



RESINS FOR AUTOMOTIVE REFINISHES



EAGLE CHEMICALSTM
RENEWS YOUR YOUTH LIKE THE EAGLE

RESINS FOR AUTOMOTIVE REFINISHES

EAGLE CHEMICALS is one of the leading producer of resins in Africa and Middle-East. Our state-of-the-art car coatings center underpins us as a superior supplier of resins for automotive refinish, especially solvent based resins.

Our fully computerized production lines, assistance of international chemical expertise and highly equipped labs helped us exceed our customers' expectations.

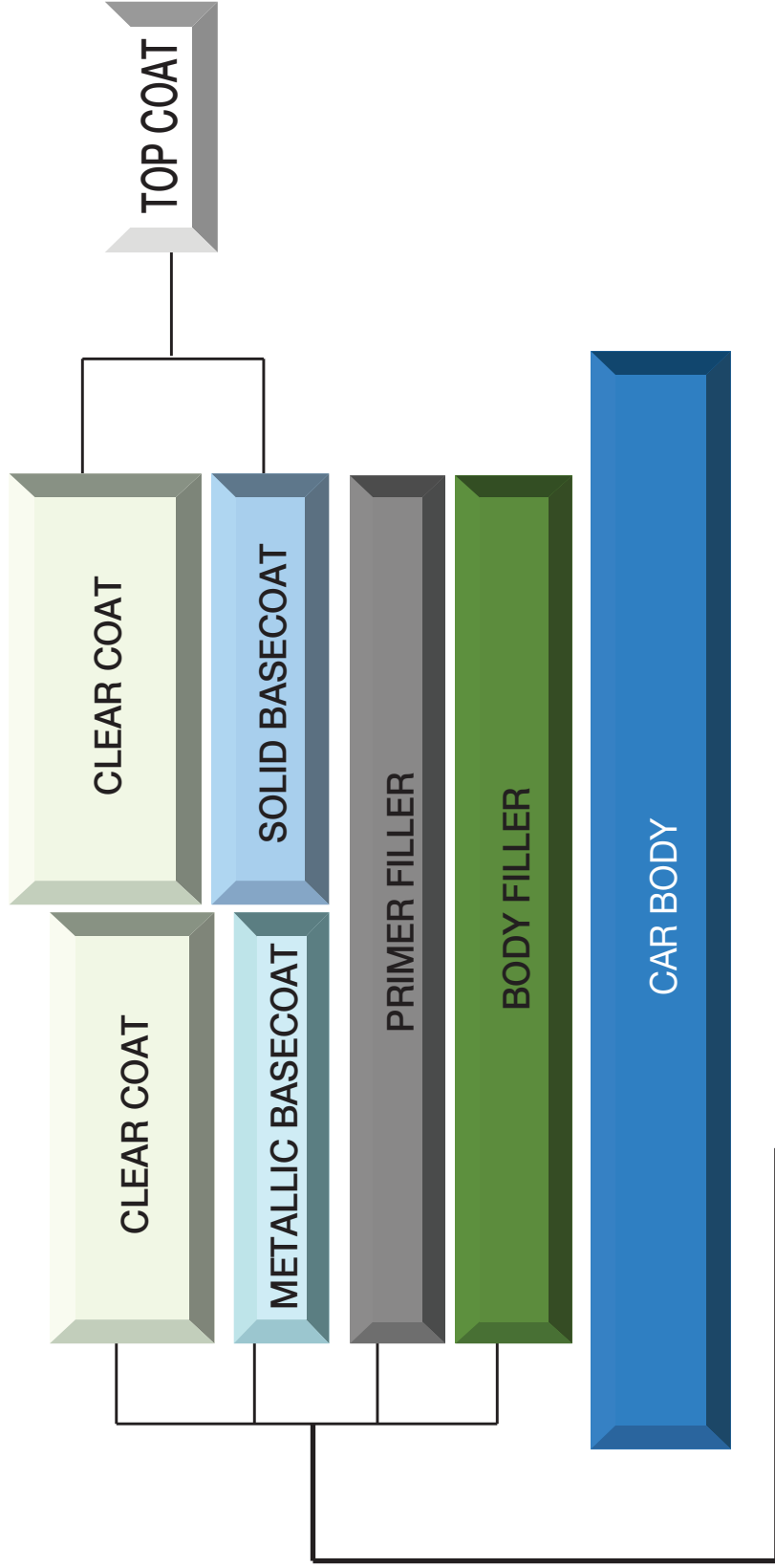
As customers are our "success partners", we provide the know-how and technology to modify resins upon their request to facilitate the optimal use of our products.

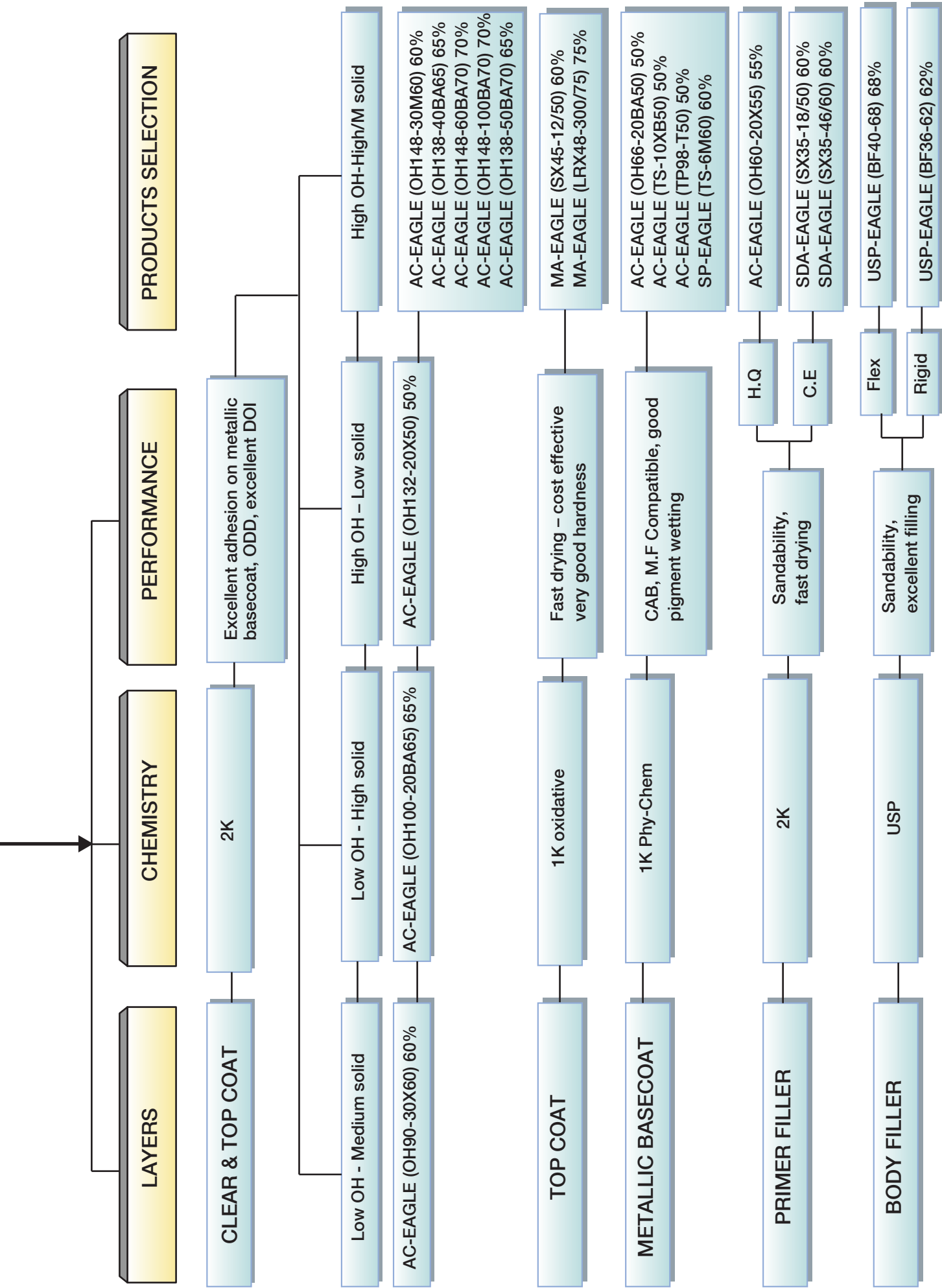
Our recent technology for automotive refinishes includes:

