

CYTEC



Liquid Coating Resins

PRODUCT GUIDE
Americas

Total Solutions Provider

Cytec Industries is one of the world's leading specialty chemicals and materials technology companies. Our focus is on creating innovative technological solutions in global markets, including aerospace, adhesives, automotive and industrial coatings, chemical intermediates, inks, mining and plastics.

We offer a broad range of advanced products, and excellent technical service, research and applications development. Also, we provide industry leadership in safety, health, and environmental protection through the Responsible Care® management system and REACH initiatives.

Innovative Technology

Cytec's surface specialty products are innovative and diverse, and can help manufacturers realize the competitive advantages of environmental compliance, while also meeting their needs for:

- Improved performance (scratch/stain/corrosion resistance, and adhesion)
- Greater ease of application (required cure response)
- Better finishes (gloss/matte, texture, and specialty)

Broad Product Portfolio

We offer an extensive selection of performance-driven products, including low volatile organic compounds (VOC) and hazardous air pollutant substance (HAPS)-free technologies, for existing and emerging markets:

- Industrial
- Architectural/Construction

- Automotive/Transportation
- Wood/Paper
- Plastic
- Opto-electronics
- Graphic Arts
- Packaging/Adhesives

Our surface specialty product portfolio is inclusive:

- UV/EB energy curable resins
- Liquid coating resins
 - Waterborne
 - High solids
 - Solventborne
- Amino crosslinkers
- Powder coating resins
- Coating additives

Global Technical Support

Through our ISO-certified manufacturing facilities, and technology and distribution centers, we are able to provide responsive service on a consistent global basis, and to help our customers identify and profit from emerging opportunities.



Table of Contents

Resins and Additives	3
Nomenclature and Trade Names	4
Key Words and Abbreviations	5
BECKOPOX™	
Amine Hardeners for Epoxy Resins and Dispersions	
Solventborne Epoxy Resins and Waterborne Epoxy Dispersions	6-10
DAOTAN™ Waterborne Polyurethane Dispersions	10-12
DUROFTAL™ Solventborne Hydroxylated Polyesters	13-14
DUROXYN™ Solventborne and Waterborne Epoxy Ester Resins	13
MACRYNAL®	
Waterborne Dispersions for Isocyanate Crosslinking	14-18
PHENODUR® Phenolic Solventborne Resins and Waterborne Dispersions	19-20
RESAMIN® Solventborne Plasticizing Resin	20
RESYDROL®	
Waterborne Alkyd Emulsions for Air-Drying and Forced Dry Systems – Decorative Wood	
Waterborne Alkyd Emulsions for Air-Drying and Forced Dry Systems – Industrial	
Waterborne Alkyd Dispersions for Baking Systems	21-26
VIACRYL®	
Solventborne Acrylic Resins, Physically Drying	
and Amino Resins Crosslinking	
Waterborne Acrylic Resins, Physically Drying	
and Hydroxylated Acrylic Dispersions	27-30
VIALKYD®	
100% Solids Alkyd Resins	27
Contact Us	Back Cover

World-Class Portfolio

Cytec's comprehensive range of liquid coating resins complements our other advanced products—additives, crosslinkers, resins, monomers—used world-wide to formulate high-performance coating systems.

Additives

Cytec provides a wide selection of specialty resins and additives for the coatings market. Our portfolio includes top-quality additives for energy curable, solvent-free, solventborne, high solids, waterborne and powder coating systems for automotive, architectural, industrial and specialty coating applications.

- MODAFLOW® flow modifiers
- ADDITOL® additives, including flow and leveling, defoaming, wetting and pigment dispersing agents
- CYCAT® catalysts

Crosslinkers

Cytec offers a broad range of crosslinkers for liquid coatings. Our crosslinkers are used around the world for improving the durability and resistance properties of coatings.

- CYMEL® resins, including resins based on melamine, urea, benzoguanamine, or glycoluril
- TMXDI® (Meta) aliphatic isocyanate

Monomers

Cytec provides specialty monomers for use in synthesizing polymers.

- TMI® (Meta) unsaturated aliphatic isocyanate
- METHYL CARBAMATE
- DIPEB™ (Meta) diisopropenylbenzene

Nomenclature and Trade Names

Trade Names	Nomenclature	Description
BECKOPOX™	VEH	Solventborne and waterborne hardeners for epoxy resins
	EH	Solventborne and waterborne hardeners for epoxy resins
	VEP	Solventborne and waterborne epoxy resins
	EP	Solventborne and waterborne epoxy resins
	VEM	Solventborne and waterborne modified epoxy resins
	EM	Solventborne and waterborne modified epoxy resins
DAOTAN™	TW, VTW	Waterborne polyurethane dispersions (physically drying/self-crosslinking/carboxyl and hydroxyl functional)
DUROFTAL™	VPI	Solventborne hydroxylated polyesters for isocyanate crosslinking
	VPE	Solventborne hydroxylated polyesters for amino resin crosslinking
DUROXYN™	VEF	Solventborne and waterborne epoxy ester resins
MACRYNAL®	SM, VSM	Solventborne and waterborne acrylic polyols for isocyanate crosslinking
PHENODUR®	PR, VPM, VPR, VPW	Solventborne and waterborne phenolic resins
RESAMIN®	HF	Solventborne plasticizing resin
RESYDROL®	AF, VAF	Solventborne and waterborne fatty acid modified alkyd resins
	AL, VAL	Solventborne and waterborne linseed oil modified alkyd resins
	AX, VAX	Waterborne modified epoxy alkyd resins
	AY, VAY	Waterborne modified acrylic alkyd resins
	AZ, VAZ	Waterborne modified urethane alkyd resins
	VAN	Waterborne oil-free polyester resins
VIALKYD®	VAF	Solventborne fatty acid modified alkyd resins
VIACRYL®	SC, VSC	Waterborne physically drying/self-crosslinking and baking acrylic resins

Key Words	Abbreviations
ABS	Acrylonitrile butadiene styrene
Ac	Acetone
Aro 100	Aromatic 100
Aro 150	Aromatic 150
AV	Acid value
BA	Butyl acrylate
BDG	Dibutoxyethanol
BG	Butoxy-ethanol or Butyl glycol
BP	Butoxy-propanol
CED	Cathodic electrodeposition
cP	Centipoise
DACA	Diacetone alcohol
DBGE	Dipropylene glycol methyl ether
DIY	Do-It-Yourself
DMEA	Dimethylethanol amine
DTM	Direct to metal
EDG	Ethylene diglycol
EEP	Ethyl ethoxypropionate
EEW	Epoxide equivalent weight
EG	Ethylene glycol
EP	Propoxyethanol
EPAc	Ethoxy propyl acetate
EtAc	Ethyl acetate
FOD	Form of delivery
HEW	Amine hydrogen equivalent weight
IP	Isopropanol
Iso H	Isopar H
Isobut	Isobutanol
MB	Methoxy butanol
MeAc	Methyl acetate

