-525	Varnish and binder of paints for wood, wood fibre boards, concrete, metals and other materials	Water dispersion of a low molecular weight epoxy resin

#### **EPOXY RESINS BASED ON BPA/F**

CHS-EPOXY® 501	0,6-0,8	5,0-5,3	188-200	max. 0,1	max.100	Composites, high solid, anticorrosion paints, civil engineering, casting	BPA/F resin modified by monofunctional reactive diluent
CHS-EPOXY® 514	0,8-1,1	5,1-5,4	185-196	max. 0,1	max.100	Composites, high solid, anticorrosion paints, civil engineering, casting	BPA/F resin modified by monofunctional reactive diluent
CHS-EPOXY® 571	6,0-8,0	5,4-5,7	175-185	max. 0,03	max.100	Coatings, penetrants, filled systems, casting applications and insulating materials	BPA/F epoxy resin
CHS-EPOXY® 572	4,5-7,0	5,5-5,8	172-182	max. 0,03	max.100	Coatings, penetrants, filled systems, casting applications and insulating materials	BPA/F epoxy resin
CHS-EPOXY® 573	8,0-10,5	5,3-5,6	179-189	max. 0,03	max.100	Coatings, penetrants, filled systems, casting applications and insulating materials	BPA/F epoxy resin
CHS-EPOXY® 574	1,4-1,7	5,5-5,75	174-182	max. 0,1	max.100	Composites, civil and electrical engineering, high-solid coatings	BPA/F resin modified by difunctional reactive diluent
CHS-EPOXY® 575	0,7-0,9	5,6-5,9	169-179	max. 0,1	max.100	Solventless coatings, penetrants, filled systems, casting applications and insulating materials, high solid coatings	BPA/F resin modified by difunctional reactive diluent

**a** waterborne

# SPECIALTY EPOXY SYSTEMS

Our Specialty Epoxy Systems portfolio covers these applications:

- Electro & Electronics
- Composites
- Construction & Flooring



FROM FOSSIL TO RENEWABLES

**EnviPOXY® Systems** are based on the liquid **EnviPOXY® Resin** containing the maximum renewable content of 33,5 %\*.

Thanks to the experts in our R&D centers, we are ready to develop top performance products with **high renewable content** that address customer-specific needs.



<sup>\*</sup>calculated value

### **SPECIALTY EPOXY RESIN SYSTEMS**

Product	Components	Mixing ratio (pbw)	Tg, DSC (°C)	Viscosity (mPa.s)	Pot-life	Description
NEW 📀 INSULATORS,	, BUSHINGS, S	SWITCHGEAR				
CHS-EPODUR® Envi 520-1787	A/B/C1/D1	100/90/0,5/5/360 4	105-115	5000/60°C	1-2 h/80°C	Epoxy resin and special hardener with low tendency to crystalize.  Preferred for high and medium voltage applications.
CHS-EPODUR® Envi 494-1667	A/B/C2/D2	100/85/0,8/4/405 4	100-115	25 000/45°C 8 000/60°C	2 h/60°C	Modified epoxy resin and hardener system suitable for high and medium voltage applications.
CHS-EPODUR® Envi 494-1667	A/B/C2	100/77,5/0,8/345 4	110-125	18 000/45°C 7 000/60°C	2 h/60°C	Modified epoxy resin and hardener system suitable for high and medium voltage applications.
CHS-EPODUR® Envi 467-1637	A/B	100/75/345 4	105-115	6 000/60°C	2 h/60°C	Modified epoxy resin and hardener system suitable for high and medium voltage applications. "REACH free".
CHS-EPODUR® Envi 466-1667	A/B/C2	100/80/0,6/370 4	105-115	7 000/60°C	3 h/60°C	Modified epoxy resin and special hardener with low tendency to crystalize. System with very good toughness.
CHS-EPODUR® Envi 466-1667	A/B/C2	100/80/0,6/370 4	105-115	7 000/60°C	3 h/60 °C	Modified epoxy resin and hardener system suitable for high and medium voltage applications.
NEW 😂 INSTRUMENT	& DISTRIBUT	TION TRANSFOR	RMERS			
CHS-EPODUR® Envi 520-1787	A/B/C1/D1	100/85/0,5/15/370 4	75-85	5 000/60°C	1-2 h/80 °C	Epoxy resin and special hardener with low tendency to crystalize. System with very good toughness.
CHS-EPODUR® Envi 531-1787	A/B/C1/D1	100/85/0,5/10/370 4	70-85	20 000/45°C 8 500/60°C	1-2 h/80°C	Modified epoxy resin and special hardener with low tendency to crystalize. System with very good toughness and higher degree of filling.
CHS-EPODUR® Envi 494-1667	A/B/C2/D4	100/85/0,6/17/385 4	60-75	4 000/60°C	1-2 h/80°C	Modified resin and hardener system. High degree of filling.
CHS-EPODUR® Envi 494-1718	A/B/D1	100/77/5/340 4	85-95	18 000/45°C 7 000/60°C	1-2 h/80°C	Modified epoxy resin and special hardener with low tendency to crystalize. System with very good toughness.
CHS-EPODUR® Envi 464-1657	A/B	100/75/389 4	80-90	20 000/45°C 8 500/60°C	1-2 h/80°C	Modified resin and hardener system. High degree of filling.
CHS-EPODUR® Envi 494-1737	A/B	100/81/2804	90-105	3 500/60°C	2 h/80 °C	Modified epoxy resin and special hardener with low tendency to crystalize. System with very good toughness and longer pot-life.
NEW 😂 PREFILLED SY	YSTEMS					
SADURIT® Envi 520-1988	A/B	100/100	110-125	3 500/60°C	8 h/40°C; 2-3 h/60°C	Excellent crack resistance at low temperatures, good toughness. UL 94 HB. High Tg.
SADURIT® Envi 520-1987	A/B	100/100	120-130	4000/60°C	6 h/40 °C; 1-2 h/60 °C	UL 94 VO. High Tg.
SADURIT® Envi 494-1667	A/B	100/85	60-70	4000/60°C	6 h/40°C; 2-3 h/60°C	Excellent crack resistance at low temperatures, good toughness. UL 94 HB.
SADURIT® Envi 560-1987	A/B	100/100	80-90	5000/60°C	6 h/40°C; 1-2 h/60°C	Cycloaliphatic resin for outdoor application. Excellent crack resistance at low temperatures, good toughness. UL 94 HB.