- 1 - RESINS FOR POLYESTER PUTTY
- 2 - RESINS FOR PRIMER FILLER
- 3 - RESINS FOR METALLIC BASE COAT
- 4 - RESINS FOR CLEAR COAT
- 5- RESINS FOR TOP COAT
- 6- WAX DISPERSION FOR METALLIC BASE COAT



PRODUCTS SELECTION GUIDE





RESINS FOR BODY FILLER

1. RESINS FOR BODY FILLER

1.1 Flexible Unsaturated Polyester Resin

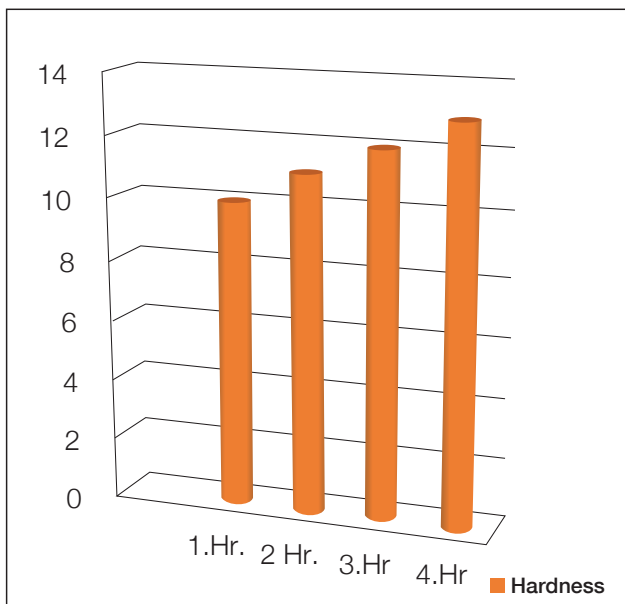
Resin Code	N.V.	Vis. Gardner @25°C	Vis. cP @25°C	Color (Gardner)	Gel Time	Cure Time	Peak Exothermic
USP-EAGLE (BF40-68)	68%	N - Q @68%	350 - 450	8 Max	3 - 6 min	11 - 15 min	110 ± 10 °C

GUIDE FORMULATION Flexible USP Body Filler

Raw Materials	Kg	Remarks
USP-EAGLE (BF40-68)	320.0	USP flexible resin - EAGLE CHEMICALS
BYK-W980	6.0	Dispersing agent
Aerosil 200	5.0	Thickener
ET2	200.0	Coarse particle size talc
SM4	130.0	Fine particle size talc
EJSF	290.0	Fine particle size calcium carbonate
TiO2	20.0	White pigment
Glass bubbles	18.0	Hollow glass microsphere
Styrene	11.0	
TOTAL	1000.0	

Mechanical properties	Hardness	Flexibility	Sandability	Adhesion	Fast drying
USP-EAGLE (BF40/68)	••	•••••	••••	•••••	•••

••••• Excellent •••• Very good ••• Good •• Fair • Poor



RESINS FOR BODY FILLER

1.2 Rigid Unsaturated Polyester Resin

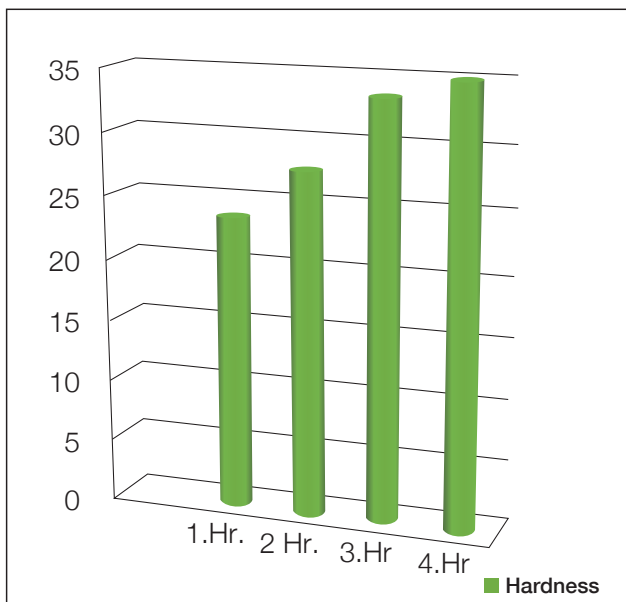
Resin Code	N.V.	Vis. Gardner @25°C	Vis. cP @25°C	Color (Gardner)	Gel Time	Cure Time	Peak Exothermic
USP-EAGLE (BF36-62)	62%	L - Q	300 - 400	8 Max	6 ± 2 min	4 - 8 min	120 ± 10 °C

GUIDE FORMULATION Rigid USP Body Filler

Raw material	(k.gm)	Remarks
USP-EAGLE (BF36-62)	160.00	USP hard resin - Eagle Chemicals
BYK-W969	3.00	Dispersing agent
Aerosil 200	2.50	Thickener
SM4	120.00	Fine particle size Talc
ET2	89.50	Slightly coarse particle size Talc
EJSF	100.00	Fine particle size (CaCO ₃)
TIO ₂	5.00	White pigment
Styrene	20.00	
Total	500.00	

Mechanical properties	Hardness	Flexibility	Sandability	Adhesion	Fast drying
USP-EAGLE (BF36/62)	•••••	••	•••••	•••••	•••••

••••• Excellent •••• Very good ••• Good •• Fair • Poor



RESINS FOR 2K- PRIMER FILLER

2. RESINS FOR 2K-PRIMER FILLER

2.1 Short Drying Alkyd

2.2 Hydroxy Acrylic Resin

Resin Code	N.V.	OH%	Vis. Gardner @25°C	Vis. cP @25°C	Color
SDA-EAGLE (SX35-46/60)	60%	3.0 %	Z3 - Z4 @60%	4600 @60%	6 Max (G)
SDA-EAGLE (SX35-18/50)	60%	3.0 %	Y - Z @50%	1800 @50%	6 Max (G)
AC-EAGLE (OH60-20X55)	55%	1.8 %	X - Z @55%	2000 @55%	50 Max (H)

