prefere melamines

AMINO RESINS FOR COATINGS

MAPRENAL®
RESIMENE®

ABOUT US

Prefere Melamines is a proven leader in the field of Amino resins. Our roots date back to the melamine resin production facilities founded at the Cassella site in Frankfurt, Germany in 1935 and at the Monsanto site in Springfield, Massachusetts, USA in 1946.

Prefere Melamines produces a comprehensive range of melamine and benzoguanamine resins, in addition to additives for laminating and paper applications. We have a proven track record of delivering high quality products, innovative solutions and value to our customers. Our amino resins are used in the development of coatings, as well as in other technical and specialty applications.

We are positioned as one of the global leaders in the resins marketplace.

Our resins serve many applications, including automotive and industrial coatings, specialty paper, textiles (woven and non-woven), wood finishes and technical rubber and tire. Prefere Melamines has strategic manufacturing sites in Europe, North America, and Asia. Our primary focus is to create value for our customers, by continually improving product performance, processes, customer service, and most importantly, health, safety, and environmental initiatives.

For more information, please visit our business on our website **www.prefere.com**

OUR BRANDS FOR:

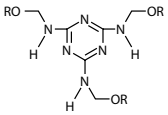
	COATING/PAINT INDUSTRY						NON COATING APPLICATIONS/SEGMENTS				
PRODUCTS	Automotive	Can	Coil	Metal	Plastic	Wood	Additives	Paper	Decorative Laminates	Fabrics & Textile	Tire
MAPRENAL®	✓	✓	✓	✓	✓	✓					
RESIMENE®	✓	✓	✓	✓	✓	✓				✓	✓
HYPERSAL®				✓			✓	✓	✓	✓	
MADURIT®							✓	✓	✓	✓	

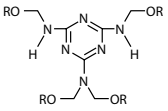
Low Formaldehyde **Low Temperature** **Low VOC**

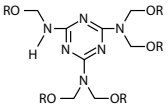
X-Linking ***4you.*** *Worldwide.*

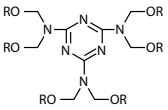
MAPRENAL® & RESIMENE® AMINO CROSSLINKER RESINS

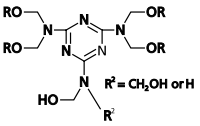
A) Melamine Formaldehyde (MF) Resins

TRI	iB-Ether	nB-Ether	Me-Ether	Me / iB-Ether	Me / nB-Ether
	MF 580 / 55 iB	BM 5901	R 717	MF 927 / 70 iB	CE 1055
	MF 650 / 55 iB		R 718		CE 1056
			R 720 LF		CE 1058
			AQ 7551		VMF 3935 / 70 B
			MF 920 w / 75 WA		

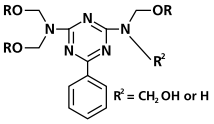
TETRA	iB-Ether	nB-Ether	Me-Ether	Me / iB-Ether	Me / nB-Ether
		VMF 3611 D / 70 B	AQ 2611		CE 1053
		MF 612 / 70 B	AQ 2609		CE 1057 LF
		MF 613 / 71 B	HM 2608		CE 1062
		MF 618 / 76 B	R 719		
		MF 600 / 55 iBB	MF 915 / 75 iB		

PENTA*	iB-Ether	nB-Ether	Me-Ether	Me / iB-Ether	Me / nB-Ether
			R 742*		R 757*
					R 758*
					CE 4514*
					R 764*

HEXA*	iB-Ether	nB-Ether	Me-Ether	Me / iB-Ether	Me / nB-Ether
			R 745*	MF 909*	R 751*
			R 747*		R 755*
			MF 900 w / 95*		CE 7103*

METHYLOL	iB-Ether	nB-Ether	Me-Ether	Me / iB-Ether	Me / nB-Ether
	MF 517 / 60 iB	R 895	R 730*		
	MF 590 / 55 iBX	MF 821 / 84 B	R 735*		
	MF 863 / 68 iB	R 750			