Product	Components	Mixing ratio (pbw)	Tg, DSC (°C)	Viscosity (mPa.s)	Pot-life	Description
<b>S</b> LOW VOLTAG	E CASTING	, ENCAPSULA	TING AND	POTTING		
SADURIT® Envi 531-0522	A/B	100/13	100-110	6 000/25°C	2 h/25°C/1 000 g	Room temperature cured modified resin system, long potlife. 2K with prefilled component A.
SPECIAL CAS	STING SYS	TEMS				
VEROPAL 520-1987	A/B	100/220	95-110	4 000/25°C; 400/60°C	4 h/60°C	Prefilled – 2K system with prefilled hardener. Low viscosity system.
VEROPAL 520-1668	A/B	100/220	95-110	4 000/25°C; 400/60°C	4 h/60°C	Prefilled – 2K system with prefilled hardener. Low viscosity system. Excellent crack resistance.
CHS-EPODUR® Envi 520-1997	A/B/C3	100/95/0,5/3504	165-175	5 000 / 60 °C	4 h/60°C	Epoxy resin and special hardener with high Tg.
Product	Components	Mixing ratio (pbw)	Tg, DSC (°C)	Viscosity (mPa.s)	Pot-life	Description
OUTDOOR APPLI	CATIONS	(bpm)	( 0)	(1111 a.3)		
CHS-EPODUR® 560-1987	A/B/C1	100/90/0,5/360 4	90-100	5 000/60°C	1-2 h/60°C	Cycloaliphatic resin and modified hardener system with very good UV resistance.
CHS-EPODUR® 560-1987	A/B/C1/D1	100/90/0,5/10/370 4	80-90	5 000/60°C	1-2 h/60°C	Cycloaliphatic resin and modified hardener system with very good UV resistance. Improved toughness.
CHS-EPODUR® 560-1787	A/B/C2	100/90/0,4/375 4	80-90	5 000/60°C	1-2 h/60°C	Cycloaliphatic resin and modified hardener system with very good UV resistance. Excellent toughnes.
CHS-EPODUR® 560-1577	A/B/C2	100/90/0,5/370 4	105-115	6 000/60°C	2 h/60°C	Cycloaliphatic resin and hardener system with very good UV resistance. High Tg.
CHS-EPODUR® 504-1577	A/B/C2/D5	100/82/0,5/10/371 4	75-95	2 500/60°C	2 h/60 °C	Hydrophobic cycloaliphatic resin and hardener system with very good UV resistance.
CHS-EPODUR® 561-1577	A/B/C2/D5	100/90/0,5/10/390 4	100-120	4 000/60°C	2 h/60°C	Hydrophobic cycloaliphatic resin and hardener system with very good UV resistance. High T
Product	Compone	nts	Mixing ratio (pbw)	Tg, DSC (°C)	Gel Time (10g/50g min)	Description
SUPPLEMENTAR	Y PRODUC	TS				
VEROPAL RA 100 LV						Solvent-free release agent for epoxy and polyurethane materials. Stable up to 300 °C.
VEROPAL 520-T17M	А	./B	100/17	90-110	10-20/5-10	Repairing epoxy system for indoor applications. Component A with common filler and component B without filler.
VEROPAL 560-T17M	А	./B	100/14	80-95	10-20/5-10	Repairing epoxy system for indoor applications. Component A with wollastonite filler and component B without filler.
VEROPAL T520-T17M	А	/ B	100/34	90-110	10-20/5-10	Fixation thixotropic epoxy system for indoor applications. Component A and B without filler.

Product	RAL	Colour
PIGMENT PASTES -	- INDOOI	R
E-pasta BF 135M-BA	RAL3013	Tomato red
E-pasta BF 160M-BA	RAL3011	Brown red
E-pasta BF 661-BA	RAL8016	Mahogany Brown
E-pasta BF 662LV-BA	RAL8016	Mahogany Brown, low viscosity
E-pasta BF 645T LV-BA	RAL8016	Mahogany Brown, thermal stability
E-pasta BF 318-BA	RAL9011	Graphite black
E-pasta FW 200-BA	RAL9017	Traffic black
E-pasta KRBF 2478-BA	RAL7024	Graphite grey
E-pasta MIX 7032-BA	RAL7032	Pebble grey
E-pasta HB 550-BA	RAL5005	Signal blue
E-pasta LG 5G-BA	RAL6032	Signal green
E-pasta GN-M-BA	RAL6025	Fern green
E-pasta BFO 130M-BA	RAL2003	Pastel Orange
E-pasta PY 6615-BA	RAL1016	Sulphur yellow

Product	RAL	Colour
PIGMENT PASTES -	- INDOOI	R
E-pasta BF 1135M-OD	RAL3013	Tomato red
E-pasta BF 1660-OD	RAL8016	Mahogany Brown
E-pasta BF 1318-OD	RAL9011	Graphite black
E-pasta KRBF 4478-OD	RAL7024	Graphite grey
E pasta MIX 7035-0D	RAL7035	Light grey