GUIDE FORMULATION 2K Primer filler

1st Pack

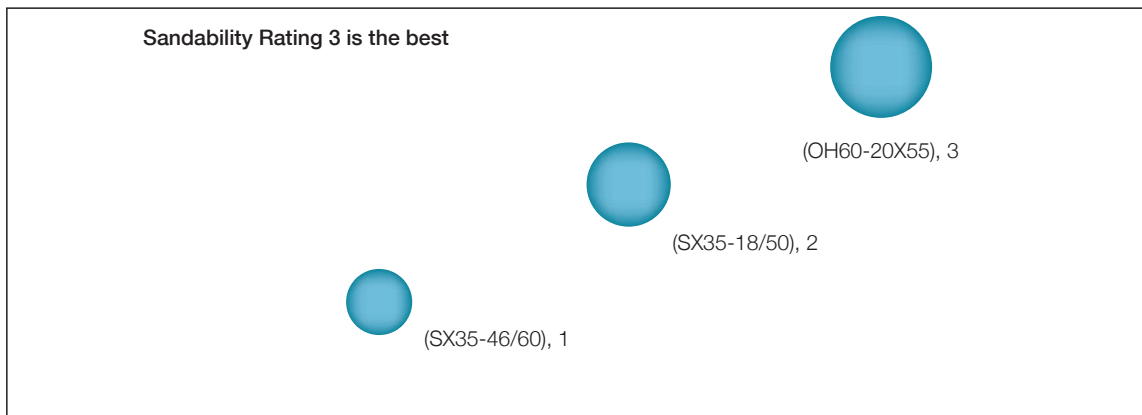
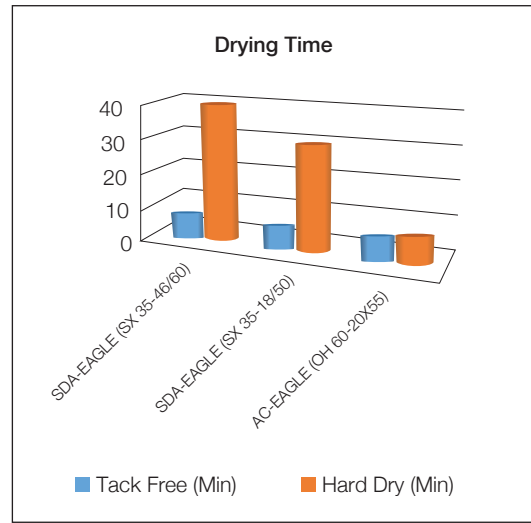
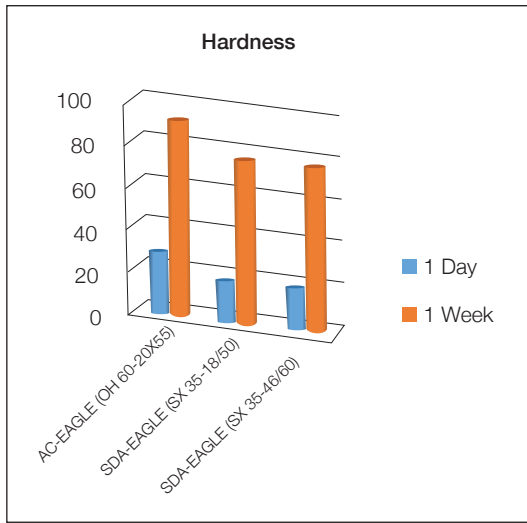
Raw Materials	Kg	Remarks
AC-EAGLE (OH60-20X55) 55%	264.00	Hydroxy acrylic resin – EAGLE CHEMICALS
Micro-Talc AT extra	63.00	Talc powder
Kronos 2065	178.00	Titanium dioxide
Millicarb	178.00	Extender
Blanc fixe F	82.00	Barium sulphate
Bayferrox 316	29.00	Iron oxide
M-P-A 60X	8.00	Anti-settling agent
Methoxy propyl acetate	58.00	
Butyl acetate	52.90	
BYK 358	1.00	Leveling agent
TOTAL	913.90	

2nd Pack

Raw Materials	Kg	Remarks
Desmodur L-75	48.00	Aromatic polyisocyanate
Methoxy propyl acetate	38.10	
TOTAL	86.10	
TOTAL ALL	1000.00	



RESINS FOR 2K - PRIMER FILLER



RESINS FOR 1K – SOLID & METALLIC BASE COAT

3. RESINS FOR 1K-SOLID & METALLIC BASE COAT

3.1 Thermoplastic Acrylic

3.2 Hydroxy Acrylic

3.3 Saturated Polyester

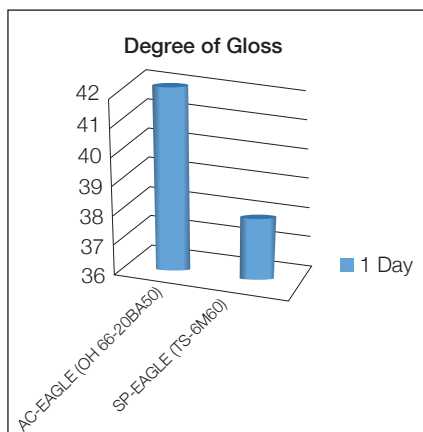
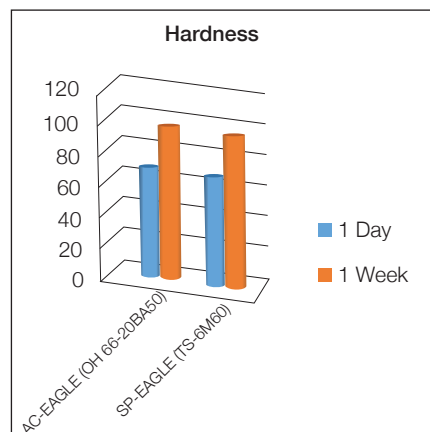
3.4 Thermosetting Acrylic

Resin Code	N.V	Solvent	OH %	Vis. Gardner @25°C	Vis. cP @25°C	Color
AC-EAGLE (TP-98T50)	50%	Toluene	--	Z4 - Z6	10000	50 Max (H)
AC-EAGLE (OH66-20BA50)	50%	BA	2.0	Z2 - Z4	4500	50 Max (H)
AC-EAGLE (TS-10XB50)	50%	X/BU	--	V - X	1000	150 Max (H)
SP-EAGLE (TS-6M60)	60%	Mixed	2.5	S - U	600	4 Max (G)

GUIDE FORMULATION 1K White base coat

Raw Materials	Kg	Remarks
INTERMEDIATE 1		Pigment concentrate
Laropal A-81	14.2	Aldehyde resin
Methoxy propyl acetate	8.2	
Aerosil R972	0.3	Pyrogenic Silica
Disperbyk 2150	2.2	Dispersing agent
Kronos 2160	46.4	Titanium dioxide
INTERMEDIATE 2		CAB 381-20 20% solution
Butyl acetate	291.1	
CAB 381-20	72.8	
INTERMEDIATE 3		CAB 551-0.2 20% solution
Butyl acetate	97.3	
CAB 551-0.2	24.3	
INTERMEDIATE 4		
EAGAWAX 265	147.7	EAGAWAX dispersion - EAGLE CHEMICALS
Butyl acetate	190.8	
SP-EAGLE (TS-6M60) 60%	79.5	Saturated polyester resin - EAGLE CHEMICALS
Uramex MF 821B	25.2	Butylated melamine resin
TOTAL	1000.0	

N.B.: Excellent adhesion on primer filler



RESINS FOR 1K – SOLID & METALLIC BASE COAT

GUIDE FORMULATION 1K Aluminum metallic base coat

Raw Materials	Kg	Remarks
INTERMEDIATE 1		Aluminum dispersion
Butyl acetate	72.0	
Alcan Toyo 8160 NAR	47.0	Non-leafing Aluminum pigment
INTERMEDIATE 2		CAB 381-20 20% solution
Butyl acetate	268.0	
CAB 381-20	67.0	
INTERMEDIATE 3		CAB 551-0.2 20% solution
Butyl acetate	89.6	
CAB 551-0.2	22.4	
INTERMEDIATE 4		
EAGAWAX 265	136.0	EAGAWAX dispersion - EAGLE CHEMICALS
Butyl acetate	161.0	
AC-EAGLE (OH66-20BA50) 50%	114.0	Hydroxy acrylic resin - EAGLE CHEMICALS
Uramex MF 821B	23.0	Butylated melamine resin
TOTAL	1000.0	

N.B.: Excellent adhesion on primer filler

Products	Hardness (60 μ)				Gloss			Drying Time			
	2 hrs	1 day	3 days	1 week	1 day	3 days	1 week	Touch D.	Tack F.	Hard D.	Through D.
SP-EAGLE (TS-6M60) 60%	110	118	119	121	35.4	35.7	34.0	<5 min	<5 min	<5 min	24 hr.
AC-EAGLE (OH66-20BA50) 50%	111	118	119	121	36.0	36.0	35.5	<5 min	<5 min	<5 min	24 hr.