Key Words	Abbreviations
MFFT	Minimum film formation temperature
MMA	Methyl methacrylate
MP	Methoxy propanol
MPP	Methoxy-propoxy propanol
n-BuAc	Butyl acetate
n-But	N-Butanol
NH ₃	Ammonia
NMP	N-methyl-pyrrolidone
OH#	Hydroxyl number
PA	Polyamide
PC	Polycarbonate
PMA	Propylene glycol methyl ether acetate
PMMA	Polymethyl methacrylate
PP flamed	Polypropylene flame-treated
PS	Polystyrene
PVC	Polyvinyl chloride
SCA	Sag control agent
T	Toluene
TEA	Triethylamine
Tg	Glass transition temperature in °C
VOC	Volatile organic compounds expressed in g/L or Lbs./Gal.
WA	Water
WPG	Weight per gallon
X	Xylene

Epoxy-Amine Systems

Relationships used to calculate stoichiometric ratios between epoxy functional resins and amine functional resins.

Resin	Type	Solids	EEW	HEW
BECKOPOX EP 384w	Epoxy dispersion	53%	980 ^g /equiv (on FOD)	
BECKOPOX EH 623	Amine hardener	80%		200 ^g /equiv (on FOD)

Note: As used in the tables and figures herein, all references to PRODUCT NAME are understood to be the products described in the text.

Question:

Calculate 1 to 0.9 Epoxy-Amine ratio for Epoxy-Amine system using 100g BECKOPOX EP 384w dispersion and BECKOPOX EH 623 hardener.

Answer:

$$\frac{100\text{g EP 384w}}{980} = 0.1020 \text{ equivalents}$$

$$0.1020 \times (0.9) \text{ equivalents} \times 200 = 18.3\text{g EH 623 Hardener}$$

General Trends	Excess Amine	Excess Epoxy
Potlife	Increases	Decreases
Flexibility	Increases	Decreases
Hardness	Decreases	Increases
Solvent Resistance	Increases	Decreases
Acid Resistance	Decreases	Increases
Adhesion	Increases	Decreases
Water Resistance	Decreases	Increases
Corrosion Resistance	Decreases	Increases

Amine Hardeners for Epoxy Resins and Dispersions

BECKOPOX	Type	Solids %	Solvent	Viscosity at 73°F in cP	HEW (H) on Form of Delivery	Amine Value	WPG Lbs./Gal.	Iodine Color	HAPS-Free	Low Temperature Cure	High Reactivity	Low Reactivity	Pigment Wetting	Flexibility	Shear Stable	Impact	Adhesion	Chemical Resistance	Water Resistance	Low Yellowing
EH 613w/80WA	Aliphatic polyamine adduct	80	Water	23000 - 31000	145	230	9.16	10	●		●		●		●		●	●	●	
EH 623w/80WA	Aliphatic polyamine adduct	80	Water	12000 - 21000	200	210	9.16	10	●			●	●	●	●	●	●			
EH 624	Mannich-based aliphatic polyamine adduct	100		2300 - 3800	80	450	9.25	5	●	●	●				●		●	●	●	
EH 625	Mannich-based aliphatic polyamine adduct	100		900 - 1400	73	415	9.33	3	●	●	●				●		●	●	●	
EH 629	Mannich-based aliphatic polyamine adduct	100		2500 - 4400	70	470	9.33	5	●	●	●				●		●	●	●	
EH 637	Cycloaliphatic polyamine adduct	100		90 - 120	100	325	8.33	2	●			●			●		●			●
EH 654	Polyamidoamine	100		17000 - 25000	100	390	8.08	20	●						●		●			
EH 659w/50WA	Polyamidoamine	50	Water	17000 - 27000	215	160	8.58	70	●			●	●	●	●		●			
EH 2104w/40WA	Aliphatic polyamine adduct; acrylic modified	40	Water	200 - 500	820	33-43	8.75		●	●	●		●		●		●	●	●	●
EH 2142w/63WA	Aliphatic polyamine adduct	63	Water	5000 - 15000	192	220	9.5	20	●		●		●		●		●			
EH 2179w/65WA	Aliphatic polyamine adduct	65	Water	8000 - 16000	200	210	9.25	30	●	●	●				●					
VEH 2106w/80WA	Aliphatic polyamine adduct	80	Water	14000 - 25000	142	230	9.00	20	●		●		●		●		●			
VEH 2177w/80WA	Aliphatic polyamine adduct	80	Water/IPA	7000 - 12000	175	215	9.16	10	●				●		●		●			
VEH 2188w/55WA	Aliphatic polyamine adduct	55	Water	6000 - 14000	380	145	9.00	25				●		●			●			
VEH 2849w/80WA	Aliphatic polyamine adduct	80	Water	18000 - 25000	134	255	9.08	10	●				●		●		●	●	●	

Application Area

<i>Low Viscosity</i>	<i>Corrosion Resistance</i>	<i>Concrete Sealer</i>	<i>Concrete Primer</i>	<i>Concrete Topcoat</i>	<i>Metal Primer</i>	<i>Wash Primer</i>	<i>Aluminum Primer</i>	<i>Pipe Coatings</i>	<i>Mastic/Trowel</i>	<i>Low Color</i>	<i>Container</i>	<i>Tank Liner</i>
	●	●	●	●	●							
		●	●	●								
	●				●	●	●	●			●	●
	●	●	●	●				●		●	●	●
	●	●		●	●			●			●	●
●		●	●	●				●		●	●	●
									●			
	●	●	●	●	●							
●	●	●	●	●	●				●			
				●								
		●	●	●								
	●											
		●	●	●	●							
	●	●	●	●	●							
	●				●							