Product	Mixing ratio (pbw)	Tg, DSC (°C)	Pot-life	Shear strength (MPa)	Description
ADHESIVES					
VEROBOND® 520-2608	100/140	70-80	20 min/25°C/50g	20-25	Structural adhesive with high elongation up to 55% and with excellent peel and shear strength.
VEROBOND® QUICK	100/100	50-60	3 min/25°C/10g	10-12	Unique, very fast epoxy adhesive (5 minutes curing time).
VEROBOND® SUPER	100/100	70-80	20 min/25°C/10g	20-24	2K epoxy structural adhesive with high elongation up to 55% and excellent mechanical properties – peel strength and shear strength. Prefilled.
VEROBOND® 14	100/50	80-85	60 min/25°C/100g	20-24	Epoxy thixotropic adhesive or casting systems, cured at room temperature. System with high strength with good chemical resistance. Prefilled.
VEROBOND® 15	100/100	60-70	25 min/25°C/100g	20-24	Unique hybrid epoxy 2K structural adhesive with high elongation and excellent mechanical properties – peel strength and shear strength. Prefilled.

## **EPOXY RESIN SYSTEMS FOR COMPOSITES**

		Mixing ratio	Tg, DSC	Viscosity		
Product	Components	(pbw)	(°C)	(mPa.s)	Pot-life	Description
FILAMENT WINDIN	G & PULTRUSIO	N SYSTEMS				
CHS-EPODUR® 494-1667	A/B/C2	100/85/1	115-125	500-1 000 5	> 10 h/25°C	Medium viscosity. Curing at higher temperature (at least 80 °C)
CHS-EPODUR® 520-1687	A/B/C2	100/90/1	130-145	500-1 0005	> 10 h/25°C	Long pot life, medium viscosity. Curing at higher temperature (at least 80 $^{\circ}\text{C})$
CHS-EPODUR® 520-1667	A/B/C2	100/85/1	115-130	500-1 0005	> 10 h/25°C	Medium viscosity. Curing at higher temperature (at least 80 °C)
CHS-EPODUR® 520-1997	A/B/C3	100/95/1	165-175	1 000-1 200 5	> 10 h/25°C	High thermal resistance. Post curing above 160 °C
CHS-EPODUR® 520-1787	A/B/C1/D1	100/85/0,5/10	85-95	1 500-2 0005	> 10 h/25°C	High mechanical properties, long pot life. Curing at higher temperature (at least 80 °C)
CHS-EPODUR® 574-0522	A/B	100/30	85-100	200-5005	1-2 h/25°C	Curing at ambient temperature, slow reactivity
HAND LAVID INC	101011 0 111 1507	LON OVOTENA	D D T 1.4			
HAND LAY-UP, INFL	JSION & INJECT	ION SYSTEMS	S, RIM			
CHS-EPODUR® 582- 0512/0492/0502/0482/0590	A/B	100/30	90-115	200-4005	0,3-4 h/25°C	Combination of one resin with five hardeners, low viscosity, fast to slow reactivity. Optimal for infusion
CHS-EPODUR® 574- 0512/0492/0502/0482/0590	A/B	100/28	90-115	350-6505	0,3-4 h/25°C	Combination of one resin with five hardeners, medium viscosity, fast to slow reactivity. Optimal for hand lay-up
CHS-EPODUR® 581-0542/0562	A/B	100/32	80-85	200-250 5	1-2 h/25°C	Combination of one resin with two hardeners, low viscosity, fast to slow reactivity. Optimal for wind mill blades
CHS-EPODUR® 582-0600	A/B	100/37	130-150	350-5505	2-3 h/25°C	Slow reactivity, low viscosity, high mechanical properties
CHS-EPODUR® 582-0420	A/B	100/25	120-130	300-450 5	0,5-1 h/25°C	Medium reactivity, low viscosity, high mechanical properties
CHS-EPODUR® 619-0600	A/B	100/40	115-130	200-5005	2-3 h/25°C	Slow reactivity, high mechanical properties. Optimal for hand lay-up
CHS-EPODUR® 619-0492	A/B	100/32	80-90	200-5005	12-30 min/25°C	Medium reactivity, high mechanical properties. Optimal for hand lay-up
CHS-EPODUR® 621-0600	A/B	100/40	115-130	500-8005	0,5-1 h/25°C	Slow reactivity, high mechanical properties. Optimal for hand lay-up
CHS-EPODUR® 621-0492	A/B	100/32	85-100	300-5005	20-40 min/25°C	Medium reactivity, high mechanical properties. Optimal for hand lay-up
CHS-EPODUR® 520-1787	A/B/C1/D1	100/85/0.5/10	85-95	1 500-2 0005	> 10 h/25°C	High mechanical properties, long pot life. Curing at higher temperature (at least 80 °C)
CHS-EPODUR® 520-1687	A/B/C2	100/90/1	130-145	5 500-1 000 5	> 10 h/25°C	Long pot life, low viscosity. Curing at higher temperature (at least 80 °C)
CHS-EPODUR® 520-1667	A/B/C2	100/85/1	115-130	500-1 000 <sup>5</sup>	> 10 h/25°C	Low viscosity. Curing at higher temperature (at least 80 °C)
CHS-EPODUR® 520-1997	A/B/C3	100/95/1	165-175	1 000-1 200 5	> 10 h/25°C	High thermal resistance. Post curing above 160 °C
CHS-EPODUR® 574-0904	A/B	100/50	70-80	1 600-2 200 <sup>5</sup>	12-15 min/25°C	Laminated system with medium viscosity. High adhesion to dural, steel and other metal surfaces.