RESINS FOR 2K - CLEAR OVER BASECOAT

4- RESINS FOR 2K - CLEAR OVER BASECOAT

Resin Code	N.V.	Solvent	OH %	Vis. Gardner @25°C	Vis. cP @25°C	Color (Hazen)
AC-EAGLE(OH148-95BA70)	70%	BA	4.5	Z4 - Z6	10000	50 Max
AC-EAGLE(OH148-27M60)	60%	Mixed	4.5	Z - Z1	3000	50 Max
AC-EAGLE(OH138-50BA70)	65%	BA	4.2	Z1 - Z3	4000	50 Max
AC-EAGLE(OH138-40BA65)	65%	BA	4.2	Z - Z3	3500	50 Max
AC-EAGLE(OH132-20X50)	50%	Xylene	4.0	W - Y	1500	50 Max
AC-EAGLE(OH100-20BA65)	65%	BA	3.0	X - Z	2000	50 Max
AC-EAGLE(OH90-30X60)	60%	Xylene	2.7	Z1 - Z2	3500	50 Max

GUIDE FORMULATION 2K- Clear over base coat

1st Pack

Raw Materials	Kg	Remarks
AC-EAGLE (OH138-50BA70) 65%	321.4	Hydroxy acrylic resin - EAGLE CHEMICALS
Butyl acetate	324.7	
BYK 378 (10% In xylene)	5.0	Leveling agent (BYK)
Tinuvin 1130	6.60	
Tinuvin 292	3.30	
TIB KAT 218 (5% in BA)	4.40	Catalyst (TIB chemicals)
TOTAL	665.40	

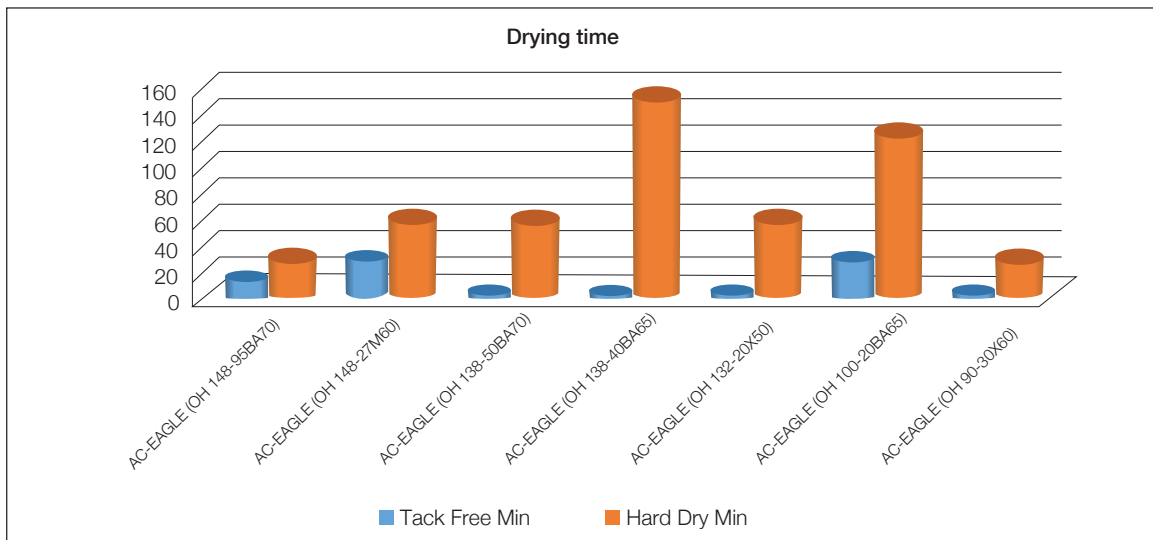
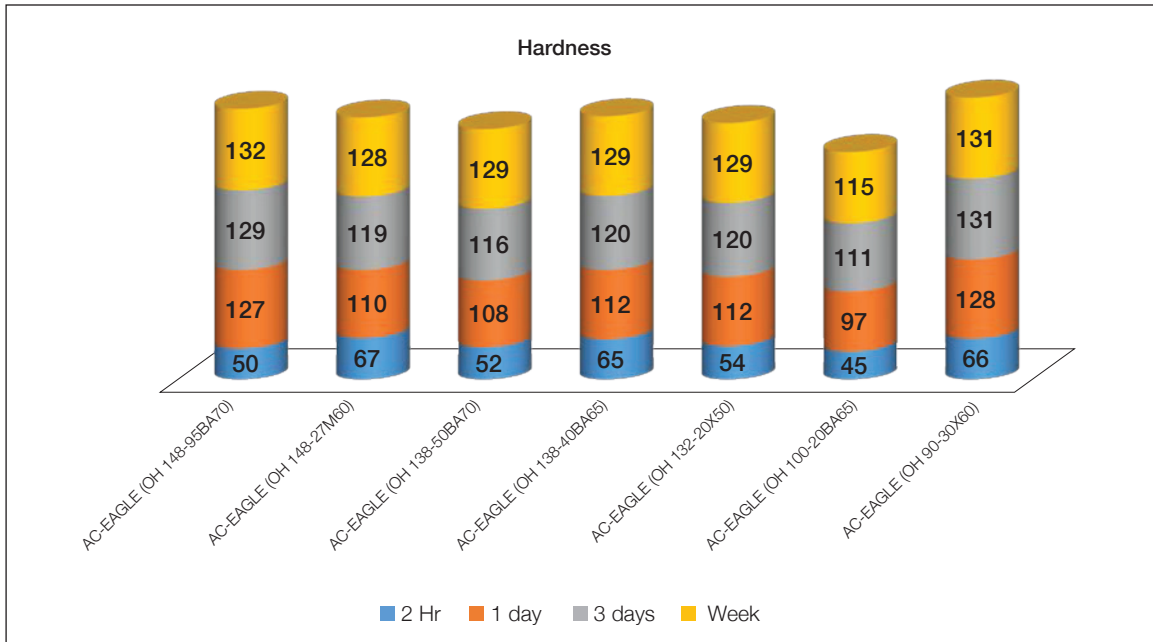
2nd Pack

Raw Materials	Kg	Remarks
Desmodur N75	131.34	Aliphatic polyisocyanate
Butyl acetate	119.41	
Methoxy propyl acetate	83.85	
TOTAL	334.6	
TOTAL ALL	1000.0	