Solventborne Epoxy Resins and Waterborne Epoxy Dispersions

BECKOPOX	Solids %	WPG Lbs./Gal.	Solvent	Viscosity at 73°F in cP	Freeze/Thaw Stability	EEW on Form of Delivery	HAPS-Free	Chemical Resistance	Corrosion Resistance	Adhesion to Concrete	Shear Stable	Adhesion to Metal	Solvent-Free	Flexibility	Abrasion Resistance	Concrete Sealer	Concrete Primer
EM 2120w/45WA	45	8.91	Water	25-1000	No	N/A	Yes		●			●		●			
EM 460/60IBX	60	8.5	Xylene/Isobut	800 - 1400	Yes	N/A	No			●	●	●					
EP 075	100	8.83		40 - 70	Yes	320 - 360	Yes			●	●		●	●			●
EP 122w	100	9.25		700 - 900	Yes	190 - 200	Yes			●	●		●			●	●
EP 128	100	9.33		900 - 1300	Yes	190 - 200	Yes	●	●	●	●	●	●		●	●	●
EP 140	100	9.66		11000 - 15500	Yes	180 - 190	Yes	●	●	●	●	●	●		●	●	●
EP 147w	100	9.75		9000 - 13000	Yes	188 - 200	Yes						●		●	●	●
EP 2350w/60WA	60	9.25	Water/MP	1000-9000	No	350	No	●	●	●		●			●	●	●
EP 384w/53WAMP	53	9.16	Water/MP	400 - 750	No	980	Yes		●	●	●	●			●	●	●
EP 386w/52WA	52	9.0	Water/EP	300 - 1500	No	900 - 1100	No		●	●	●	●		●			●
VEP 2381w/55WA	55	9.0	Water/EP	3500 - 12000	No	910	No		●	●	●	●			●	●	
VEP 2382w/55WA	55	9.0	Water/MP	3500 - 12000	No	910	Yes		●		●	●		●		●	
VEP 2390w/75MP	75	9.16	MP/Ethanol	3000 - 6000	Yes	655	Yes					●		●			

N/A = Not Applicable.

Application Area

Concrete Topcoat	Metal Primer	Wash Primer	Aluminum Primer	Zinc Rich Primer	Pipe Coatings	Mastic/Trowel	Coil	Container	Tank Liner
	●		●						
		●					●		
	●					●		●	●
						●			
●			●		●	●		●	●
●			●		●	●		●	●
●					●				
●									
●	●								
●	●								
●	●		●		●				
●	●		●		●				
				●					

Waterborne Polyurethane Dispersions

DAOTAN	Urethane Type	Backbone Type	Modification	Solids %	% NMP	Viscosity at 73°F in cP	pH at 10% in Water	% Elongation ^a	Neutralization Amine	OH Number on Solids	WPG Lbs./Gal.	Freeze/Thaw Stability	Physically Drying	Self-Crosslinking	Crosslinking with NCO	Oxidative Cure	Crosslinking with Aziridine	Fast Drying	Pigment Wetting	Shear Stable	Sag Resistance	Chemical Resistance	Corrosion Resistance	Interior	Exterior	Humidity Resistance	Gloss
TW 6431/45WA	Aliphatic	Polybutadiene		45	0	150 - 1500	7.0 - 8.0	310	TEA	0	8.25	No	●				●	●	●	●		●		●		●	
TW 6472/45WA	Aliphatic	Polycarbonate	Polybutadiene	45	0	200 - 2000	6.7 - 7.7	250	TEA/DMEA	11	8.16	No			●												
TW 6490/35WA	Aliphatic	Polyester		35		50 - 100	9.0 - 9.5	400	TEA				●				●	●				●		●	●	●	●
TW 6491/33WA	Aliphatic	Polyether		33		50 - 100	10.0 - 10.5	525	TEA				●				●	●				●		●	●	●	●
TW 6492/35WA	Aliphatic	Polyester		35		50 - 150	9.5 - 10.0	260	TEA			Yes	●				●	●				●		●	●	●	●
TW 6493/35WA	Aliphatic	Polyester		35		50 - 100	9.5 - 10.0	30	TEA			Yes	●				●	●				●		●	●	●	●
VTW 1225/40WA	Aliphatic	Polyester		40	6.5	100 - 800	6.7 - 7.7	230	DMEA	47	8.83	No			●					●		●			●		
VTW 1227/40WA	Aliphatic	Polyester		40	0	50 - 850	7.2 - 7.6	210	DMEA	50	8.91	No			●					●		●		●	●		
VTW 1252/42WA	Aliphatic	Fatty acid		42	3	500 - 1500	7.0 - 9.5		NH ₃	-	8.75	Yes			●			●	●	●	●	●	●	●	●	●	●
VTW 1262/35WA	Aliphatic	Polycarbonate	Acryl hybrid	35	0	5 - 50	7.5 - 8.4	245	DMEA	32	8.66	No	●		●		●	●	●	●							
VTW 6460/35WA	Aliphatic	Polyester	Acryl hybrid	35	0	20 - 400	7.0 - 8.5	300	DMEA	29	8.83	No	●		●		●			●				●			
VTW 6462/36WA	Aliphatic	Polyester	Acryl hybrid	36	0	25 - 120	7.4 - 8.4	140	DMEA	36	8.83	No	●	●	●		●	●		●	●	●	●	●	●	●	●
VTW 6470/39WA	Aliphatic	Polyester/Polyether		39	4.7	100 - 1000	6.5 - 7.5		DMEA	77	8.83	No			●			●	●	●		●			●	●	●

^a Elongation numbers are ± 50.

Application Area

Solvent-Free	Abrasion Resistance	Surface Hardness	Flexibility	Adhesion to Plastic	Primer/Surfacer	Metallic Basecoat	Topcoat/Clearcoat	CARC/Military/Aerospace	Wood Flooring	Soft Feel	Strippable	Blend with Waterborne UV	Blend with Acrylic Emulsion	Electronic Cabinetry and Equipment	Inks for Plastics	Concrete Topcoat	Construction/Heavy Equipment	OEM Primer/Surfacer	DTM	Adhesion to Rubber	Stone Chip Resistance	Single Coat	Anticorrosion	DIY Glue
●			●								●									●				
●			●	●						●														
	●		●	●			●						●		●							●		
	●		●	●			●						●									●		
●	●		●	●			●						●									●		
●	●		●	●			●		●				●									●		
			●	●	●		●						●									●		
		●	●	●	●		●						●									●		
	●	●	●				●							●			●						●	
			●		●	●								●				●						
●	●	●	●	●	●	●	●		●			●										●		
	●	●	●			●	●	●	●				●			●						●		

Solventborne Hydroxylated Polyesters

DUROFTAL	Solids %	Solvent	Viscosity at 73°F in cP	WPG Lbs./Gal.	OH Number on Solid Resin	Aliphatic Structure	AV on Solid Resin	Tg °C	Structure	HAPS-Free	High Solids	Flexibility	Hardness	Interior	Exterior	Yellowing Resistance	Bake	2K Cure	Pigment Wetting	Impact Resistance	Long Potlife (in 2k System)	Flow and Leveling	Chemical Resistance	Corrosion Resistance	Humidity Resistance	Skydrol® Resistance	Compatible with Acrylic Resins
PE 6607/60BGMP	60	BGMP	1-4	9.2	~350		25-35		SB	Yes	Yes	●		●	●	●	●	●	●	●	●	●					●
VPE 6104/60MPAC	60	MPAC	4.0-8.0	9.5	~90		max 5		SB	Yes	Yes	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
VPE 6117	100	None	6000 - 12000	9.25	130	Yes	10 max	-55	L	Yes	Yes	●		●	●	●	●	●	●	●	●	●					●
VPI 2801/78BAC	78	n-BuAc	4000 - 17000	9.25	220	Yes	22	24	B	Yes	Yes	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
VPI 2803/78BAC	78	n-BuAc	7000 - 19000	9.5	180	Yes	22	21	B	Yes	Yes	●		●	●	●		●	●	●	●	●			●		●

N/A = Not Applicable. L = Linear B = Branched. Skydrol® is a registered trademark of Solutia.