	Product	Components	Mixing ratio (pbw)	Tg, DSC (°C)	Viscosity (mPa.s)	Pot-life	Description
	PREPREG MATRIX SYS	TEMS					
	CHS-EPODUR® 525-0269	A/B/C55	100/12/0-3	115-135	14 000/23°C 1 500/40°C	2-8 h /25°C 12	Solvent-free epoxy prepregging system with chemically induced B-stage, adjustable tack/ drapability. For cold, simple equipped processing. Recommended for general industrial and sport & leisure applications.
NEW	CHS-EPODUR® 411-0269	A/B/C55	100/9/0-2	120-128	9 800/55°C 2 700/70°C	0,5-2 h /25°C 12	Solvent-free epoxy system for hot-melt prepregging, adjustable tack. For industrial and sport & leisure composite applications.
NEW	CHS-EPODUR® N 554-0249	A/B/C55	100/10/0-3	120-165	10 000/40°C 2 000/55°C	1-4 h /25°C 12	Solvent-free epoxy system for hot-melt prepregging, adjustable tack/drapability. For applications with higher temperature resistence.

Product	Components	Mixing ratio (pbw)	Tg, DSC (°C)	Shear strength (MPa)	Pot-life	Description
48445045050						
ADHESIVES FOR C	OMPOSITEST					
VEROBOND® QUICK	A/B	100/100	50-60	10-12	3 min/25°C/10g	Unique, very fast epoxy adhesive (5 minutes curing time)
VEROBOND® 520-2608	A/B	100/100	70-80	20-25	20 min/25 °C/50g	Structural adhesive with high elongation up to 55% with excellent peel and shear strength
VEROBOND® SUPER	A/B	100/50	80-85	20-24	20 min/25°C/10g	Structural adhesive with high elongation up to 55% with excellent peel and shear strength
VEROBOND® 14	A/B	100/100	60-70	20-24	60 min/25°C/100g	Epoxy adhesive cured at room temperature. Systems is a thixotropic paste of high strength with good chemical resistance
VEROBOND® 15	A/B	100/140	70-80	20-24	25 min/25°C/100g	Hybrid epoxy structural adhesive with high elongation and excellent peel and shear strengths
VEROBOND® 531-0903	A/B	100/50	50-60	15-20	35 min/25°C/400g	Epoxy adhesive with low viscosity, cured at room temperature. Optimal for chemical anchors
VEROBOND® 521-0846	A/B	100/50	60-70	6-8	28 min/25 °C/15g	2K epoxy structural adhesive. It is used for structural bonding of a wide range of substrates, especially metals, metal structures, wood and ceramics

### **EPOXY RESIN SYSTEMS FOR CONSTRUCTION & FLOORING**

Product	Components	Mixing ratio (pbw)	Application	Description
<b>COATING SYSTEM</b>	S			
IMPREGNATION & PRIME	RS			
EPOSTYL® 200 V	A/B	100/266	Primer/penetrating sealer	Waterborne epoxy dispersion
CHS-EPOSTYL® 521-2433	A/B	100/1206	Primer/penetrating sealer	Solvent-free water-based epoxy system
CHS-EPODUR® 474 PRIMER	A/B	100/23	Bonding agent, primer for bridges, roads, pavements, flooring	Low viscosity epoxy system, penetration, adhesion and water control insulation
CHS-EPODUR® 474 PRIMER FAST	A/B	100/40	Bonding agent, primer	Low viscosity epoxy system, for use at lower temperature
SADURIT® 474 PRIMER	A/B	100/14	Prefilled penetration coating for concrete substrates	Prefilled epoxy system
INDUSTRIAL FLOOR TOPO	COATS			
SADURIT® Z 1	A/B	100/25	Coloured coating systems, high mechanical & chemical resistance, interior/exterior	Solvent based epoxy system. Different colours upon request (based on RAL).
EPOSTYL® 215 V	A/B	100/146	Matt topcoat system for concrete, useable in poorly ventilated rooms, vapour permeable	Waterborne epoxy system. Different colours upon request (based on RAL).
EPOSTYL® 521-01	A/B	100/30	Coloured coating system with higher UV resistance	Solvent-free epoxy system. Different colours upon request (based on RAL).
EPOSTYL® 200 V MAT	A/B	100/216	Matt top coat for flooring, parquets and other surfaces	Waterborne matt coating
TRANSPARENT LACQUER	S			
EPOSTYL® 200 V	A/B	100/266	Glossy topcoat for interior applications on wood, concrete and metal	Waterborne epoxy dispersion
EPOSTYL® 200 V MAT	A/B	101/216	Matt topcoat for flooring, parquets and other surfaces	Waterborne matt coating
FLOORING SYSTE	MS			
DECORATIVE FLOORING	110			
EPOSTYL® 521-01	A/B	100/30	Universal pigmented epoxy self-levelling flooring system	Solvent-free epoxy system. Different colours upon request (based on RAL).
EPOSTYL® GRANIT	A/B/C	70/30/150		Solvent-free epoxy system, excellent appearance
INDUSTRIAL & ANTI-STAT	IC EL NORS			
EPOSTYL® 521-01	A/B	100/30	Universal pigmented epoxy self-levelling flooring system	Solvent-free epoxy system. Different colours upon request (based on RAL).
EPOSTYL® 521-01 AS	A/B	100/30	Pigmented self-levelling flooring system, chemically resistant and antistatic. Suitable for interior.	Solvent-free epoxy system Solvent-free epoxy system
EPOSTYL® 521 FLEX	A/B		Self-levelling and gravelled flooring and coatings for covering of cracks, for garages and interiors	Natural rubber epoxy system with excellent ductility above 70% and stratch resist
BINDERS FOR STONE CAR	·		3 3 3 3	. , ,,
CHS-EPODUR® STONE	A/B	100/437	Pavements, flooring	Special epoxy system for stone carpets
CHS-EPODUR® STONE UV	A/B	100/43	Pavements, flooring	Special epoxy system for stone carpets, improved UV stability