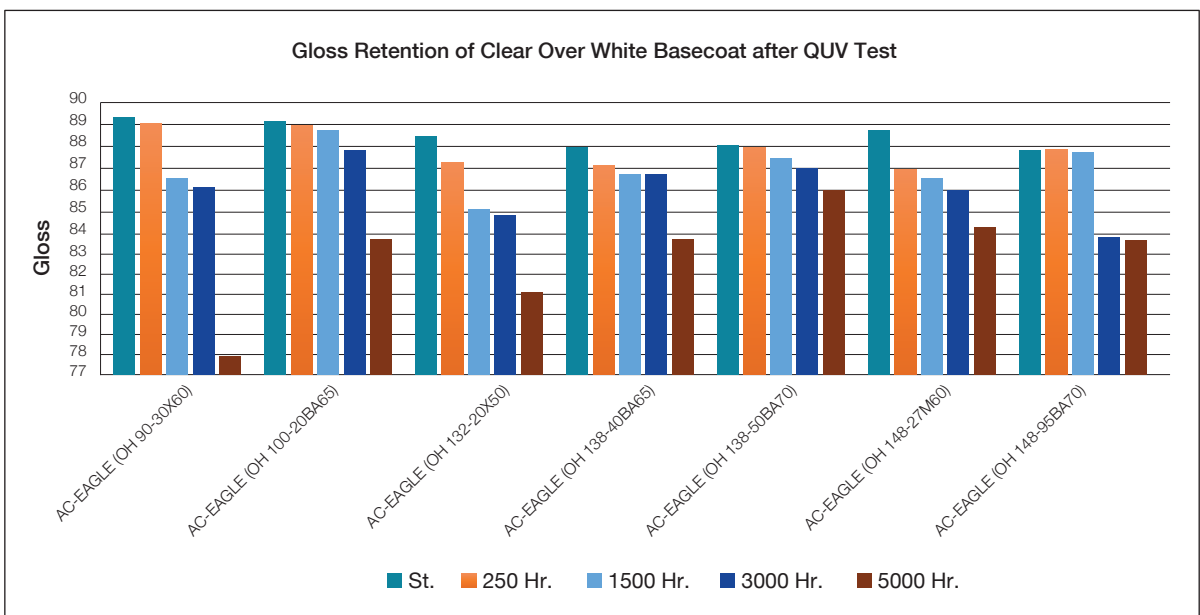
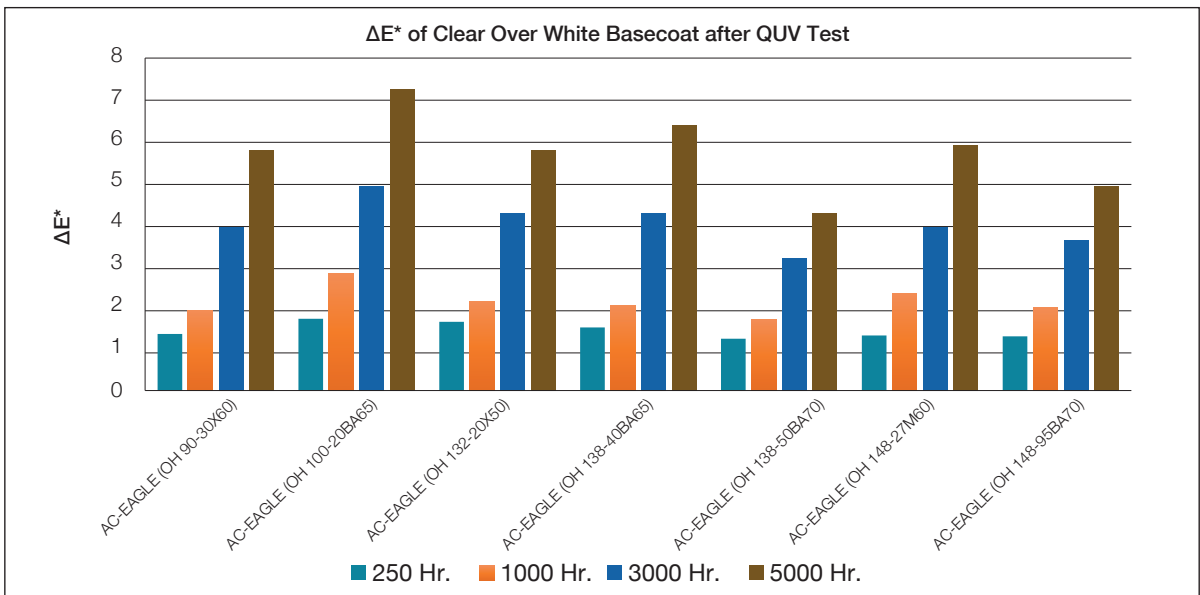
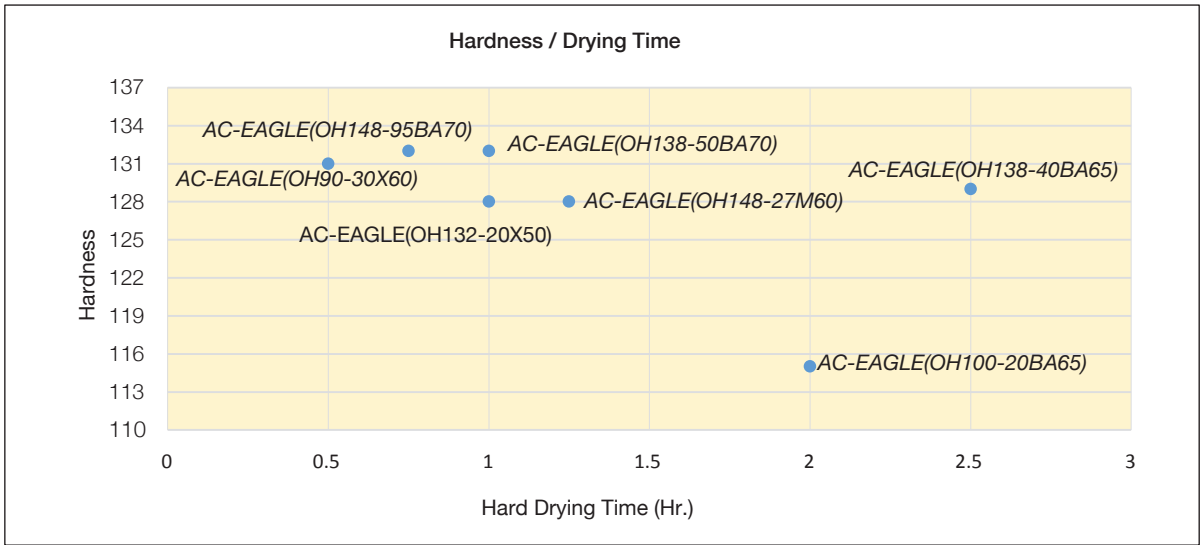


RESINS FOR 2K - CLEAR OVER BASECOAT

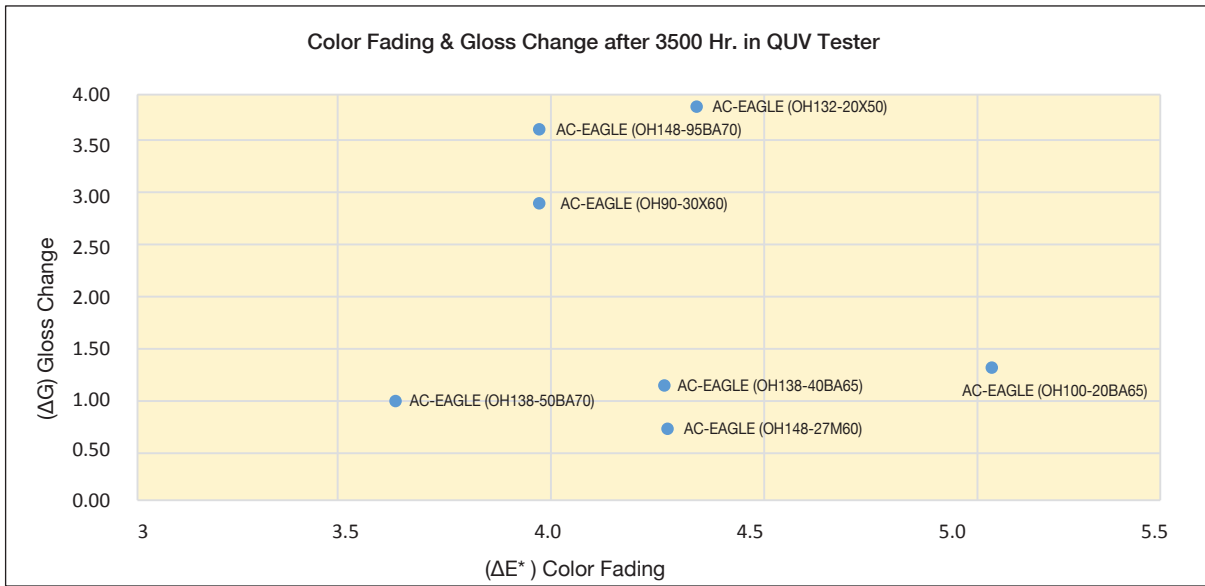
Mechanical & weathering results for clear over base coat 1- Clear Over White Base Coat