B) Benzoguanamine Formaldehyde (BF) Resins

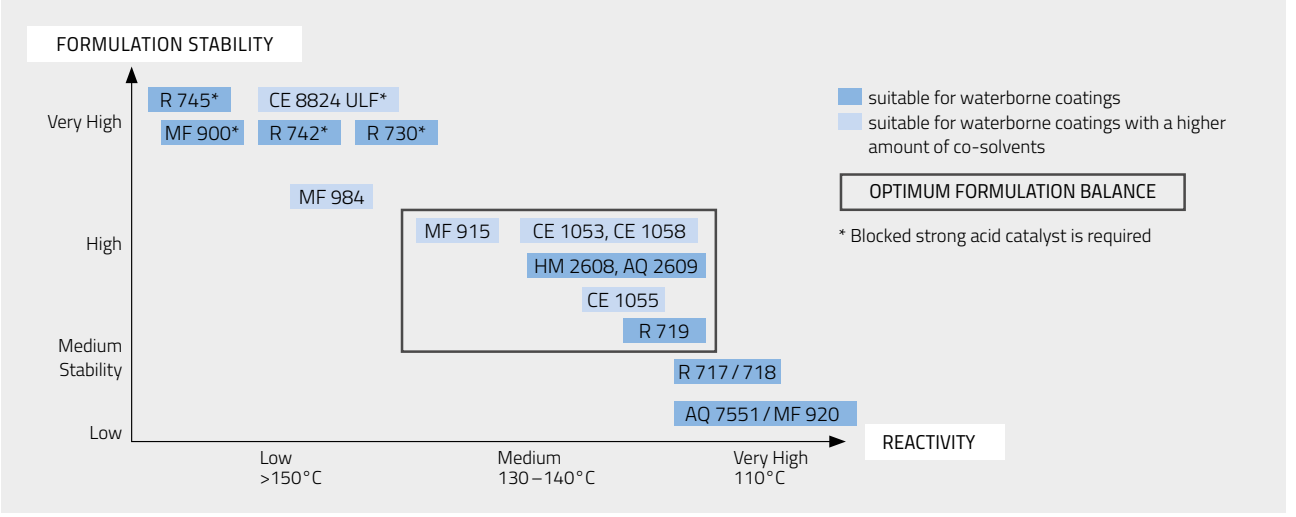
BENZOGUANAMINE	iB-Ether	nB-Ether	Me-Ether	Me / iB-Ether	Me / Et-Ether
		BF 891 / 77 SNB	BF 987		CE 8824 ULF*
		BF 892 / 68 B	MF 984 / 80 B		
		MF 988 LF / 80 B			

* Strong acid catalyst is required

MAPRENAL® and RESIMENE® suitable for waterborne coatings

MAPRENAL® and RESIMENE® suitable for waterborne coatings with a higher amount of co-solvents