Product	Hardener Compo	onents Mixing ratio (pbw)	Application	Description
BINDERS FOR	POLYMERCONCRE	TE & POLYMER	MORTAR	
	TELALIT® 0240	100/107	Binder for polymer mortars and concretes, adhesives	Solvent-free epoxy system with high chemical resistance
CHS-EPOXY® 455	TELALIT® 0492	100/237	Binder for polymer mortars and concretes, coatings, chemical anchors	Solvent-free epoxy system, accelerated, excellent mechanical properties
	TELALIT® 0846	100/397	Binder for polymer mortars and concretes, adhesives	Solvent-free epoxy system with high chemical resistance

Binder for polymer mortars and concretes, coatings,

Chemical anchors, polymer concretes and mortars

Penetration with interlayer, adhesive bridge

Binder for polymer mortars and concretes

Very fast curing time in low temperature, fast sandability

Binder for polymer mortars and concretes, adhesives

Chemical anchors, polymer concretes and mortars

Very fast curing in standard temperature, using in low temperature,

chemical anchors

fast sandability

 $100/40^7$ 

 $100/23^7$ 

 $100/10^7$ 

 $100/39^7$ 

 $100/11^7$ 

 $100/44^7$ 

 $100/12^7$ 

 $100/47^7$ 

#### ADHESIVES FOR CONSTRUCTION

TELALIT® 0846

TELALIT® 0492

TELALIT® 0240

TELALIT® 0846

TELALIT® 0240

TELALIT® 0846

TELALIT® 0240

TELALIT® 0846

CHS-EPOXY® 474

CHS-EPOXY® 512

CHS-EPOXY® 517

CHS-EPOXY® 531

ADIILOIVESTO	K OOMOTROO	11011			
CHS-EPOXY® 512	TELALIT® 0240		100/10	For standard temperatures & higher chemical resistance	Epoxy bonding agent for fixing of metal parts into mortar constructions
CHS-EPOXY® 324	TELALIT® 0240		100/7	For standard temperatures, good chemical resistance	Special phthalate-free epoxy system for adhesive composition and construction sealant
CHS-EP0XY® 324	TELALIT® 0343		100/11	Adhesive for metal, wood, glass	Standard system, higher viscosity, balanced shear and peel strenght, resistant up to $60^{\circ}\text{C}$
VEROBOND® 520-2608		A/B	100/140	Universal adhesive for various type of materials, including thermoplastics and composites	High toughness, excellent peel streght, resistance up to 95°C
VEROBOND® 531-0903		A/B	100/50	Optimal for chemical anchors	Epoxy adhesive with low viscosity, cured at room temperature
VEROBOND® QUICK		A/B	100/100	Universal adhesive for various type of materials	Unique, very fast epoxy adhesive (5 minutes curing time)
VEROBOND® SUPER		A/B	100/100	Universal adhesive for various type of materials, including thermoplastics and composites	Adhesive with excellent shear and peel strenght, resistant up to 85 °C
VEROBOND® 14		A/B	100/50	Adhesive for various type of materials	Epoxy adhesive or casting systems, cured at room temperature. Systems is a thixotropic paste adhesive of high strength with good chemical resistance
VEROBOND® 15		A/B	100/100	Adhesive for various type of materials	Hybrid epoxy structural adhesive with high elongation and excellent peel and shear strengths

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 ratio - 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.

Solvent-free epoxy system, accelerated, excellent mechanical properties,

Special solvent-free epoxy system, low temperature, wet condition,

Special solvent-free epoxy system, low temperature, wet condition,

Solvent-free system, low temperature, wet conditions, very fast hardening

Standard epoxy system, low temperature, wet conditions

Standard epoxy system, wet conditions, very fast hardening

Solvent-free epoxy system with high chemical resistance

Solvent-free system with high chemical resistance

very fast hardening

very fast hardening

very fast hardening

# **HARDENERS**

	Product	Viscosity (mPa.s, 25°C)	Amine number (mg KOH/g)	HEW (g/mol)	Application	Description
NEW	TELALIT® 0240	5-50		24	Standard, civil engineering, composites, adhesives	Aliphatic amine, substitution of CHS-HARDENER P 11
	TELALIT® 0420	10-25	600-650	42	Composites, higher Tg	Cycloaliphatic amine
	TELALIT® 0430	5-50	1 250-1 320	43	Composites, civil engineering, faster curing, higher toughness	Cycloaliphatic amine
	TELALIT® 0492	15-30	550-600	49	Composites, civil engineering	Cycloaliphatic modified
	TELALIT® 0500	5-50	1 100-1 200	50	Composites, accelerated	Cycloaliphatic amine
	TELALIT® 0590	5-10	440-490	59	Composites, long pot life	Polyoxyetheramine
	TELALIT® 0600	80-120	450-500	62	High performance composites, long pot life, highest Tg	Cycloaliphatic, modified
	TELALIT® 0842	1 100-1 900	min.290	84	Hardening in wet conditions, applicable in different weather conditions	Solvent-free system, under water curing
	TELALIT® 0846	550-750	345-375	84	Universal hardener for epoxy systems, applicable in lower temperatures, unsuitable for food, beverages and drinking water	Mannich base without phenol, substitution of TELALIT $\!\!^{\oplus}$ 60
	TELALIT® 0903	200-500	320-350	90	Self-levelling flooring, nonylphenol free, low yellowing	Cycloaliphatic adduct modified
	TELALIT® 1040	10-30	230-260	104	Waterborne coatings, high solid coatings, nonylphenol free	Polyoxyetheramine
	TELALIT® 1203 NF	50-400	250-300	120	For high solid coatings, nonyl phenol free	Cycloaliphatic adduct, modified
NEW	TELALIT® 3509 IX 50	200-700	110-135	350	Lacquers, anticorrosive coatings	Aliphatic adduct modified, substitution of TELALIT 160
NEW	TELALIT® 2433 VBG 50	1 000-2 000	130-150	243	Waterborne systems	Polyamine adduct modified, substitution of TELALIT 180
	TELALIT® 2608	5 000-7 000	95-115	260	High performance super toughness adhesives	Aliphatic and cycloaliphatic based modified
	TELALIT® 3404 X 70	700-2 000	145-165	340	Anticorrosive coatings, nonylphenol free	Polyamide
	TELALIT® 0343	400-1 200	850-1 200	34	Composites, civil engineering	Aliphatic adduct
	TELALIT® 95	170-400	300-500	95	Self-levelling flooring	Cycloaliphatic adduct modified

