



YOUNG'S CORPORATION

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EPOXY RESIN

1. LIQUID RESIN

KER Liquid Epoxy Resins.

Liquid KER epoxy resins are used in several major industries, notably the paint industry (high-solid and Solvent – free coatings), the electrical industry (Casting, Potting, Encapsulation), the building industry (Flooring, Mortars, Grouts, Adhesives) and in many other applications e.g. Structural laminates, High performance adhesives, etc.

"KER" Grades	EGC (mmol/kg)	WPE (g/eq)	Viscosity 25°C (Pa.s) ¹⁾	Color (Pt/Co)	Hydrolysable Cl (mg/kg)	Remark
KER 215	4800 ~ 5200	192 ~ 208	0.7 ~ 1.1	MAX 100	-	Diluted with AGE, Low viscosity
KER 215HC	4650 ~ 5100	196 ~ 215	1.0 ~ 3.0	MAX 100	5000 ~ 9000	Diluted with AGE, Non crystallization
KER 232	5600 ~ 5760	174 ~ 179	4.5 ~ 6.0	MAX 100	< 400	Non-crystallization, Blend of BPA & BPF, low-medium viscosity
KER 235	5490 ~ 5650	177 ~ 182	6.0 ~ 8.0	MAX 100	-	
KER 291	4655 ~ 4815	208 ~ 215	12.0 ~ 16.0	MAX 200	-	High flexibility, Adhesives
KER 293	3450 ~ 3700	270 ~ 290	10.0 ~ 10.5	MAX 200	-	
KER 8132	4650 ~ 5130	195 ~ 215	0.5 ~ 0.7	MAX 100		-
KER 882HB	4390 ~ 4813	208 ~ 228	1.5 ~ 2.0	MAX 100	5400 ~ 9000	Diluted with Benzyl alcohol, Low viscosity-
KER 815	5100 ~ 5600	178 ~ 196	0.7 ~ 1.1	MAX 100		Diluted with n-BGE, Low viscosity *for Electric & Electronic
KER 815HC	4651 ~ 5128	195 ~ 215	0.8 ~ 1.6	MAX100	17500 ~ 19500	
KER 815HCK	4430 ~ 5280	189 ~ 225	0.7 ~ 0.9	MAX 100	16000 ~ 25000	
KER 815J	5128 ~ 5714	175 ~ 195	0.15 ~ 0.5	MAX 100	6000 ~ 9000	
KER 8240	4545 ~ 5000	200 ~ 220	0.7 ~ 1.1	MAX 100	< 400	
KER 827	5400 ~ 5550	180 ~ 185	8.0 ~ 10.5	MAX 100	< 200	Standard
KER 828	5260 ~ 5420	184 ~ 190	12 ~ 14	MAX 100	< 400	
KER 828H	4878 ~ 5348	187 ~ 205	12~18	MAX 100	5000~10000	Non-crystallization Low viscosity
KER 828HC	4000 ~ 5000	200 ~ 250	20 ~ 30	MAX 100	18000 ~ 28000	
KER 828LV	5340~5500	182~187	10~12	MAX 100	-	Low viscosity
KER 829	5076 ~ 5235	191 ~ 197	3.0 ~ 7.0	MAX 100	-	High Reactivity
KER 834	3800 ~ 4250	235 ~ 263	2.1 ~ 2.3*	MAX 100	-	Semi-solid, Available in solution
KER 836	2990 ~ 3450	290 ~ 334	2.0 ~ 3.6*	MAX 100	-	

* 1 Pa S = 10 Poise,

* Viscosity = 40% wt % solid in

MEK



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2. SOLUTION EPOXY

"KER" Solution Epoxy Resins

High viscous liquid and low molecular weight solid KER epoxy resin are available as solutions in xylene or other various solvents. Principal applications for these are the same as for the base resins. Standard KER grades include KER 834-X-80, KER 1001-X-75, KER 3001-X-75.

High molecular weight KER epoxy resin solutions could be made available upon request.

"KER" Grades	EGC (mmol/kg)	WPE (g/eq)	Viscosity at 25°C (Pa.s) ¹⁾	Color (Pt/Co)	Non-Volatile (wt.%)	Remark
KER 827-X-90	5260~5555	180~190	Q~U*	MAX 100	89~91	Ambient cure coatings
KER 828-X-90	5260~5420	184~190	-	MAX 100	89~91	
KER 834-X-80	3800~4250	235~263	-	MAX 100	79~81	
KER 834-X-85	3800~4250	235~263	-	MAX 100	84~86	
KER 834-X-90	3800~4250	235~263	-	MAX 100	89~91	
KER 836-C-75	2990~3450	290~334	-	MAX 100	74~76	
KER 836-X-80	2990~3450	290~334	-	MAX 100	79~81	
KER 1001-HU-65	2000~2220	450~500	U~W	MAX 100	64~66	
KER 1001-FX-65	2000~2220	450~500	0.45~0.5	MAX 100	64~66	
KER 1001-X-70	2000~2220	450~550	2.5~4.0	MAX 100	69~71	
KER 1001-X-75	2000~2220	450~500	0.45~0.5	MAX 100	74~76	
KER 3001-X-70	2000~2220	450~500	2.5~4.0	MAX 100	69~71	
KER 3001MSQ-X-75	1818~2000	500~550	Z3~Z6+ *	MAX 100	74~76	
KER 3001-X-75	2000~2220	450~500		MAX 100	74~76	
KER 3001-CTR-50	2000~2220	450~500		MAX 100	49~51	
KER 3002-X-75	1420~1600	625~704	-	MAX 100	74~76	
KER 3004-CFT-50	1000~1110	901~1000	0.25~0.4	MAX 100	49~51	
KER 3004N-HU-60	1064~1130	885~940	Z~Z ₂ *	MAX 100	59~61	
KER 3007-KSH-50	435~500	2000~2300	0.9~1.5	MAX 100	> 50	PCM
KER 1007-LX-50	540~600	1667~1852	Y~Z ₁ *	MAX 100	49~51	
KER 3007-FLX-50	440~540	1852~2273	1.4~2.0	MAX 100	49~51	