MAPRENAL® & RESIMENE® FOR WATERBORNE PAINTS



Reactivity	Product	Type/Ether	Non-volatile content	Diluent	Viscosity	Free Formaldehyde
			%		mPa·s / cP	%
A-1) Methylated Melamine Resins						
Very High	**MAPRENAL MF 920**	Tri-Me	75 – 77[3]	WA	450 – 950[1]	≤ 0.60
	RESIMENE AQ 7551	Tri-Me	75 – 80[4]	WA	600 – 1500[2]	< 0.50
	RESIMENE 717	Tri-Me	82 – 86[4]	nB	3800 – 10670[1]	< 1.00
	RESIMENE 718	Tri-Me	80 – 84[4]	iB	4300 – 10670[1]	< 1.00
	RESIMENE 720 LF	Tri-Me	74 – 78[4]	nB	1000 – 2500[1]	< 0.50
High	**RESIMENE AQ 2609**	Tetra-Me	86 – 90[4]	WA	1800 – 6500[1]	< 0.60
	RESIMENE AQ 2611	Tetra-Me	81 – 84[3]	WA	1800 – 6500[1]	< 0.30
	RESIMENE HM 2608	Tetra-Me	88 – 92[4]	iB	4900 – 13300[2]	≤ 0.80
	RESIMENE HM 2608 LF	Tetra-Me	88 – 92[4]	iB	5500 – 11500[2]	< 0.50
	RESIMENE 719	Tetra-Me	78 – 82[4]	iB	1000 – 3000[1]	< 0.75
Medium	**MAPRENAL MF 915**	Tetra-Me	74 – 77[3]	iB	3000 – 6500[1]	< 2.00
	RESIMENE 730*	Methylol-Me	88 – 92[4]	iP	4300 – 17600[2]	≤ 2.00
	RESIMENE 735*	Methylol-Me	78 – 82[4]	iP	625 – 1125[2]	< 2.00
Low*	**MAPRENAL MF 900***	Hexa-Me	93 – 96[3]	no solvent	4500 – 7200[1]	< 0.50
	RESIMENE 742*	Penta-Me	78 – 82[4]	iP	330 – 750[1]	≤ 0.40
	RESIMENE 745*	Hexa-Me	>98[4]	no solvent	2100 – 4350[2]	< 0.20
	RESIMENE 747*	Hexa-Me	> 98[4]	no solvent	2100 – 4650[2]	≤ 0.15
	RESIMENE 747 ULF*	Hexa-Me	> 98[4]	no solvent	2100 – 4650[2]	< 0.10
A-2) Coetherified Melamine Resins						
Very High	**MAPRENAL MF 927**	Tri-Me / iB = 65 / 35	69 – 71[3]	iB	1100 – 3900[1]	< 0.50
	MAPRENAL VMF 3935	Tri-Me / nB = 55 / 45	69 – 71[3]	nB	1300 – 2300[1]	< 0.20
	RESIMENE CE 1055	Tri-Me / nB = 45 / 55	68 – 72[3]	nB	2000 – 3500[1]	< 1.00
	RESIMENE CE 1056	Tri-Me / nB = 65 / 35	68 – 72[3]	nB	1000 – 2500[1]	< 1.00
High	**RESIMENE CE 1053**	Tetra-Me / nB = 45 / 55	69 – 71[3]	nB	400 – 1000[1]	< 0.50
	RESIMENE CE 1058	Tri-Me / nB = 35 / 65	69 – 72[3]	nB	3000 – 5000[1]	< 0.50
	RESIMENE CE 1062	Tetra-Me / nB = 55 / 45	80 – 84[4]	nB	2800 – 6000[2]	≤ 0.60
Medium	**RESIMENE CE 1057 LF**	Tetra-Me / nB = 55 / 45	74 – 80[3]	2EH	2000 – 5000[1]	< 0.25
Low*	**MAPRENAL MF 909***	Hexa- Me / iB = 70 / 30	91 – 95[3]	iB	1000 – 2000[2]	< 0.10
	RESIMENE CE 4514*	Penta-Me / nB = 55 / 45	92 – 96[4]	nB	1200 – 4000[2]	≤ 0.35
	RESIMENE CE 7103*	Hexa-Me / nB = 90 / 10	> 98[4]	no solvent	430 – 640[2]	≤ 0.03
	RESIMENE 751*	Hexa-Me / nB = 45 / 55	> 98[4]	no solvent	290 – 400[2]	< 0.10
	RESIMENE 755*	Hexa-Me / nB = 60 / 40	> 98[4]	no solvent	570 – 1150[2]	< 0.10
	RESIMENE 757*	Penta-Me / nB = 75 / 25	> 97[4]	nB	2600 – 5300[2]	< 0.10
	RESIMENE 758*	Penta-Me / nB = 75 / 25	> 97[4]	no solvent	2500 – 5000[2]	≤ 0.15
	RESIMENE 764*	Penta-Me / nB = 20 / 80	> 98[4]	no solvent	700 – 1800[2]	< 0.10

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MAPRENAL® and RESIMENE® suitable for waterborne coatings MAPRENAL® and RESIMENE® suitable for waterborne coatings with a higher amount of co-solvents

Remark:
- Index 1 = 23 °C
- Index 2 = 25 °C
- Index 3 = 1 hr / 120 °C
- Index 4 = Foil / 45 min / 45 °C
- Index 5 = Foil / 60 min / 90 °C