DUROXYN™

Solventborne and Waterborne Epoxy Ester Resins

DUROXYN	Solids %	Solvent	Viscosity at 73°F in cP	Color	AV #	pH at 10% in Water	WPG Lbs./Gal.	Oil Length %	Oxidative Drying	Adhesion to Metal	Flexibility	Corrosion Resistance	High Stability in Water	Fast Drying Time	Good Gloss	Primer	Industrial Paint	DTM	Recoatibility	Hardness	Temperature Resistance	Water Resistance	
EF 2107w/45WA	45	Water	25-1000	Opaque	Acetic Acid	4-6	8.91	N/A				●	●	●		●	●	●	●	●			●
VAX 6127w/42WA	42	MB	200 - 3000	Beige	N/A	8.5 - 10	8.58	38	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
VEF 2406w/45WA	45	Water	50 - 1000	Opaque	N/A	4 - 6	8.91	N/A				●	●	●		●	●		●	●	●		●
VEF 4380w/35WA	35	Water/BG	2500 - 12000	Opaque	N/A	8.0 - 9.5	8.5	43	●	●	●	●	●	●	●	●	●	●	●				●

N/A = Not Applicable.

Application Area

Topcoat/ Clearcoat	Primer	Refinishing	Aerospace	Industrial	Humidity Resistance	Transportation	Plastic Cabinetry	Coil Application Outdoor Architectural Coil	Can Application	
									General Industrial	Resin for Blend
										●
								●	●	
●	●	●	●	●	●	●	●		●	●
●	●	●	●	●			●		●	●
●			●	●				●		●

Application Area

Monocoat	Steel Primer	Aluminum Primer	Wood Primer	Wood Sealer	Concrete Primer	Transportation Coatings	Protective Coatings	Industrial Coatings	Dipping Application	Airless Application	UV Resistance
●	●		●	●	●	●			●	●	
●	●										●
●	●	●	●	●				●	●	●	
●	●						●	●	●	●	

Resin	Solids, %	OH Number, Solids	NCO, %	OH Eq. Wt.	NCO Eq. Wt.
MACRYNAL VSM 6299w/42WA resin	42	135		416	
Desmodur® N 3600 resin	100		23		183
Bayhydur® 304 resin	100		18.2		231

Note: As used in the tables and figures herein, all references to PRODUCT NAME are understood to be the products described in the text.

Isocyanate Stoichiometry Calculation

NCO equivalent weight = 4200 / % NCO
 NCO Equivalence = (resin weight x solids content) / NCO equivalent weight
 OH equivalent weight = 56100 / OH number
 OH Equivalence = (resin weight x solids content) / OH equivalent weight

Question:

Calculate the NCO: OH ratio to crosslink 75g of MACRYNAL VSM 6299 resin with a blend of 10g of Desmodur® N 3600 resin and 10g of Bayhydur® VPLS 2319 resin.

Answer:

10g Desmodur N3600
 ■ NCO Equivalent weight = 4200/23 = 183
 ■ NCO Equivalence = (10 x 100%)/183 = 0.0546

75g MACRYNAL VSM 6299
 ■ OH Equivalent weight = 56100/135 = 416
 ■ OH Equivalence = (75 x 42%)/416 = 0.0757

10g Bayhydur 304
 ■ NCO Equivalent weight = 4200/18.2 = 231
 ■ NCO Equivalence = (10 x 100%)/231 = 0.0433

NCO : OH Ratio
 Ratio = total NCO equivalence/total OH equivalence = (0.0546 + 0.0433)/0.0757 = 1.29

Adhesion of MACRYNAL Crosslinking Resins	Polyamide	Poly-carbonate	PMMA	PP Pretreated	Poly-styrene	Hard PVC	Soft PVC	ABS
SM 565	5/0	0/0	5/0	5/5	0/0	5/5	5/5	5/5
VSM 2570	5/5	0/0	5/5	5/5	0/0	5/5	5/5	5/5
VSM 2800	0/0	0/0	5/5	5/5	0/0	5/5	5/5	5/5
VSM 2872	5/0	0/0	0/0	5/5	0/0	5/5	5/5	5/0

*Crosslinked with Desmodur N 3390. ^aBefore/After 7 days @100% RH exposure. 0 = Best 5 = No Adhesion
 Bayhydur® is a registered trademark of Bayer. Desmodur® is a registered trademark of Bayer.*