RESINS FOR 2K - CLEAR OVER BASECOAT

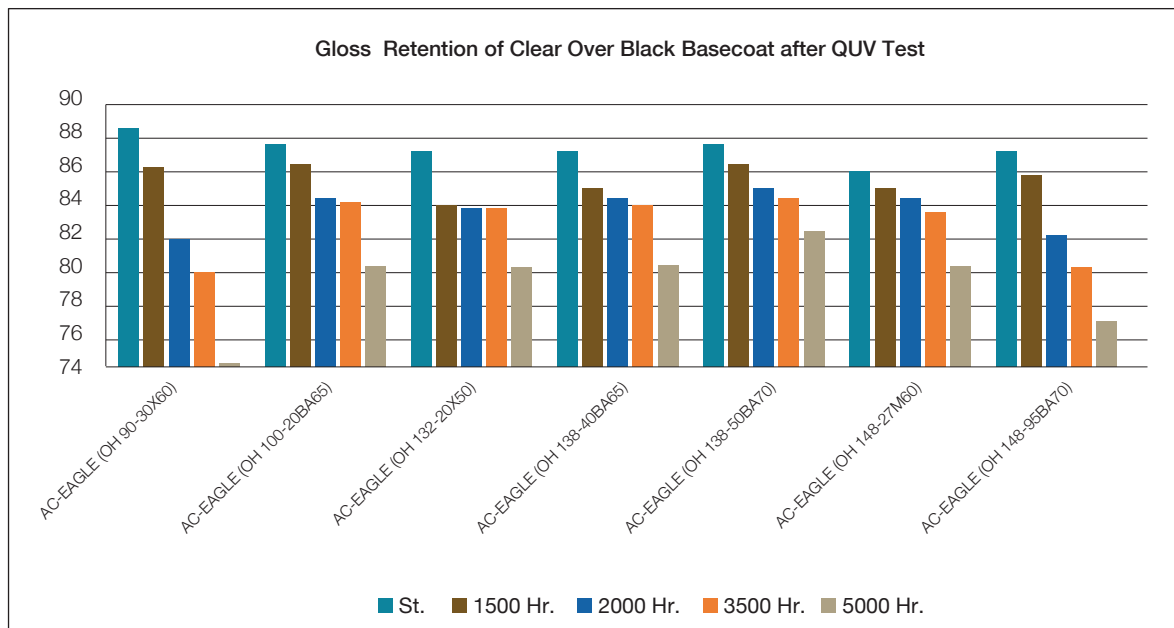
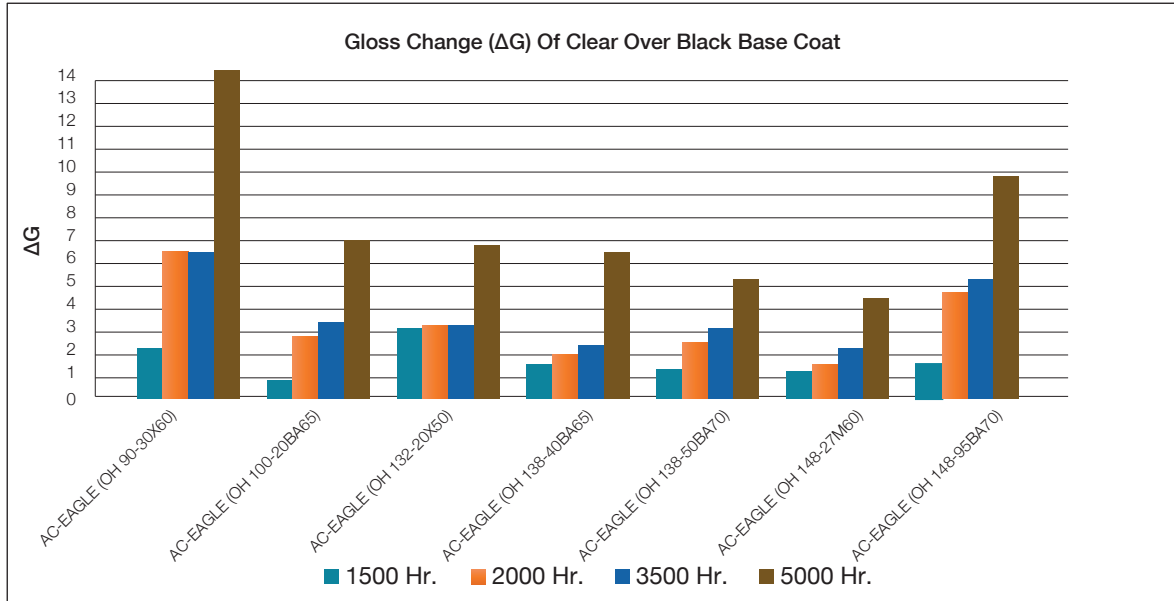