* EGC, WPE : Solid based data

* Viscosity : Gardener viscosity



3. SOLID TYPE

"KER" Solid Epoxy Resins

in the manufacture of solvent-borne paints, Air-drying Epoxy-esters, can coatings, PCM(Coil) coatings, powder coatings, printing wiring board and molding powder.

"KER" Grades	EGC (mmol/kg)	WPE (g/eq)	Viscosity 25°C (mPa.s) ¹⁾	Color (Pt/Co)	Remark
KER 3001N	2040~2170	461~490	5.3~6.8	MAX 100	Ambient cure, Marine & Heavy duty coatings
KER 3001	2000~2220	450~550	6.3~7.9	MAX 100	
KER 1001MSQ	1740~2000	500~575	6.3~7.9	MAX 100	Less sintering than 1-type resins
KER 3002	1420~1600	625~704	10.5~13.5	MAX 100	Powder coatings
KER 3002N	1515~1560	641~660	8.9~9.8	MAX 100	
KER 3022	1429~1667	600~700	5000~15000 *1	MAX 100	
KER 3003	1260~1420	704~794	13~17	MAX 100	
KER 3003N	1190~1282	780~840	11~15.2	MAX 100	
KER 3023N	1120~1370	730~820	12~15	MAX 100	
KER 3003-FCA-10	1135~1295	770~880	Flowing Agent 9.0~11.0 (wt.%)		
KER 3003KFL	1260~1380	725~794	Flowing Agent 2.43~2.97 (wt.%)		
KER 3004	1020~1180	847~980	20~25	MAX 100	Powder Coatings
KER 3004N	1064~1130	885~940	15.2~16.1	MAX 100	
KER 3014	1042~1099	910~960	17~20	MAX 100	
KER 3004K	970~1070	935~1031	22.0~27.0	MAX 100	
KER 3004CD	1020~1080	926~980	16~22	MAX 100	
KER 3005N	714~833	1200~1400	25~55	MAX 100	
KER 3006N	600~660	1515~1665	32~48	MAX 100	
KER 3007	600~820	1220~1667	42~80	MAX 100	Stoved coatings, Can coatings & Primer coating for PCM
KER 3007K	440~640	1563~2273	50~100	MAX 100	
KER 1009	260~440	2273~3846	100~280	MAX 100	
KER 7007	513~588	1700~1950	30~70	MAX 100	Powder Coating
KER 7014	1025~1142	875~975	10~30	MAX 100	
KER 7024	770~870	1150~1300	5000~10000 *2	MAX 100	
KER 7034	833~909	1100~1200	30~40	MAX 100	

Viscosity : 40wt, % solid in MEK

Viscosity *1 : cps melt viscosity 120 degree C

Viscosity *2 : cps melt viscosity 175 degree C



4. SPECIALTY TYPE

Specialty KER Epoxy resins (including solution types) are consisted of products confirmed by user test and designed with the newest technology for various requirements & applications.

•Acid Resistance Epoxy Resins

Grades	WPE (g/eq)	Viscosity@25°C (Pa.s)	Color (Pt/Co)	Applications
KER 262	186 – 190	12.1 – 12.9	Max. 100	Civil & Construction Anti-Acidity

•Waterborne Epoxy Resins

KWER Series are designed for use in waterborne, two-package coatings. When combined with curing agents, KWER offers the potential for high performance aqueous system.

Grades	WPE (g/eq)	Viscosity@25°C (Pa.s)	Appearance	Non-volatile (wt.%)	Applications
KER 828S	200 – 220	7000 – 15000	Max 100	100	Civil & Construction Adhesives, Coatings, Sizing
KER 828-70	191 – 211	500 – 7000	Milky	70 ± 2	
KER 834-60	225 - 269	200 – 7000	Milky	60 ± 2	
KER 836-57	320 - 360	100 – 7000	Milky	57 ± 2	
KER 3001-50	900 - 1100	500 – 5000	Milky	50 ± 2	

•KER 700 Series

High-OH value contained epoxy resin (KER 730) can improve the adhesion of urethane top coatings. Carboxyl group modified epoxy resin (KER 750) can improve the adhesion strength and water resistance of the cure epoxy systems. Dimer Acid modified epoxy resin (KER 774 Series) & Rubber modified epoxy resins (KER 790) can improve the adhesion strength and flexibility of the cured epoxy system.