Hydroxylated Solventborne Polyols

Solventborne Resins

MACRYNAL	Solids %	Solvent	Viscosity at 73°F in cP	WPG Lbs./Gal.	OH Number on Solid Resin	OH Equivalent on Form of Delivery	HAPS-Free	Fast Drying	Pop Resistance	Fast Initial Hardness Development	Sandability	Hardness	Flow and Leveling	Flexibility	Yellowing Resistance	Exterior Durability	High Gloss	Long Potlife	Chemical Resistance	Humidity Resistance	Adhesion to Aluminum	Adhesion to Zinc	Adhesion to Plastic	Sag Resistance
SM 500/60X	60	Xylene	2000 - 3800	8.10	90	1050	●					●	●			●	●	●			●			
SM 510n/60LG	60	n-BuAc/Aro100/X	2400 - 3600	8.41	150	625		●			●	●	●	●	●	●	●	●	●	●			●	
SM 510n/60LGV4	60	X/MPAc	2500 - 4000	8.58	150	625		●			●	●	●	●	●	●	●	●	●	●			●	
SM 515/70BAC	70	n-BuAc	3600 - 6000	8.75	150	535	●	●			●	●	●			●	●		●	●			●	
SM 516/70BAC	70	n-BuAc	7000 - 11000	8.75	150	535	●					●	●	●	●	●	●	●	●	●				
SM 540/60X	60	Xylene	1400 - 2400	8.26	45	2080	●	●						●				●			●	●		
SM 565/70BAC	70	n-BuAc	2000 - 4200	8.75	145	550	●	●				●	●	●	●	●	●	●		●				
SM 2704/75BACX	75	n-BuAc/X	5000 - 7000	8.58	65	1150		●	●	●	●	●	●		●		●	●						●
SM 2708/75BAC	75	n-BuAc	2500 - 4500	8.58	95	788	●		●				●	●	●	●	●	●			●			●
SM 2810/75BAC	75	n-BuAc	4500 - 6000	8.84	135	555	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●
VSM 1004/75LGV2	75	PMA/EEP/MeAc	8000 - 15000	8.75	123	608	●	●	●	●		●	●	●		●	●							
VSM 2570/70BAC	70	n-BuAc	2200 - 3800	8.66	80	1000	●					●	●	●	●	●	●	●			●	●		
VSM 2705/70LG	70	Aro100/n-BuAc	3000 - 6800	8.58	100	800	●	●			●	●	●	●	●	●	●	●						
VSM 2800/70BAC	70	n-BuAc	2000 - 5000	8.66	145	550	●					●	●	●	●	●	●	●		●				
VSM 2805/80BAC	80	n-BuAc	4000 - 8500	9.08	142	495	●					●	●	●	●	●	●	●						
VSM 2872/70BAC	70	n-BuAc	1500 - 3700	8.66	145	550	●	●				●	●	●	●	●	●	●		●				

Application Area

Scratch Resistance	High Solids	Metal Primer/Surfacers	Plastic Primer	Pigmented Topcoat	Clearcoat	Transportation	OEM Topcoat/Clearcoat	Wood Paint	Refinishing	Plastics	Anti-Graffiti	Aluminum Primer	Airless/Airmix Application	Single Coat/Direct to Metal	For Blending	High Film Build
		●	●	●				●		●				●		
●			●	●	●			●		●				●		
●			●	●	●			●		●				●		
●	●	●	●	●		●			●	●						
	●			●	●									●		
●		●	●					●	●	●		●			●	
●	●				●	●	●		●	●					●	
●	●	●		●									●	●		
●	●	●		●	●								●	●		
●	●			●	●	●			●				●	●		
	●	●	●	●	●	●			●	●					●	
●	●		●	●	●	●			●	●		●	●	●		●
		●	●					●	●	●		●			●	
●	●	●	●	●		●		●	●	●			●		●	
	●	●	●	●	●	●			●	●		●		●	●	●
●	●			●		●			●	●				●		

Waterborne Dispersions for Isocyanate Crosslinking

Waterborne Resins

MACRYNAL	Solids %	Solvent	Viscosity at 73°F in cP	WPG Lbs./Gal.	OH Number on Solid Resin	OH Equivalent on Form of Delivery	AV on Solid Resin	Tg °C	Neutralization Agent	Fast Drying	Sandability	HAPS-Free	Hardness	Flow and Leveling	Flexibility	Shear Stability (for WB Resins)	Yellowing Resistance	Exterior Durability	High Gloss	Long Potlife	Chemical Resistance	Humidity Resistance	VOC < 2.5	VOC < 1.5	Forced Dry
SM 6810 w/42WA	42	Water/BP	200 - 1200	8.75	135	989	19		DMEA		●	●		●	●	●	●	●	●	●	●	●	●	●	●
SM 6820w/42WA	42	Water			130	1027								●	●		●					●	●		
SM 6825w/41WA	41	Water/MP	500-3000	8.79	140	977	40		DMEA	●	●	●	●			●		●			●	●	●		
VSM 2521w/42WAB	42	Water/n-But	1000 - 4000	8.66	140	950	40		DMEA	●	●	●	●			●		●			●	●	●		
VSM 6285w/43WABDG	43	Water/BDG	400 - 2000	8.75	110	1180	36	57	DMEA					●	●	●	●	●	●				●		●
VSM 6299w/42WA	42	Water	800 - 4000	8.83	135	990	25	38	DMEA	●			●	●	●	●	●	●	●	●	●	●		●	

<i>Metal Primer/ Surfacer</i>	<i>Plastic Primer</i>	<i>Pigmented Topcoat</i>	<i>Clearcoat</i>	<i>Transportation</i>	<i>Wood Paint</i>	<i>Refinishing</i>	<i>Plastics</i>	<i>Solid Color Basecoat</i>	<i>Airless/Airmix Application</i>	<i>Single Coat/ Direct to Metal</i>	<i>For Blending</i>	<i>High Film Build</i>
		●	●	●		●			●		●	●
	●						●					
●		●	●		●		●			●	●	
●		●	●		●		●			●	●	
		●	●	●			●				●	
●	●	●	●	●	●	●	●	●	●		●	●