# **REACTIVE DILUENTS**

Product	Viscosity (mPa.s, 25°C)	EPOXY index (mol/kg)	Hydrolyzable chlorine (%)	Colour (APHA, Gardner*)	Application	Description
CHS-EPOXY® RR 300	40-90	2,90-3,30	max. 0,3	max.2*	Flexibilizer, low toxicity and vapour pressure, reduced reactivity, limited diluting power	Polypropyleneglycol diglycidyl ether
CHS-EPOXY® RR 330	5-10	2,94-3,70	max. 0,1	max.1*	Low toxicity and vapour pressure, good diluting power, reduced reactivity	C12-C14 alkyl glycidyl ether
CHS-EP0XY® RR 430	1-6	4,25-4,55	max. 0,05	max.1*	Low toxicity and vapour pressure, good diluting power, reduced reactivity	C8-C10 alkyl glycidyl ether
CHS-EPOXY® RR 690	130-200	7,20-7,70	max. 0,1	max.1*	Excellent mechanical strength and reactivity, hot water and solvent resistance, limited diluting power	Trimethylol propane triglycidyl ether
CHS-EPOXY® RR 700	15-25	6,70-7,20	max. 0,2	max.1*	Excellent reactivity at low temperatures and good solvent resistance, high mechanical strength, limited acid resistance	1, 6-hexanediol diglycidyl ether
CHS-EPOXY® RR 800	10-25	7,60-8,10	max. 0,2	max.1*	Excellent reactivity at low temperatures and good solvent resistance, high mechanical strength, limited acid resistance	1, 4-butanediol diglycidyl ether

# SPECIAL ADDITIVES - DECIDOL®

Under the trade name DECIDOL® we offer a range of acetyl alcohol-based surfactants ideally suited as a wetting agent and defoamer. These products fundamentally reduce surface tension, improve the wetting of surfaces, including hydrophobic substrates, regulate the formation of foam and help to stabilize the viscosity of the paint. The additives are non-toxic, siliconefree and fully compliant with REACH regulations.

DECIDOL® is available as a highly pure product or as solutions in different concentrations of solvents such as monoethylene glycol (MEG) and propylene glycol (PG), which we are able to produce according to customer requirements.



Product	Colour (APHA)	Concentration of H <sub>2</sub> O (%)	TMDD Content (%)	MIBK Content (%)	HIOL Content (%)	Description
DECIDOL®						
DECIDOL®	150	max. 1	min. 98	max. 0,25	max. 0,45	White solid substance with menthol odour.
Product	Colour (Gardner)	Concentration of H <sub>2</sub> O (%)	Density at 20 °C (kg/m³)			Description
DECIDOL® Blends						
DECIDOL® 105 MEG	4	max. 0,7	980-1 010			Colorless to light yellow, transparent liquid, slightly soluble in water, containing 50 % TMDD and 50 % MEG (Monoethylene glycol).
DECIDOL® 107 MEG	4	max. 0,7	945-965			Colorless to light yellow, transparent liquid, slightly soluble in water, containing 75% TMDD and 25% MEG (Monoethylene glycol).
DECIDOL® 105 PG	4	max. 0,7	955-975			Colorless to light yellow, transparent liquid, slightly soluble in water, containing 50 % TMDD and 50 % PG (Prophylene glycol).

# ALKYD & ROSIN RESINS

We have over 70 years of tradition as a manufacturer of alkyd resins produced using fusion technology (aromatic free products). Our wideranging 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:

- ♦ high BIO content up to 92%
- solvent-free
- high solid with low VOC
- waterborne