Grades	OH Value (mmol/kg)	Viscosity@25°C (Pa.s)	Color (Pt/Co)	Non-volatile (wt.%)	Applications
▲ Polyol Modified Epoxy Resin					
KER 730	Min. 3800	X ~ Z	1 Max.	60±1	Marine & Heavy duty coating, Urethane top coating.
▲ Aliphatic Modified Epoxy Resins					
KER 750	752~833	U ~ W+(gardener)	1 Max.	65±1	Marine & Heavy duty coating
KER 760-X-90	752~833	1 ~ 2	1 Max.	90±1	
KER 774	600~700	Semi-Solid	12 Max.	-	Marine & Heavy duty coating, Adhesives
KER 774-X- 75	600~700	X ~ Z (Gardener)		75±1	Marine & Heavy duty coating
KER 775	280~380	32~52	-	-	Adhesives
KER 776-X-90	258~94	2.4~4.6	6 Max.	90±1	Marine & Heavy duty coating
▲ Rubber Modified Epoxy Resins					
KER 792	328~377	Semi-Solid	Brown	-	Electric & Electronic, Adhesives



•Curing Agents

Grades		Amine value mgKOH/g	Viscosity (cps) @25°C	NV(%)	AHEW (g/eq)	Solvent	Applications
Poly Amide	KCA 2100	90 - 100	Semi-solid		450 – 500		Ink. Paint
	KCA 2230	200 – 240	50000 – 70000*		165 – 185		Paint, Adhesive
	KCA 2300	280 – 320	8000 – 12000*		120 – 140		
	KCA 2310	280 – 340	2500 – 4500		100 – 120		
	KCA 2311	280 – 340	2500 – 4500		100 – 120		
	KCA 2330	300 – 360	500 – 1000		95 – 115		Paint, Adhesive, for Groutings
	KCA 2340	310 – 370	10000 – 20000		70 – 90		Paint, Adhesive
KCA 2400	370 – 430	1500 - 3000		60 - 80			
Poly Amide Solution	KCA2230X70	140-170	T-W	68-72	165-185	Xylene	Paint, Adhesive
	KCA2300X70	195-225	L-P	68-72	84-98	Xylen	
	KCA2300X80	225-255	X-Z1	78-82	96-112	Xylene	
	KCA2300T80	225-255	L-Y	78-82	96-112	Toluene	
Poly amide adduct	KCA3220	120-170	S ~ W	4852	125-165	Xylene, buthanol	Heavy duty coating
	KCA3330	210-250	200 ~ 5000	73-77	170-210	Xylene	
	KCA3420	110-150	Z ~ Z3	58-62	350-390	Xylene, buthanol	
	KCA3430	165-185	100 ~ 2000	63-67	230-270	xylene	
	KCA3530	260-320	800 ~ 2000		90-110		



Grades	Amine value mgKOH/g	Viscosity (cps) @25°C	NV(%)	AHEW (g/eq)	Solvent	Applications
Modified Poly amines	KCA 4102	650~750	50~150		55~75	For groutings & resin mortar
	KCA 4103	600~660	300~900		45~50	
	KCA 4104	345~385	400~900		90~100	For flooring (summer season)
	KCA 4106	360~420	100~200		55~75	For low-viscosity building stone
	KCA 4108	350~400	500~1500		65~85	For fast curing, great in anti-chemicals
	KCA 4110	410~450	50~200		60~70	Great in anti-chemicals
	KCA 4112	310~370	200~500		70~80	For flooring (winter season)
	KCA 4115	420~480	500~2000		75~85	Accelerating curing agent for other curing agent
	KCA 4303	220~330	200~500		95~115	Anti-being yellow color
	KCA 7701	420	3000		90	Adhesive, putty
	KCA 7705	130	7000		280	Coating
KCA 7702	200	10000		200	Adhesive	

*viscosity: Gardner Method



● **EQUIVALENT LIST OF EPOXY RESINS**

YOUNG'S (KER)	SHELL (EPIKOTE)	CIBA (ARALDITE)	DOW(DER)	REMARK
815	815			100% Solid, liquid type
	827	GY250	330	"
828	828	GY260	331	"
834	834	GY280	337	"
834X80	834X80			80% Solution of 834X80
3001X75	1001X75			75% solution of 3001
3001N	1001		661	100% Solid, solid type
3002	1002			"
3003	1003			"
3004	1004		664	"
3007K	1007		667	
3009	1009	GT6099	668	"

● **EQUIVALENT LIST OF POLYAMIDE RESINS**

YOUNG'S (KCA)	HENKEL (VERSAMIDE)	ANCHOR (ANCAMID)	CIBA (POLYAMIDE)	REMARK
KCA2230	115	220	HY815	100% Solid, liquid type
KCA2230X70				70% Solid, liquid type
KCA2300	125	260	HY825	100% Solid, liquid type