Phenolic Solventborne Resins and Waterborne Dispersions

PHENODUR	Solids %	Solvent	Viscosity at 73°F in cP	WPG Lbs./Gal.	Compatible with Epoxy Resins	Compatible with PVB (Butvar™) Resins	Usual Ratio Epoxy/Phenolic Phenolic/PVB Butvar™	Color	Silver Lacquer	Typical Baking Conditions (minutes)	Temperature	ADDITOL® XK 406	Shock Curing	Induction Curing	Wedge Bend	Erichsen Number 2	2% Lactic Acid	Cysteine Test/ 90 min. at 121°C
EP 560	71	Butanol	1300 - 2600	9.2	●	●	80/20 to 50/50	Medium		12	200°C	●	●		Medium	Medium	Good	Good
PH 2013/65B	65	Butanol	1000-5000	8.68	●	●	80/20 to 50/50	Golden		10-12'	200°C	●			Medium	Good	Good	Good
PH 2024/60B		Butanol	150-500	8.60	●	●	80/20 to 50/50	Sl. golden		10-12'	180°C	●			Low	Low	Medium	Low
PR 263/70B	70	Butanol	250 - 1500	8.34	●	●	N/A	Light		Air drying	Air drying				N/A	N/A	N/A	N/A
PR 285/55IB/B	55	But/Isobut 4/5	180 - 250	8.25	●	●	80/20 to 50/50 / 90/10	Dark		15	190°C		●		Very good	Good	Good	Good
PR 307/63X/MP	63	X/MP	1000 - 7000	8.75	●	●	Additive	Very dark										
PR 308/62MP	62	MP	1000 - 2250 ^a	8.75	●	●	Additive	Very dark										
PR 411/75B	75	Butanol	390 - 530	8.84	●	●	80/20 to 50/50	Very light	●	12	200°C	●	●	●	Medium	Good	Good	Medium
PR 516/60B	60	Butanol	150 - 500	8.58	●	●	80/20 to 50/50	Light	●	12	200°C	●	●		Good	Good	Good	Good
PR 517/60B	60	Butanol	2000-5000	8.35	●	●	80/20 to 50/50 / 90/10	Medium		10-12'	200°C	●			Very good	Very good	Good	Excellent
PR 612/80B	80	Butanol	80 - 125 ^b	8.75	●	●	80/20 to 50/50 / 90/10	Medium		12	200°C	●			Good	Very good	Good	Medium
PR 722/53BG/B	53	BG/But 3:1	1500 - 4000 ^a	8.75	●	●	80/20 to 50/50 / 90/10	Medium		12	200°C	●			Very good	Very good	Good	Good
PR 898/52BGB	52	BG/But	400 - 1400	8.83	●		80/20 to 55/45	Medium		10 - 30	170°C - 210°C	●			Good	Good	Very good	Good
PR 899/60MPAC	60	MPAC	200-1500	8.35	●	●	80/20 to 55/45	Medium		10-12'	200°C	●			Good	Very good	Good	Medium
PW 165/40WAMP	40	WA/MP	100-1000	8.76	N/A	N/A	N/A	N/A		N/A	N/A							
VPM 1150/50EPAC	50	EPAc	1500 - 4000	9.16	●	N/A	Co-curing resin	Clear	●	12	200°C		●	●	Good		Very good	Medium
VPW 1942w/52WA	52	Water	100 - 1000	9.33	N/A	N/A	N/A	Light		12	200°C	●	●		Good	Medium	Good	Medium
VPW 1946/46WA	46	Water	500-2500	8.76	N/A	N/A	N/A	N/A		10-12'	170°C - 210°C	●			Good	Medium	Very good	Medium

^a Viscosity at 50% diluted with Butanol. ^b Viscosity at 60% diluted with Butanol. Butvar™ is a trademarked product of Solutia. N/A = Not Applicable.

PHENODUR®

Phenolic Solventborne Resins and Waterborne Dispersions

RESAMIN®

Solventborne Plasticizing Resin

Application Area

Free Phenol/ Cresol	Free Formaldehyde	Can	Tubes	Drums	Metal Foil	Waterborne	
7%	< 0.4%	●	●	●		●	
<2%	0.5%	●		●		●	
<3%	<1%	●		●	●	●	
				●			
0.50%	0.50%		●	●			
0.10%	0.10%					●	
0.10%	0.10%	coloring resin					●
< 1%	< 0.1%	●		●	●	●	
< 3%	< 1%	●		●	●		
<2%	<0.5%	●	●				
0.5%	1%		●		●	●	
8%	5%	●					
3%	2%	●	●				
	<0.5%	●		●		●	
						●	
0%	0%	●			●		
0.10%	< 0.1%	●	●		●	●	
	< 0.1%	●		●	●	●	

RESAMIN	Solids %	Solvent	Viscosity at 73°F in cP	WPG Lbs./Gal.	Plasticizer	Waterborne Systems	Solvent Systems	Grind Stability	Compatible – PVC, NC, PVB, Alkyds (see TDS)	Air Dry	Bake Systems
HF 480	99	0	3500-15000	9.16	●		●	●	●	●	●

* PHENODUR® phenolic solventborne/waterborne resins/dispersions
 * RESAMIN® solventborne plasticizing resin

Waterborne Alkyd Emulsions for Air-Drying and Forced Dry Systems – Decorative Wood

RESYDROL	Solids %	Solvent	Viscosity at 73°F in cP	WPG Lbs./Gal.	Amine Neutralization	Appearance	pH at 10% in Water	Type of Modification	Oil Length	Freeze/Thaw Stability	VOC-Free	Fast Initial Drying	Rapid Through Drying	Fast Development of Hardness	Fast Sandability	Early Water Resistance	High Hardness Coating	Adhesion on Non-Ferrous Metal	Water Resistance	Corrosion Resistance	Flexibility	Pigment Wetting	Yellowing Resistance	Compatible with Acrylic Dispersion	Sag Resistance	Increase the Open Time	Wood Penetration	Excellent Recoatability	Humidity Protection	Brushability
AF 6120w/62WA	62	Water	500 - 1500	8.91	Not needed	Whitish	5.5 - 9.5	None	35%	No	Yes								●		●		●	●			●			●
AY 241w/40WA	40	Water/BG	3000 - 6000	8.5	NH ₃	White opaque	8.0 - 9.5	Acrylic	24%	Yes	No	●	●		●	●	●	●	●					●				●		
AY 586w/42WA	42	Water	400 - 2500	8.5	NH ₃	Light Brown/Opaque	7.3 - 8.3	Acrylic	58%	Yes	Yes	●					●		●	●	●	●	●		●	●	●	●	●	●
AY 588w/42WA	42	Water	1000 - 4000	8.5	NH ₃	Light Brown/Opaque	7.0 - 9.0	Acrylic	58%	Yes	Yes	●	●					●				●	●	●	●	●		●		●
AY 6150w/45WA	45	Water	300-2000	8.75	NH ₃	Light Brown/Opaque	8.0-9.2	Acrylic	35%	Yes	Yes	●	●	●		●	●	●		●	●	●								●
VAL 7149w	98		700 - 1500	8.5	None	Light Brown/Opaque	4.0 - 6.0	None	50%	Yes	Yes										●					●	●			●
VAY 6278w/45WA	45	Water	100 - 900	8.58	NH ₃	White opaque	7.8 - 8.6	Acrylic	15%	Yes	Yes	●	●	●		●			●				●						●	

Application Area

Shear Stable	High Gloss	Weathering Resistance	Gloss Retention	Anticorrosion Primer	DTM	Dip Enamel	Semitransparent Stain	Solid Color Stain	Wood Primer	Wood Impregnation	Wood Varnishes	Architectural Paints	High Film Build
	●							●				●	●
●		●	●		●				●				
●	●				●		●	●			●		
●	●	●	●									●	●
●		●	●		●				●			●	
		●	●				●			●			
●		●	●		●			●	●			●	

Neutralization Equation

$$\frac{R \times AN \times E \times (\% \text{ neutralization})}{56,100} = \text{wt. of amine}$$

R = Wt. % Resin solids

AN = Acid number of weight solids

E = Equivalent wt. Amine

56,100 (KOH solution equivalent wt., constant)

Question:

How many grams of ammonia and TEA are needed to neutralize 100g of a 70% solids alkyd, acid number = 40? Neutralize 50/50 with ammonia/TEA based on equivalents.