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 <sub>2</sub> mg/100 cm³)	Description
	BINDERS FOR IN	DUSTRIA	L COATINGS						
	CHS-ALKYD® F 261 X 60	26	Vegetable drying oil	Х	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	Х	1,0-3,0	58,0-62,0	max.10	max.7	Acrylated alkyd, super fast-drying, superior corrosion resistance, low yellowing, improved flexibility
<b>6</b>	CHS-ALKYD® AL 3964	28	Linoleic rich FA, DCO	BuGB	13,0-18,08	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)
<b>6</b>	CHS-ALKYD® AL 3220	32	Coconut	М	0,9-1,59	74,0-76,0	max.10	max.10	Stoving alkyd resin, wood and metal low yellowing coatings
<b>6</b>	CHS-ALKYD® C 351 E 75	39	FA	Е	3,5-4,5	73,5-76,5	max.7	max.10	Stoving alkyd resin, for baking or nitrocelulose coatings
<b>6</b>	CHS-ALKYD® C 351 X 60	39	FA	Х	0,7-1,3	58,0-62,0	max.6	max.10	Stoving alkyd resin, for baking or nitrocelulose coatings.
	CHS-ALKYD® TU 341 X 60	34	TOFA, DFA	Х	2,0-5,0	58,0-62,0	max.7	max.8	High performance anticorrosive coatings
	CHS-ALKYD® AL 3701	37	TOFA	Χ	1,9-2,5	59,0-61,0	13-18	max.30	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	Χ	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	Χ	2,0-4,0	58,5-61,5	max.7	max.7	Economic primers and anticorrosive coatings
NEW	CHS-ALKYD S 405 N 60	40	Vegetable drying oil	N	3,0-7,0	59,0-61,0	max.8	max.10	Binder for solventbortne non-aromatic primers, anticorrosive coatings and enamels, especially for metal substrates.
NEW	CHS-ALKYD S 405 NN 55	40	Vegetable drying oil	NN	3,0-7,0	54,0-56,0	max.8	max.10	Binder for solventbortne non-aromatic primers, anticorrosive coatings and enamels, especially for metal substrates.
	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	Χ	0,8-1,7	58,0-62,0	max.6	max.8	Economic primers and anticorrosive coatings
NEW	CHS-ALKYD® S 475 X 70	47	Vegetable drying oil	Х	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.15	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® S 622 X 70	62	Vegetable drying oil	Χ	2,0-3,0	68,0-72,0	max.7	max.10	For air-drying coatings, mainly enamels, lacquers and wood stains for indoor and outdoor application.
	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
<b>6</b>	CHS-ALKYD® AL 2460	72	Linseed	NN	0,2-0,4	69,0-71,0	32-40		Binder for foundry sand moulds

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.

low VOC

	Product	Oil length (%)	Type of Oil or FA	Solvent	Viscosity (Pa.s, 23 °C)	Non-volatile content (%)	Acid value (mg KOH/g)	Colour (I <sub>2</sub> mg/100 cm³)	Description
	BINDERS FOR DE	CORATI	/E COATINGS						
	CHS-ALKYD® F 261 X 60	26	Vegetable drying oil	Х	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	Х	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	Х	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	Х	2,0-4,0	58,5-61,5	max.7	max.7	Economic primers and anticorrosive coatings
NEW	CHS-ALKYD® S 405 N 60	40	Vegetable drying oil	N	3,0-7,0	59,0-61,0	max.8	max.10	Binder for solventbortne non-aromatic primers, anticorrosive coatings and enamels, especially for metal substrates.
NEW	CHS-ALKYD® S 405 NN 55	40	Vegetable drying oil	NN	3,0-7,0	54,0-56,0	max.8	max.10	Binder for solventbortne non-aromatic primers, anticorrosive coatings and enamels, especially for metal substrates.
	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	Х	0,8-1,7	58,0-62,0	max.6	max.8	Economic primers and anticorrosive coatings
NEW	CHS-ALKYD® S 475 X 70	47	Vegetable drying oil	Х	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
NEW	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.15	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, $\mbox{\bf aromatic content less than 1\%,}$ flash point over 61 $^{\circ}\mbox{C,}$ 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 622 X 70	62	Vegetable drying oil	Х	2,0-3,0	68,0-72,0	max.7	max.10	For air-drying coatings, mainly enamels, lacquers and wood stains for indoor and outdoor application.
	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%

	Product	Oil length (%)	Type of Oil or FA	Solvent	Viscosity (Pa.s, 23 °C)	Non-volatile content (%)	Acid value (mg KOH/g)	Colour (I <sub>2</sub> mg/100 cm³)	Description
ı	BINDERS FOR DE	CORATI	<b>VE COATINGS</b>						
	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
	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	<b>High solid</b> alkyd resin, fast-drying, good hardness, gloss retention and weather-resistance, wood & metal
W	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 <b>low VOC content</b> especially for woo application
	CHS-ALKYD® AL 8000	80	Linoleic rich FA		1,5-3,09	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	<b>High solid</b> urethanised alkyd, <b>low VOC content</b> 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	<b>Solvent-free</b> 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	٧	0,01-0,1	49,0-53,0	max.8	milky white	<b>Solvent-free</b> fast-drying waterborne alkyd, <b>high bio content</b> , 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	<b>Solvent-free</b> super-fast drying alkyd, <b>high bio content</b> , superflexible, excelle UV resistance, high hydrophobicity, optimal for exterior applications
W	CHS-HYDROSPOL D 920	92	Linoleic rich FA	V	0,01-0,1	49,0-53,0	max 8	milky white	<b>Solvent-free</b> fast-drying waterborne alkyd, <b>high bio content</b> , excellent UV stability, for wood applications
	BINDERS FOR AD	HESIVE	S						
	ABIESTER® 90					100	max.20		Ester based rosin resin, coatings, hot melt adhesives & printing inks
	ABIFEN® 125 D					100	max.25		Novolac resin modified with rosin, coatings, adhesives & tyres
	ABIMAL® 125					100	max.40	max.35 <sup>10</sup>	Ester based rosin resin, coatings, printing inks, fast-drying, gloss, light durability & weather resistance
ı	BINDERS FOR PR	INTING	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)
۵	high BIO content 🍐 low VOC 👍	waterborne (	solvent-free						

