NEXA AUTOCOLOR

PDS N5.3.2

June 2009

P989- Aquabase® Plus Waterborne Basecoat

PRODUCT DESCRIPTION

Aquabase Plus is a high performance waterborne basecoat mixing scheme that significantly reduces solvent emissions into the environment and complies with all current and future legislative requirements.

Aquabase Plus is part of a complete product system offering comprehensive basecoat color matching (metallics, pearls, solid color basecoat and special effect finishes), excellent coverage and fade-out capability, therefore maintaining bodyshop productivity and profitability.

Coupled with high quality Nexa Autocolor® clearcoats and primers, the Aquabase Plus system delivers excellent gloss, appearance and durability. Easy to apply, this simple and flexible system is capable of being used across a wide range of ambient conditions.

- **Excellent Coverage = Less coats, materials savings**
- **Fast Dry = Improved process times**
- **Easy Application = Consistent results**
- **Excellent Color Match = Customer satisfaction**

RM-2851W

AQUABASE PLUS BASECOAT

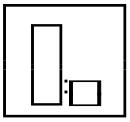
PRODUCTS

P989-XXXX	***AQUABASE PLUS BASECOAT COLOR***
P980-5000	***AQUABASE PLUS THINNER***
P980-5085	***HIGH TEMP/LOW HUMIDITY THINNER***
P980-8212	***AQUABASE PLUS GUN WASH***

THESE PRODUCTS ARE FOR THE PROFESSIONAL PAINTING OF AUTOMOTIVE VEHICLES ONLY

AQUABASE PLUS BASECOAT

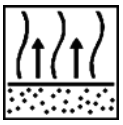
PROCESS

	Basecoat Metallic, Pearl and Special Effect Colors	Solid Color Basecoats
MIX RATIO 	**P989-XXXX Color** 1 part **P980-5000 / P980-5085* Thinner** 20 - 30%**	**P989-XXXX Color** 1 part **P980-5000 / P980-5085* Thinner** 10%**
	**** Note: percentage by volume * For use in high heat, low humidity conditions only. See thinner selection guide RM2859W for additional information**	
VISCOSITY & POT LIFE 	**Optional Activator:** P935-2019, 10% by volume after reducing. After activation, additional thinner may be required to bring the color into the 23 - 28 second sprayable viscosity range.	
	Viscosity: 23 - 28 seconds DIN4 70°F / 21°C	
	Most metallic colors will give the best balance of application, opacity and drying when reduced at 20% with thinner. At temperatures above 95°F / 35°C, an additional 10 - 15% thinner may be added to help with application, metallic orientation and overspray absorption.	Most solid colors give the best balance of application, opacity and drying when reduced at 10% with thinner. At high temperatures above 95°F / 35°C an additional 5 - 10% thinner may be added to help with application and overspray absorption.
	Pot Life: Un-activated, 90 days stored in sealed plastic containers. If Activated, 2 hours.	
	Always strain before use (nylon 125 micron is recommended)	
SPRAY GUN & PRESSURE 	**HVLP gravity feed** Fluid tip: 1.2 -1.4 mm Refer to equipment manufacturer's recommendations for inlet air pressure.	
APPLICATION 	Apply single coats until opacity is achieved. **Horizontal Surfaces** Apply a light control coat onto dry film for even metallic appearance. **Vertical Surfaces** Apply a single light control coat onto dry film for even metallic appearance. For optimum metallic control, apply control coats at 16 - 21 psi. inlet pressure. Flash off thoroughly between coats	Apply single coats until opacity is achieved Flash off thoroughly between coats No control coat is required for solid color basecoats.

AQUABASE PLUS BASECOAT

PROCESS (Cont.)

FLASH-OFF



Flash off until uniformly matt in appearance

Use air movement equipment to accelerate drying as necessary.
Choice of drying methods will depend upon the type and size of the repair.

DRYING

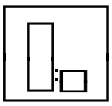
Wait until uniformly dry before applying clearcoat.

OR

3 - 5 minutes at half power or until matt in appearance. Do not apply the final control coat onto a hot panel. Allow 5 minutes for panel to cool before applying clearcoat.

3 STAGE PEARL / SPECIAL EFFECTS PROCESS

MIX RATIO



Groundcoat		Pearlcoat	
P989-XXXX Color	1 part	**P989-XXXX Color**	1 part
P980-5000 / P980-5085* Thinner	10%**	**P980-5000 / P980-5085* Thinner**	20%**

**** Note: percentage by volume * For use in high heat, low humidity conditions only. See thinner selection guide RM2859W for additional information.**

VISCOSITY & POT LIFE

Viscosity: 23-28 seconds DIN4 70°F / 21°C

Pot Life: 90 days stored in sealed plastic containers

Always strain before use (nylon 125 micron is recommended)

SPRAY GUN & AIR PRESSURE

HVLP gravity feed Fluid Tip: 1.2 -1.4 mm

Refer to equipment manufacturer's recommendations for inlet air pressure.