Answer:

$$\frac{70 \times 40 \times 101^a \times (0.50)}{56,100} = 2.5g \text{ TEA}$$

$$\frac{70 \times 40 \times 61^a \times (0.50)}{56,100} = 1.52g \text{ NH}_3$$

^a Equivalent wt. of Amine from table below.

Amine	Equivalent Weight	Boiling Point °C	pKb
Ammonia (26%)	61	-33	9.25
DEA	73	55	10.8
TEA	101	89	11.01
Morpholine	87	128	8.33
DMEA	89	134	9.3
AMP	89	165	9.69

* RESYDROL® waterborne alkyd emulsions/dispersions

Waterborne Alkyd Emulsions for Air-Drying and Forced Dry Systems – Industrial

RESYDROL	Solids %	Solvent	Viscosity at 73°F in cP	WPG Lbs./Gal.	Amine Neutralization	Appearance	pH at 10% in Water	Type of Modification	Oil Length	Freeze/Thaw Stability	VOC-Free	Fast Initial Drying	Rapid Through Drying	Fast Development of Hardness	Fast Sandability	Early Water Resistance	High Hardness Coating	Adhesion on Non-Ferrous Metal	Water Resistance	Corrosion Resistance	Flexibility	Pigment Wetting	Yellowing Resistance	Compatible with Acrylic Dispersion	Sag Resistance	Wood Penetration	Excellent Recoatability	Humidity Protection	Brushability
AY 241w/40WA	40	Water/BG	3000 - 6000	8.5	NH ₃	White opaque	8.0 - 9.5	Acrylic	24%	Yes	No	●	●		●	●	●	●	●					●			●		
AY 6150w/45WA	45	Water	300 - 2000	8.75	NH ₃	Light Brown/Opaque	8.0 - 9.2	Acrylic	35%	Yes	Yes	●	●	●		●	●	●	●	●	●	●		●				●	●
AY 6173w/45WA	45	Water	300 - 1500	8.75	NH ₃	Light Brown/Opaque	8.0 - 9.2	Acrylic	33%	Yes	Yes	●	●	●		●	●	●	●	●	●	●		●				●	●
AZ 436w/45WA	45	Water/BG	4000 - 12000	8.66	NH ₃ /DMEA	Milky	8.5 - 9.5	Acrylic/Urethane	43%	Yes	No	●					●		●	●		●		●	●		●	●	●
AZ 6185w/40WA	45	Water	300-2000	8.75	NH ₃	Light Brown/Opaque	8.0 - 9.2	Acrylic	35%	Yes	Yes	●	●	●		●	●	●	●	●	●	●	●	●					●
VAN 6113w/42WALG	42	Water/BG/MP	500 - 3000	9.08	Cationic resin	White opaque	3.0 - 5.0	Polyester	N/A	No	No	●					●		●		●	●		●				●	
VAX 6050w/40WA	40	Water/BG	2000 - 6500	8.58	NH ₃ /DMEA	White opaque	8.2 - 9.2	Acrylic/Epoxy	32%	Yes	No	●	●				●			●		●	●	●			●		
VAX 6267w/40WA	40	Water	45 - 200	8.66	NH ₃ /DMEA	Whitish	8.0 - 9.0	Acrylic/Epoxy	7%	No	Yes	●	●	●				●	●	●				●			●		
VAY 6096w/39WA	39	Water/BG	2000 - 8000	8.66	NH ₃	Brown/Opaque	7.0 - 9.0	Acrylic	32%	Yes	No	●	●	●		●	●		●			●		●			●		
VAY 6278w/45WA	45	Water	100 - 900	8.58	NH ₃	White opaque	7.8 - 8.6	Acrylic	15%	Yes	Yes	●	●	●		●			●				●					●	

N/A = Not Applicable.

Application Area

Shear Stable	Abrasion Resistance	High Gloss	Weathering Resistance	Gloss Retention	Primer	Anticorrosion Primer	DTM	Industrial Topcoat	Dip Enamel	High Film Build	For UV Blend	Plastic Coatings
●			●	●	●		●	●				
●		●	●	●	●	●	●	●				
●			●		●	●						
●					●	●		●	●	●		
●		●			●	●	●	●		●		
●	●	●										●
●		●			●	●	●					
					●	●	●					
●		●					●	●				
			●	●	●		●					

Waterborne Alkyd Dispersions for Baking Systems

RESYDROL	Solids %	Solvent	Viscosity at 73°F in cP	WPG Lbs./Gal.	Amine Neutralization	Appearance	pH	VOC-Free	Modification	Freeze/Thaw Stability	Oil Length	Hardness	Impact	Yellowing Resistance	Metal	Non-Ferrous Substrates	Single Coat	High Filled Topcoat	Stone Chip Resistance	Corrosion Protection	Water Resistance	Shear Stable	Pigment Wetting	High Gloss	Weathering
AF 502w/35WA	35	Water	225 - 710 ^a	8.58	DMEA	Light brown	7.5 - 8.8	Yes	Fatty acid	Yes	N/A		●		●		●	●				●	●	●	
AM 224w/40WA	40	Water/MP	100 - 700 ^a	8.91	DMEA	Opaque brown	7.5 - 9.0	No	Fatty acid	Yes	N/A	●	●	●	●		●			●	●	●	●	●	●
AX 246w/70BG	70	BG/MP	340 - 690 ^a	9.0	DMEA	Brown	Partially neutralized	No	Epoxy	Yes	22%				●					●		●	●		
AX 906w/55WALG	55	Water/n-But/DPGE	185 - 600 ^a	9.0	DMEA	Clear - Opaque	7.0 - 9.0	No	Epoxy polyester	Yes	N/A	●	●		●	●					●	●	●		●
AZ 6608w/43WA	43	Water/NMP/MP	100 - 1500	9.0	DMEA	Milky - White	7.5 - 8.5	No	Urethane	Yes	N/A	●	●	●	●	●	●		●		●			●	●
VAF 5540w/70MP	70	MP	300 - 550 ^a	9.16	N/A	Clear	Not neutralized	No	Polyester	Yes	N/A	●			●				●			●		●	
VAX 5227w/55LG	55	Water/DPGE/BG	90 - 500 ^a	8.75	DMEA	Brown	7.0 - 9.0	No	Epoxy polyester	Yes	N/A	●	●	●				●	●	●		●	●		
VAY 5536w/35WA	35	Water/NMP	500 - 8000	8.83	DMEA	Opaque	7.5 - 9.2	No	Acrylic polyester	Yes	N/A		●	●	●	●	●					●	●	●	●
VAZ 6600w/36WA	36	Water/MPP	100 - 800	8.83	DMEA	Brown	7.0 - 8.0	No	Alkyd urethane	Yes	N/A	●	●		●				●			●	●	●	
VAZ 6605w/40WA	40	Water	100 - 1000	8.91	DMEA	Yellow	7.5 - 8.6	Yes	Urethane	Yes		●	●		●	●	●			●	●			●	

N/A = Not Applicable. ^a Diluted in solvent for viscosity measurement.