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Reactivity	Product	Type/Ether	Non-volatile content	Diluent	Viscosity	Free Formaldehyde
			%		mPa·s / cP	%
A-3) iso-Butylated Melamine Resins						
Very High	MAPRENAL MF 518	Methylol-iB	59 – 61[3]	iB	850 – 1550[1]	< 1.50
	MAPRENAL MF 580	Tri-iB	54 – 56[3]	iB	750 – 1500[1]	< 0.60
	MAPRENAL MF 590	Methylol-iB	54 – 56[3]	iB/X	260 – 460[1]	< 2.00
High	MAPRENAL MF 650	Tri-iB	54 – 56[3]	iB	300 – 500[1]	< 0.60
	MAPRENAL MF 863	Methylol-iB	66 – 70[5]	iB	9000 – 13000[1]	< 1.50
A-4) n-Butylated Melamine Resins						
Very High	RESIMENE BM 5901	Tri-nB	78 – 82[4]	nB	3300 – 10700[1]	< 0.50
High	MAPRENAL MF 600	Tetra-nB/iB	54 – 56[3]	iB/nB	260 – 460[1]	< 1.00
	MAPRENAL MF 612	Tetra-nB	68 – 72[3]	nB	900 – 2400[1]	< 0.50
	MAPRENAL VMF 3611D	Tetra-nB	68 – 72[3]	nB	900 – 2400[1]	< 1.00
High-medium	MAPRENAL MF 613	Tetra-nB	69 – 73[3]	nB	1100 – 1700[1]	< 0.40
	MAPRENAL MF 618	Tetra-nB	75 – 77[3]	nB	2000 – 7000[1]	< 0.50
	RESIMENE 750	Tetra-nB	78 – 82[4]	nB	3200 – 9800[1]	< 1.00
Medium	MAPRENAL MF 821	Methylol-nB	82 – 84[5]	nB	11000 – 16500[1]	< 0.50
	RESIMENE 895	Methylol-nB	62 – 66[3]	X	300 – 650[1]	< 0.50
B-1) n-Butylated Benzoguanamine Resins						
High	MAPRENAL BF 891	Methylol-nB	75 – 79[3]	SNB	10000 – 18000[1]	< 0.50
	MAPRENAL BF 892	Methylol-nB	66 – 70[3]	nB	450 – 650[1]	< 0.70
	MAPRENAL BF 892 ULF	Methylol-nB	68 – 72[3]	2EH	1200 – 2500[1]	< 0.10
	MAPRENAL MF 988 LF	Tri-nB	78 – 82[3]	nB	5000 – 10000[1]	< 0.70
B-2) Methylated Benzoguanamine Resins						
Medium	MAPRENAL BF 987	Tri-Me	72 – 76[3]	2EH	1000 – 2500[1]	< 0.25
	MAPRENAL MF 984	Tri-Me	78 – 82[3]	nB	1000 – 2000[1]	< 1.00
Low*	RESIMENE CE 8824 ULF*	Tetra-Me/Et	> 98[3]	no solvent	7500 – 13500[1]	< 0.10
C-1) Butylated Urea Resins						
High	MAPRENAL UF 134	Di-nB	58 – 62[3]	nB	800 – 2000[1]	< 0.50
	MAPRENAL UF 297	Di-iB/nB	55 – 60[3]	iB/nB	600 – 1200[1]	< 1.00

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Methylated	Performance Properties	Butylated
	Water Solubility	
	Polarity	
	Cure Response	
	Hardness	
	Solvent Resistance	
	Weight Retention (on Cure)	
	VOC (on Cure)	
	Wetting, Flow, Leveling	
	Viscosity	
	Recoat Adhesion	
	Exterior Durability	
	Corrosion / Humidity Resistance	
	Resistivity	
	Formulation Stability	

Abbreviations

2EH	= 2-Ethylhexanol	iB	= iso-Butanol, iso-Butyl
B & nB	= n-Butanol, n-Butyl	Me	= Methanol, Methyl
Et	= Ethanol, Ethyl	SNB	= Solvent Naphta Butanol
FF	= Free Formaldehyde	WA	= Water
iP	= iso-Propanol	X	= Xylene

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Version: March 2025