APPLICATION

Apply single coats to opacity.
Flash off thoroughly between coats.

Avoid heavy application and excessive film builds.

Use air movement equipment to accelerate drying as necessary.
Choice of drying methods will depend upon the type and size of the repair.

No control coat is required for solid color basecoats.

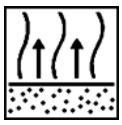
Horizontal Surfaces
Apply light coats based on color check panels. Flash off thoroughly between coats.

Vertical Panels
Apply single light coats based on color check panels. Flash off thoroughly between coats.

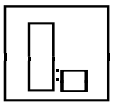
The pearl color layer is not designed to give opacity.

AQUABASE PLUS BASECOAT

3 STAGE PEARL / SPECIAL EFFECTS PROCESS (Cont.)

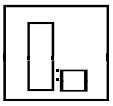
FLASH-OFF 	Flash off until uniformly matt in appearance.	
DRY TIMES 	Wait until ground coat is uniformly dry before applying pearlcoat.	Wait until pearl coat is uniformly dry before applying clearcoat. Approximately 15 minutes.

3 STAGE TINTED MID COAT PROCESS

MIX RATIO 	**Metallic Ground Coat** **P989-XXXX Color** 1 part **P980-5000 / P980-5085* Thinner** 20 - 30%**	**Tinted Mid Coat** **P989-XXXX Color** 1 part **P980-5000 / P980-5085* Thinner** 30%**
	**** Note: percentage by volume * For use in high heat, low humidity conditions only. See thinner selection guide RM2859W for additional information.**	
VISCOSITY & POT LIFE 	**Viscosity:** 23-28 seconds DIN4 70°F / 21°C **Pot Life:** 90 days stored in sealed plastic containers Always strain before use (nylon 125 micron is recommended)	
SPRAY GUN & AIR PRESSURE 	**HVLP gravity feed:** Fluid Tip: 1.2 -1.4 mm Refer to equipment manufacturer's recommendations for inlet air pressure.	
APPLICATION 	Apply single coats until opacity is achieved. **Horizontal Surfaces** Apply a light control coat onto dry film for even metallic appearance. **Vertical Surfaces** Apply a single light control coat onto dry film for even metallic appearance. For optimum metallic control, apply control coats at 16 - 21 psi. inlet pressure. Flash off thoroughly between coats	Apply single light coats based on color check panels. Flash off thoroughly between coats. The mid coat layer is not designed to give opacity. Flash off the mid coat until it is uniformly dry before applying clearcoat. Approximately 15 minutes No control coat is required for solid color basecoats.

AQUABASE PLUS BASECOAT

BLENDING / WET BED

MIXING RATIO	
	**P990-8999 Clear Adjuster 4 Parts** **P980-5000 Thinner / P980-5085* 1 Part** **For use as a blending additive:** Add up to 1 equal part of the P990-8999 mixture to 1 part of ready to spray color and fade into the prepared blend panel. **or** **For use as a wet bed:** Apply 1 medium light coat of the P990-8999 mixture to the blend panel and or the entire repair panel and allow to dry. It will be milky blue when wet but will dry translucent. Once dry, apply color. Be sure that wherever the wet bed material has been applied, it is completely covered with either basecoat or clearcoat.
	*** For use in high heat, low humidity conditions only. See thinner selection guide RM2859W for additional information**

METALLIC, 2 STAGE PEARL AND SOLID COLOR BASECOAT FADE OUT PROCESS

Preparation

Prepare the repair area in the appropriate Spectral Grey primer or sealer (SG01-SG07) as recommended on the color formula. Where no Spectral Grey is specified then SG05 should always be selected. Spectral Grey primer or sealer should be applied and flashed off in accordance with the appropriate PDS.

If the repair area is primed, Sand with (P800 wet or P600 dry). For rub-throughs to bare metal, apply P565-908, 9081 or 9086 before topcoating.

Where an overspray edge is created from the use of a wet on wet primer, the repair area should be denibbed to produce a feather edge using P800 wet or dry paper taking care to remove all primer overspray.

The area into which blending is done should be abraded with a Gold / Ultrafine scuff pad or P800 or finer wet. Clean all sanded areas with P980-251 Waterborne Pre-Cleaner or SWX350 H_2O-So-Clean.