RESINS FOR 2K - CLEAR OVER BASECOAT



RESINS FOR 2K - CLEAR OVER BASE COAT

2- Clear Over Black Base Coat



RESINS FOR TOP COAT

5.1 RESINS FOR HIGH QUALITY 2K -TOPCOAT

Mechanical & weathering results for white top coat

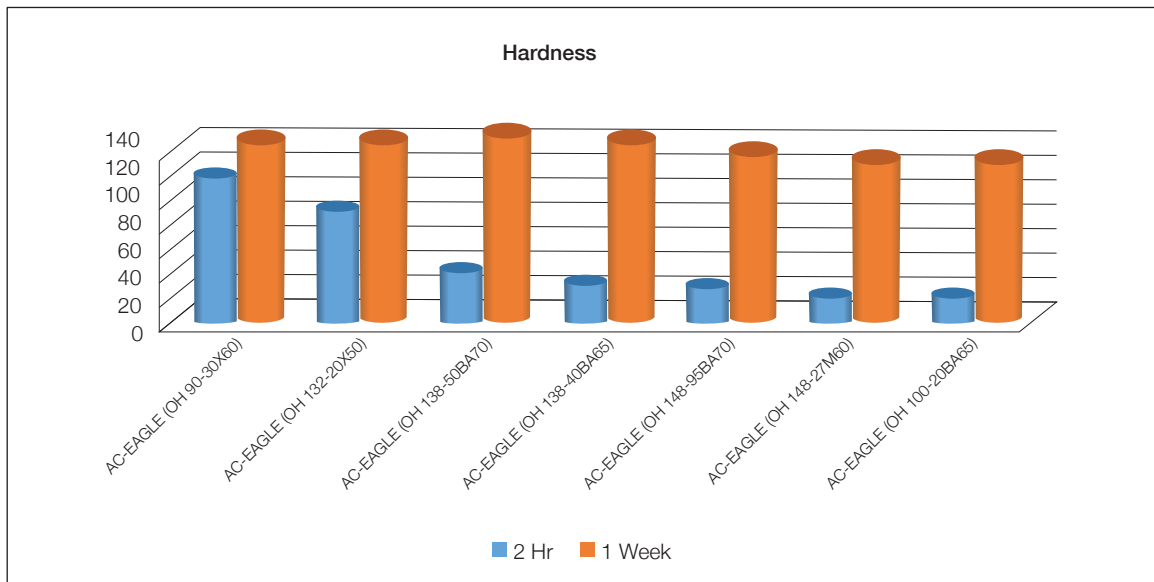
GUIDE FORMULATION 2K- White top coat

1st Pack

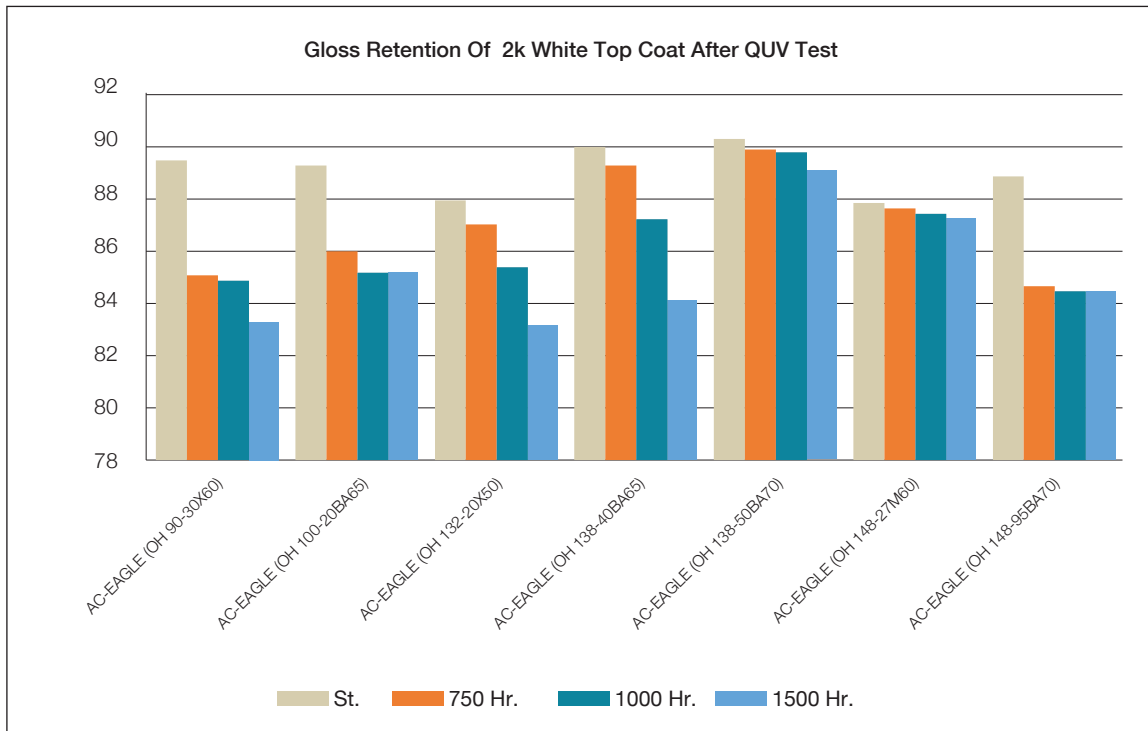
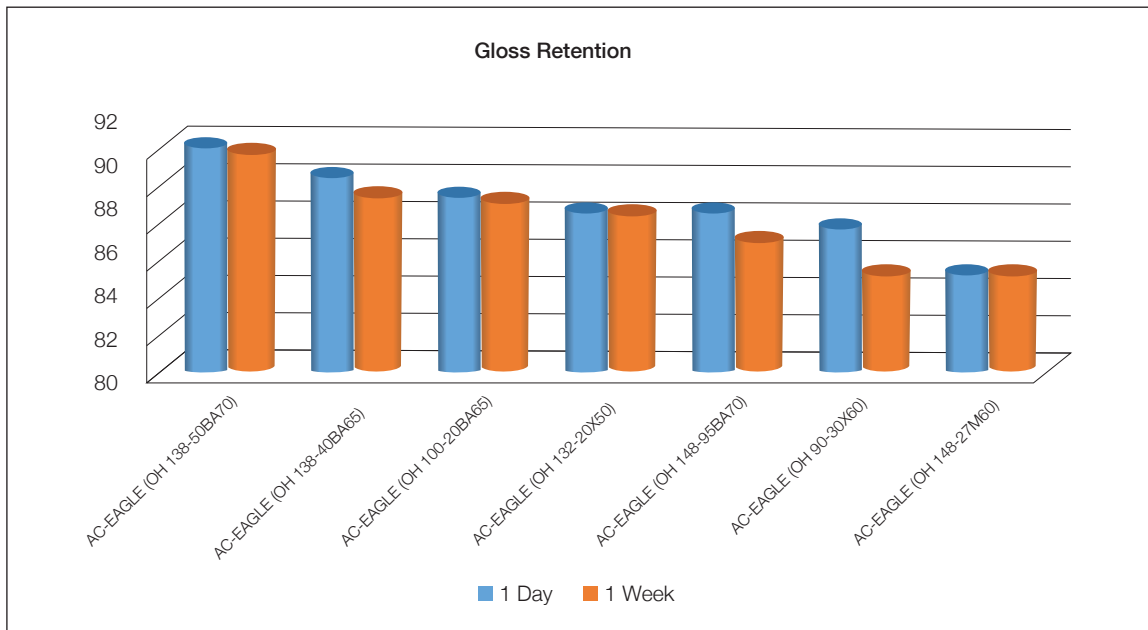
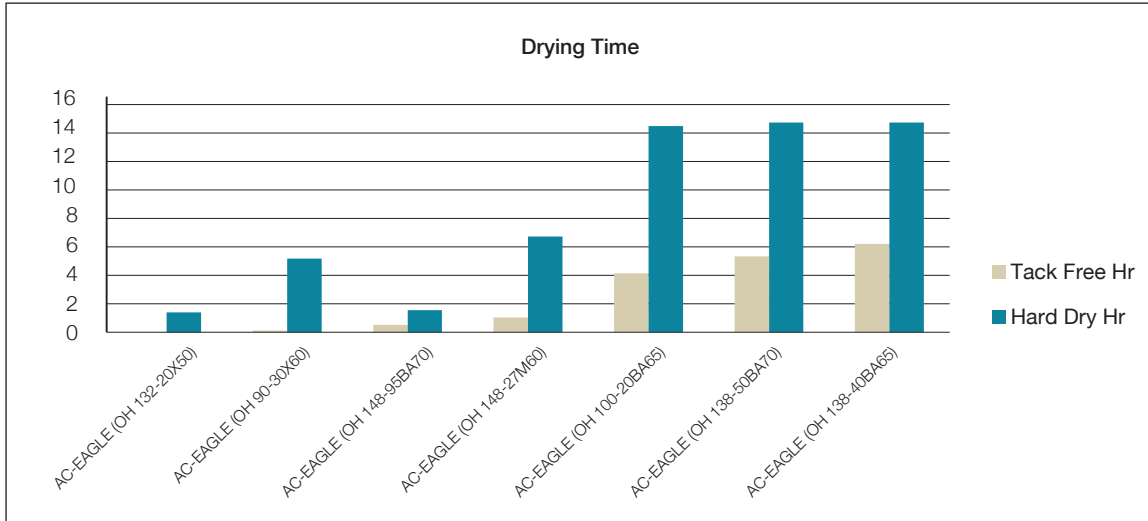
Raw Materials	Kg	Remarks
AC-EAGLE (OH138-40BA65) 65%	62.27	Hydroxy acrylic resin – EAGLE CHEMICALS
BYK P 104 S	1.70	Dispersing agent
TIO2	208.6	Pigment
Methoxy propyl acetate	52.0	Solvent
AC-EAGLE (OH138-40BA65) 65%	309.0	
Baysilone MA (1% in Xylene)	6.90	Leveling additive
Butyl acetate	207.8	Solvent
TOTAL	848.27	

2nd Pack

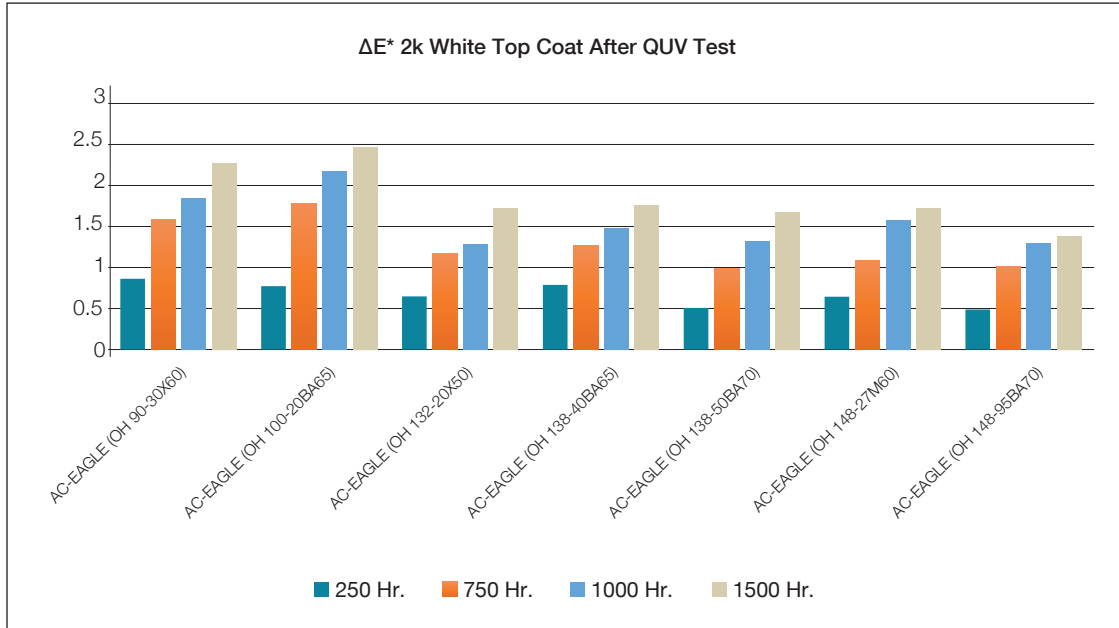
Raw Materials	Kg	Remarks
Desmodur N75	151.73	Aliphatic polyisocyanate
TOTAL	151.73	
TOTAL ALL	1000.0	