# **HYDROXIDES**

Product	Modification	Concentration of NaOH (%)	Na <sub>2</sub> CO <sub>3</sub> (%)	Chlorides Cl- (ppm)	Fe (ppm)	SO <sub>4</sub> <sup>2-</sup> (ppm)	PO <sub>4</sub> <sup>3-</sup> (ppm)	Heavy metals as Pb (ppm)	Description
SODIUM HY	SODIUM HYDROXIDE								
NaOH - LIQUID		> 48	< 0,5	< 50	< 5				Clear, colourless liquid
NaOH - PELLETS	Technical grade	> 98	<1	< 200	< 20	< 100	< 20	< 20	White, strongly hygroscopic lenticular pellets that may have a bluish, yellowish or greyish tint, absorbing ${\rm CO_2}$ and moisture in the open air
NaOH - PELLETS	Semipure	> 98	<1	< 80	< 15	< 40	< 20	< 20	White, strongly hygroscopic lenticular pellets that may have a bluish, yellowish or greyish tint, absorbing ${\rm CO_2}$ and moisture in the open air
NaOH - PELLETS	Pharma grade (BP, EP, USP)	> 98	< 0,5	< 200	< 10	< 200		< 20	White, strongly hygroscopic lenticular pellets, rapidly dissolving in water, absorbing ${\rm CO_2}$ and moisture in the open air
NaOH - PELLETS	p.a.	> 98,5	< 0,4	< 70	< 8	< 40	< 3	< 10	White, strongly hygroscopic lenticular pellets, rapidly dissolving in water, absorbing ${\rm CO_2}$ and moisture in the open air
NaOH - PELLETS	Pure	> 98	< 1	< 70	< 10	< 40	< 5	< 10	White, strongly hygroscopic lenticular pellets, rapidly dissolving in water, absorbing ${\rm CO_2}$ and moisture in the open air
POTASSIUI	M HYDROXIDE								
KOH - LIQUID		45 ± 0,5	< 0,3	< 35	< 5	< 20			Clear, colourless liquid.
KOH - LIQUID		50 ± 0,5	< 0,3	< 35	< 5	< 20			Clear, colourless liquid.
KOH - FLAKES		> 90	< 0,65	< 70	< 30	< 40			White flakes that may have a grayish or bluish tint, absorbing moisture and ${\rm CO_2}$ in the open air
KOH - PELLETS	Semipure	> 85	< 0,6	< 70	< 5	< 40	< 5	< 5	White, strongly hygroscopic lenticular pellets, rapidly dissolving in water, absorbing moisture and ${\rm CO_2}$ in the open air
KOH - PELLETS	Pharma grade (BP, EP, USP)	> 85	< 2,0	< 200	< 10	< 200	< 100	< 10	White, strongly hygroscopic lenticular pellets, rapidly dissolving in water, absorbing moisture and ${\rm CO_2}$ in the open air
KOH - PELLETS	p.a.	> 86	< 0,5	< 70	< 3	< 40	< 1	< 5	White, strongly hygroscopic lenticular pellets, rapidly dissolving in water, absorbing moisture and ${\rm CO_2}$ in the open air
KOH - PELLETS	Pure	> 86	< 0,5	< 70	< 3	< 40	< 5	< 5	White, strongly hygroscopic lenticular pellets, rapidly dissolving in water, absorbing moisture and ${\rm CO_2}$ in the open air

## **CHLORINE PRODUCTS & OTHER**

Product	Colour (APHA)	Concentration (%)	Concentration of H₂O (%)	1,5 Hexadiene (%)	Stabilizer (%)	Description
ALLYLCHLORIDE	< 50	> 99	< 0,01	< 0,3	0,015-0,02511	Clear liquid of characteristic pungent odour, extremely flammable, UV sensitive (darkens).

Product	Colour (APHA)	Concentration (%)	Concentration of H <sub>2</sub> O (%)	Description
EPICHLOROHYDRIN	< 10	> 99,8	< 0,02	Colourless volatile liquid with a characteristic irritating odour.

Product	Concentration (%)	Concentration of Fe (%)	Concentration of free Cl <sub>2</sub> (%)	Concentration of SO <sub>4</sub> <sup>2- (</sup> %)	Evaporation residue (%)	Chlorinated hydrocarbons (%)	Description
HYDROCHLORIC ACID	> 31	< 0,03	< 0,01	< 0,04	< 0,1	< 0,0025	Clear, colourless liquid with a yellowish tint and a characteristic pungent odour.

Product	Colour (APHA)	Concentration (%)	Concentration H₂O (mg/kg)	Stabilizer (%)	Distillation range 95% (°C)	Density at 20°C (kg/m³)	Description
PERCHLOROETHYLENE	< 15	> 99,9	< 34	0,0006-0,00211	119,5-121,5	1623	Colourless, water-clear liquid, ether-like odour.

Product	Concentration of active Cl <sub>2</sub> (g/l)	Concentration of NaOH (g/l)	Concentration of Na <sub>2</sub> CO <sub>3</sub> (g/l)	Concentration of Fe (g/l)	Description
SODIUM HYPOCHLORITE	>140 (summer - 1.530.9.) >150 (winter - 1.1030.4.)	< 12	< 20	< 0,01	Yellow-green to yellow-brown liquid. It decomposes spontaneously at light, in case of increased temperature and in contact with specific metals.

Product	Colour (APHA)	Concentration of H2O (%)	Concentration of HF acidimetr. KOH (%)	Description
TRIETHYLAMINE TRIHYDROFLUORIDE (TEA)	0-200	> 1,0	22-27	Faintly yellow clear liquid.

#### **Registered Trade Marks**

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





Revoluční 1930/86, 400 32 Ústí nad Labem Czech Republic info@spolchemie.cz

www.spolchemie.com

2024\_05