Complete Panel Repair

Mask out adjacent panel if necessary. Apply basecoat to repair area as normal. Remove any temporary masking and tack rag off. Fade further onto the adjoining panel. Apply final control coat for metallic or pearl colors as normal. Allow to dry uniformly before applying clearcoat.

Spot Repair

Metallic and 2-Stage Pearlescent basecoats:

Paint prepared area to cover the primed area. Reduce pressure at gun and fade further into surrounding area. Flash off basecoat until uniformly dry. Apply the final control coat before applying clearcoat. Use air movement equipment to accelerate drying as necessary.

Solid Color Basecoat:

Paint prepared area to obliterate primed area fading each coat further into the surrounding prepared area. Flash-off the basecoat until uniformly dry before applying clearcoat. For compliant guns apply as normal and when fading out, reduce inlet pressure as necessary. The pressure required will depend on the brand of equipment being used.

3-STAGE SPECIAL EFFECT COLOR

The transparent nature of 3-Stage colors means that a fade-out process can be more difficult to achieve. Refer to the section below for details on the recommended fade out process. Alternatively, the fade-out process may be avoided either by a complete panel repair, or by using break lines to reduce the size of the area to be painted.

Preparation

Prepare the repair area in the appropriate Spectral Grey (SG01-SG07) as recommended on the color formula. Where no Spectral Grey is specified then SG05 should always be selected.

The specified Spectral Grey primer should be applied and flashed off in accordance with the appropriate PDS.

If the repair area is primed, Sand with (P800 wet or P600 dry). For rub-throughs to bare metal, apply P565-908, 9081 or 9086 before topcoating. Do not apply directly over P565-713 Chromate Free Etch Primer.

Where an overspray edge is created for e.g. from the use of a wet on wet primer the repair area should be denibbed to produce a feather edge using P800 wet or dry paper taking care to remove all primer overspray.

The area into which blending is done should be abraded with P800 or finer grade wet/dry or an equivalent preparation system. Clean sanded area with P980-251 Waterborne Pre-Cleaner.

Complete Panel Repair

Ensure that a color check has been carried out prior to the repair and that the number of coats required is known.

Groundcoat layer:

Apply groundcoat to the complete panel as normal. Apply to opacity and fade into the adjoining panel as necessary. Allow to dry uniformly and tack off before applying pearlcoat.

Transparent effect layer:

Apply color to the repair area making sure that the product extends beyond the groundcoat. Each coat should extend further into the repair area to ensure a good fade out edge. Allow to dry uniformly before applying clearcoat.

Spot Repair

Ensure that a color check has been carried out prior to the repair and that the number of coats required is known.

Groundcoat layer:

Apply Groundcoat to obliterate the primed area fading each coat into the surrounding area. Flash off groundcoat until uniformly dry. Tack off before applying transparent effect layer.

Transparent effect layer:

Apply the first coat of color over the groundcoat, extending the repair area beyond the groundcoat edge and further into the surrounding prepared area. Allow the pearl coat to dry naturally. Do not use air movement equipment to accelerate drying.

When applying the remaining coats of color, extend further into the repair area as required. Allow each coat of color to dry fully before further application. Flash-off basecoat until uniformly dry before applying clearcoat.

GENERAL PROCESS NOTES

PREPARATION OF SUBSTRATE

Wet sand with P800 or finer grade wet/dry paper or when dry sanding, use P600 or finer. For the removal of oil and grease, use P273-901 Body Cleaner or SXA330 Wax and grease remover. For the removal of water soluble salts and sanding residues produced by wet or dry sanding and as a final wipe prior to applying basecoat color, use P980-251 Waterborne Pre-Cleaner or SWX350 H_2O-So-Clean. Do not allow cleaning materials to dry on panel surface.

SPECTRAL GREYS

Use of the specified Spectral Grey will ensure that the minimum volume of basecoat color is used and that the basecoat process time is optimized. The recommendation for which Spectral Grey to use can be found on our color communication systems i.e., e-fiche, On-Line Color, Shopwatch, Basic Mix, Paint Manager or Touch Mix. Where there is not Spectral Grey specified, SG05 should always be selected.

BASECOAT MIXING

Mix and store paint in plastic containers. **DO NOT** use metal cans. Gently invert cans twice before pouring. Stir immediately after weighing all the ingredients specified. **DO NOT SHAKE**. Cover container if left for any length of time before use.