RESINS FOR TOP COAT



RESINS FOR TOP COAT



5.2 RESINS FOR COMMERCIAL VEHICLE 1K -TOPCOAT

5.2.1 Medium Oil Alkyd Resin

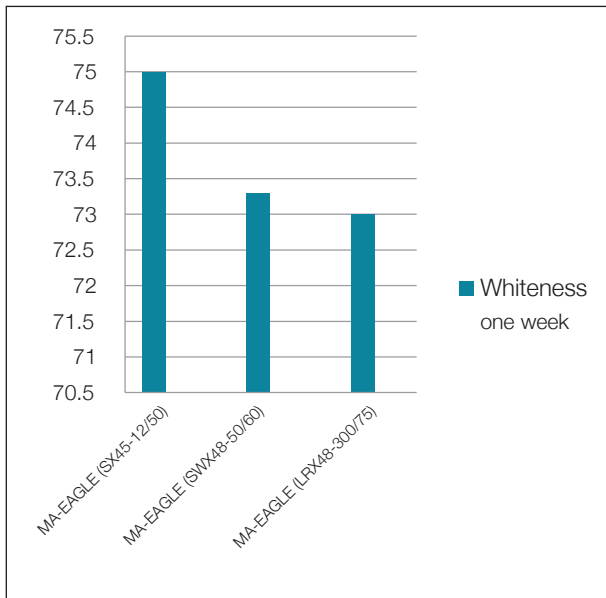
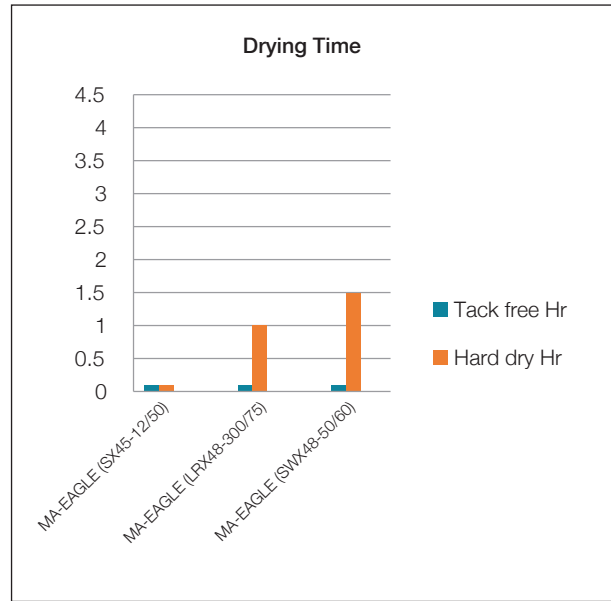
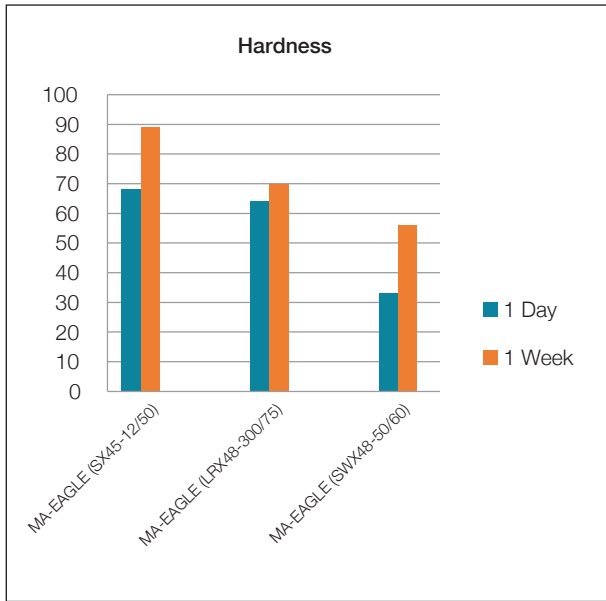
Resin Codes	N.V	Solvent	Vis. Gardner @25°C	Vis. cP @25°C	Color (Gardner)
MA-EAGLE (SX45-12/50)	60%	Xylene	V - X @50%	1200 @50%	5 Max
MA-EAGLE (LRX48-300/75)	75%	Xylene	Z7 - Z8 @75%	30000 @75%	5 Max
MA-EAGLE (SWX48-50/60)	60%	WS/X	Z3 - Z4 @60%	5000 @60%	5 Max

GUIDE FORMULATION 1 K- Economical White top coat

Raw Materials	Kg	Remarks
MA-EAGLE (SX45-12/50)60%	120.0	Medium oil alkyd resin – EAGLE CHEMICALS
BEZ 75	2.9	Anti-settling
Benton paste 34	14.7	Rheology modifier
FA 601	2.9	Dispersing agent
TIO2	195	
Grind well at high speed		
MA-EAGLE (SX45-12/50)60%	310.0	
CO (10%)	1.50	
Ca (10%)	5.25	
Zr (12%)	6.25	
EXKIN 2	2.20	Anti-skinning agent
Xylene	89.3	
TOTAL	750.0	



RESINS FOR TOP COAT



ASTM STANDARDS

ASTM STANDARDS used for products evaluation

HARDNESS: Drying on glass panels (60 µm wet) at 25°C (ASTM D4366) -Konig pendulum hardness

GLOSS: At suitable substrate (120µm wet) at 25°C (ASTM D523)-Sheen spectrometer @ suitable angle

DRYING TIME: Result on glass panels (100µm wet) drying at 25°C (ASTM D5895) -Mechanical records machine

WEATHERING: on Q-Panel test substrate over white and black basecoat QUV accelerated weathering tester

FOR PU-2K SYSTEM CALCULATION

The calculation based on the OH% on solid for all EAGLE CHEMICALS resins included short drying alkyd, short nondrying alkyds, hydroxy acrylics and saturated polyester resins

$$100 \text{ gm of EAGLE CHEMICALS OH-Resin} = \frac{247 \times \text{OH} \%}{\text{NCO} \%}$$





EL Shark Company for Trade & Industry / Eagle Polymers Company

www.eagle-chemicals.com

Head Office

72 B/2, Hegaz St., Roxy, Cairo, Egypt
Tel: +20 2 22596601/2/9
Fax: +20 2 22596612
Gsm: +20 1000776659
Postal code: 1134

Customer Service Department

Tel: +20 2 22596601/2/9 - EXT: 107
Email: cs@eagle-chemicals.com

Logistics Department

Tel: +20 2 38202871/2 – EXT: 112
Email: Logistics@eagle-chemicals.com

Factories

**Solvent Borne Resins
& Acrylics + UPR plants**

Industrial Zone # 2, Part no.233,
6th October Egypt
Tel: +20 2 38202871/2
Fax: +20 2 38202481
Gsm: +20 12 86299222

Emulsion Resins plant

Engineering Square (E2)
Industrial Complex
North Extensions Industrial
Zone
Part NO# B4- H2- H4 H6
6th October, Egypt