Application Area

Sag Resistance	High Reactivity	Heat Resistance	For Use in Blend to Increase Reactivity	Increase of Solid Contents	Primer	Anticorrosion Primer	DTM	Dip Enamel	Industrial Topcoat	Drums Coating	OEM Primer/Surfacer	Low Temperature	Textured Paint
					●	●	●			●			
●						●	●	●	●			●	
	●	●			●	●		●				●	
	●		●			●		●				●	
							●		●				
			●	●							●		
						●					●		
		●					●	●	●				
●					●						●		
						●			●				

Waterborne Acrylic Resins, Physically Drying/Self-Crosslinking and Hydroxylated Acrylic Dispersions

VIACRYL	Solids %	Solvent	Viscosity at 73°F in cP	pH at 10% in Water	WPG Lbs./Gal.	MFFT in °C	OH Number on Solid Resin	OH Equivalent on Form of Delivery	Physically Drying	Self-Crosslinking	Crosslink with Amino Resin	Fast Dry	Sandability	Hardness	Flow and Leveling	Flexibility	Shear Stability	Yellowing Resistance	Exterior	Corrosion Resistance
SC 175w/40WAIP	40	Water/IP	550 - 850	7.5 - 8.0	8.66				●						●	●	●			
SC 6827w/47WA	46	Water	<150	3.0-5.0	8.83	20	75	1626	●	●	●	●		●		●		●	●	
VSC 6250w/65MP	65	MP	18000 - 35000	Not neutralized	8.66													●	●	●
VSC 6254w/40WA	40	Water	150 - 700	8 - 9	8.66	45	60	2337	●			●					●	●	●	●
VSC 6265w/40WA	40	Water	200 - 1300	8 - 9	8.75	26	65	2158	●			●	●	●			●	●	●	●
VSC 6279w/45WA	45	Water	280 - 1600	7.7 - 8.5	8.66	25	65	1918	●			●	●	●			●	●	●	●
VSC 6286w/45WA	45	Water	30 - 600	6.5 - 7.8	8.75	11			●	●				●	●	●	●	●	●	
VSC 6288w/35WA	35	Water/BG	20 - 90	7.4 - 8.1	8.58		65	2465	●	●	●								●	●
VSC 6293w/45WA	45	Water	50 - 800	7.5 - 8.8	8.66	20			●			●		●			●	●	●	●
VSC 6295w/45WA	45	Water	30 - 200	6.5 - 7.8	8.75	30			●	●				●	●		●	●	●	

Waterborne Acrylic Resins for 1K Baking Systems or 2K with Isocyanates

VSC 6273w/44WA	44	Water	200 - 2400	8.0 - 9.1	8.66		85	1500			●			●			●	●	●	
VSC 6292w/38WA	38	Water	450 - 4500	3.8 - 5.3	8.75					●	●			●			●			
VSC 6800w/47WA	47	Water	300 - 2000	8.0 - 9.0	8.83		100	1195			●				●	●	●	●	●	

Application Area

Humidity Resistance	Chemical Resistance	Stain Resistance	Metal Primer	Metal Topcoat	DTM	Anticorrosion	CED	Soft Plastic	Hard Plastic	Glass	Architectural Paint	Wood Furniture	Wood Flooring	Solid Color Stain	Stain Block	OEM Topcoat	OEM Clearcoat	Basecoat	Aluminum	Flexo and Printing Inks	Concrete Topcoat
																				●	
●	●			●	●					●									●		
			●	●	●	●	●														
●			●	●	●					●	●		●	●							
●	●	●	●	●	●	●		●	●					●	●				●		●
●	●	●	●	●	●	●		●	●					●	●				●		●
●	●					●						●	●								
●	●			●												●	●	●			
●							●														
				●												●					

Contact Us

NORTH AMERICA

Cytec Surface Specialties Inc.

1950 Lake Park Drive
Smyrna, Georgia 30080
Tel: 1 800 433 2873 (USA)
Tel: 1 678 255 4691 (outside USA)
Fax: 1 678 255 4789

MEXICO

Cytec de Mexico, SA de CV

Km. 40, Carretera Guadalajara-La Barca
Atequiza, Jalisco CP45860
Mexico
Tel: ++52 376 737 4100
Fax: ++ 52 376 737 4105

LATIN AMERICA

Cytec Brasil Especialidades Química Ltda.

Av. Dr. Cardoso de Melo, 1450 - Conj: 401/402
04548-005 - Vila Olimpia
Sao Paulo, SP - Brasil
Tel: ++55 11 3048 8000
Fax : ++55 11 3048 8040

EUROPE

Cytec Surface Specialties

Square Marie-Curie 11
1070 Anderlecht
Brussels
Tel: ++32 2 560 4511
Fax: ++32 2 560 4521

ASIA PACIFIC/CHINA

Cytec Surface Specialties (Shanghai) Co Ltd

30A Jun Yao International Plaza
789 Zhao Jia Bang Road,
Xuhui District
Shanghai 200032
Tel: 86 21 6422 8920
Fax: 86 21 6422 8980

Global Product Referral

Tel.: 1 800 652 6013 (USA)
Tel.: 1 973 357 3193 (Outside USA)
custinfo@cytec.com

Cytec Industries Inc. in its own name and on behalf of its affiliated companies (collectively, "Cytec") decline any liability with respect to the use made by anyone of the information contained herein. The information contained herein represents Cytec's best knowledge thereon without constituting any express or implied guarantee or warranty of any kind (including, but not limited to, regarding the accuracy, the completeness or relevance of the data set out herein). Cytec is the sole owner or authorized user of the intellectual property rights relating to the information communicated. The information relating to the use of the products is given for information purposes only. No guarantee or warranty is provided that the product is adapted for any specific use. The user or purchaser should perform its own tests to determine the suitability for a particular purpose. The final choice of use of a product remains the sole responsibility of the user.

TRADEMARK NOTICE: The ® indicates a Registered Trademark in the United States and the ™ or * indicates a Trademark in the United States. The mark may also be registered, the subject of an application for registration or a trademark in other countries.

LCR-0157-H-EN-NA-01B

www.cytec.com

©2010 Cytec Industries Inc. All rights reserved.