COLOR IDENTIFICATION AND CHECKING

As with all refinish paint systems, a color check should be carried out before paint application. Ensure mix is thoroughly stirred before carrying out color check. This is particularly important with 3-Stage Pearlescent/Special Effect finishes, because their transparent nature means that a fade-out process can be more difficult.

RECTIFICATION / RECOATABILITY

Visible defects, e.g. dirt, are readily removed provided the basecoat is fully dry and the defect is dry denibbed using minimal pressure with P1500 wet/dry paper. It is preferable to remove defects before clearcoating. Once clearcoated, defects can only be removed when into-service times have been reached. See clearcoat data sheet for additional information. An alternative method is to use very fine grade fibre sanding pads either dry, or in combination with a small amount of SXA330 Wax and Grease Remover as a lubricant.

To avoid contamination and to insure maximum adhesion, Aquabase Plus Basecoat should be clearcoated after recommended dry times. Note: If Basecoat has dried longer than 24 hours, additional Basecoat color should be applied before clearcoating.

EQUIPMENT CLEANING

Manual Operation

Clean the gun using water in a suitable gun-cleaning machine. For gravity feed guns unscrew the paint cup (and filter if fitted) and rinse separately. Rinse gun through with clean water. Finally spray through with clean Aquabase Plus thinner P980-5000 and ensure that the gun is fully dry before storing or further use.

Automatic Gun Cleaning Machine (Aquabase Plus Gun Wash P980-8212)

Dis-assemble gun and place in waterborne gun cleaning machine as per manufacturer's instructions. After the cleaning cycle, clean off the gun parts and rinse with water. Assemble gun and spray through with Aquabase thinner P980-5000. Ensure gun is fully dry before storing or further use.

AQUABASE PLUS BASECOAT

PHYSICAL PROPERTIES

RTS Combinations:	P989	P989 : P980-5000 / 5085	P989 : P980-5000 / 5085	P989 : P980-5000 / 5085
Applicable Use Category	Color Coating	Color Coating	Color Coating	Color Coating
Ratio:	Packaged	1 : 10%	1 : 20%	1 : 30%
Density (g/L)	991 - 1204	992 - 1186	992 - 1171	992 - 1156
Density (lbs/gal)	8.27 - 10.05	8.28 - 9.90	8.28 - 9.77	8.28 - 9.65
VOC Actual (g/L)	47 - 120	44 - 111	43 - 103	41 - 97
VOC Actual (lbs/gal)	0.39 - 1.00	0.37 - 0.93	0.36 - 0.86	0.34 - 0.81
VOC Regulatory (g/L)	207 - 395	213 - 401	219 - 407	225 - 419
VOC Regulatory (lbs/gal)	1.73 - 3.30	1.78 - 3.35	1.83 - 3.40	1.88 - 3.50
Volatiles wt.%	60.42 - 84.97	63.42 - 86.29	66.01 - 87.44	68.26 - 88.40
Water wt.%	51.37 - 74.99	54.94 - 77.09	58.00 - 78.85	60.05 - 80.33
Exempt wt.%	0	0	0	0
Water vol.%	61.98 - 77.47	65.29 - 79.41	68.03 - 80.96	70.26 - 82.22
Exempt vol. %	0	0	0	0

RTS Combinations:	P989 : P980-5000 / 5085 : P935-2019	P989 : P980-5000 / 5085 : P935-2019	P989 : P980-5000 / 5085 : P935-2019	P990-8999 : P980-5000 / 5085
Applicable Use Category	Color Coating	Color Coating	Color Coating	Uniform Finish Coating
Ratio:	1 : 10% : 10%	1 : 20% : 10%	1 : 30% : 10%	4 : 1
Density (g/L)	998 -1170	999 - 1158	998 - 1146	992
Density (lbs/gal)	8.33 - 9.76	8.34 - 9.66	8.33 - 9.56	8.28
VOC Actual (g/L)	70 - 119	67 - 112	63 - 105	91
VOC Actual (lbs/gal)	0.58 - 0.99	0.56 - 0.94	0.53 - 0.88	0.76
VOC Regulatory (g/L)	252 - 359	256 - 370	261 - 373	380
VOC Regulatory (lbs/gal)	2.1 - 3. 0	2.14 - 3.09	2.18 - 3.11	3.17
Volatiles wt.%	61.4 - 80.5	64.0 - 82.0	66.2 - 83.3	85.7
Water wt.%	51.2 - 70.0	54.3 - 72.1	57.0 - 74.0	76.6
Exempt wt.%	0.0	0.0	0.0	0.0
Water vol.%	60.0 - 72.1	63.0 - 74.1	65.5 - 75.8	76.1
Exempt vol. %	0.0	0.0	0.0	0.0

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