

Product Data Sheet

March 2011

INTERNATIONAL MASTER
FOR PROFESSIONAL USE ONLY



J2070V

2K HS Plus Clearcoat P190-6690

<i>Product</i>	<i>Description</i>
P190-6690	2K HS Plus Clearcoat
P210-870	2K HS Plus Hardener - Express
P210-872	2K HS Plus Hardener - Fast
P210-875	2K HS Plus Hardener - Medium
P210-877	2K HS Plus Hardener - Slow/High Temperature
P850-1692/-1693/-1694	2K Low VOC Thinners
P850-1491/-1492/1493/-1494	2K Thinners
P852-1689	2K HS Plus Express Thinner

Product Description

P190-6690 is a high solids 2-pack acrylic clearcoat. It offers a hard and durable finish with superb gloss and is suitable for all types of repair.

The P190-6690 2K HS Plus Clearcoat system offers a full range of processing options, from an Express 10 minutes at 60°C (metal temperature) bake system for the most rapid processing of small repairs, to a 40 minutes at 60°C metal temperature bake system ideal high temperature application conditions.







For compliance reasons P190-6690 has been designed for application with HVLP or Compliant spray guns. It can be used in two modes, standard 2-coat application and "one visit" application, where 1 light/medium flowing coat is followed by a full coat with no flash-off* between coats.

Substrates/Preparation

P190-6690 should be applied only over: -

- P965-line **Aquabase™** basecoats
- P989 **Aquabase Plus** basecoats
- Prepared existing paintwork in sound condition. Existing paintwork should first be abraded (E.g. with **Scotch-Brite™** Ultrafine Grey with P562-106) and cleaned with P980-251, P980-9010 or P980-8252 prior to application of P190-6690.

Standard and Fast Process

	Standard and High Temperature Application Systems	Fast System
	P190-6690 3 parts P210-875/-877 1 part P850-16** series thinners 0.6 parts P190-6690 3 parts P210-875/-877 1 part P850-14** series thinners 0.5 parts	P190-6690 3 parts P210-872 1 part P850-16** series thinners 0.6 parts P190-6690 3 parts P210-872 1 part P850-14** series thinners 0.5 parts
	18-20 secs. DIN4 at 20°C	18-20 secs. DIN4 at 20°C
	Pot life at 20°C: 2-2.5 hours	Pot life at 20°C: 1 hour.
	Fluid Tip Gravity Fed : 1.2-1.4 mm Suction Fed : 1.4-1.6 mm Pressure : 0.7 bar/10 psi max (air cap)	Fluid Tip Gravity Fed : 1.2-1.4 mm Suction Fed : 1.4-1.6 mm Pressure : 0.7 bar/10 psi max (air cap)
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	Conventional 2 coat Process Apply 2 single coats to give 50-75 microns (2-3 thou) dry film thickness Allow 5 -7 mins flash-off between coats. Express Single Visit Process Apply 1 light/medium coat followed by a full coat to give 50 microns (2 thou) dry film thickness. The first coat should be applied to all repair panels before the second coat is applied. For less than 3 panels, allow 2-3 minutes flash between spray coats. For more than 3 panels, no flash off is required.	

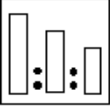







Standard and Fast Process

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	<p>Bake at metal temp. of :</p> <table border="0"> <tr> <td></td> <td style="text-align: center;"><u>P210-875</u></td> <td style="text-align: center;"><u>P210-877</u></td> </tr> <tr> <td>70°C :</td> <td>20 minutes</td> <td>25 minutes</td> </tr> <tr> <td>60°C :</td> <td>35 minutes</td> <td>40 minutes</td> </tr> <tr> <td>50°C :</td> <td>70 minutes</td> <td>80 minutes</td> </tr> </table> <p>Into service : When cool</p> <p>Air-dry (20°C) :</p> <table border="0"> <tr> <td>Dust free</td> <td>40-50 mins.</td> <td>60 minutes</td> </tr> <tr> <td>Handleable</td> <td>6 hours</td> <td>8 hours</td> </tr> <tr> <td>Into Service :</td> <td>16 hours</td> <td>24 hours</td> </tr> </table>		<u>P210-875</u>	<u>P210-877</u>	70°C :	20 minutes	25 minutes	60°C :	35 minutes	40 minutes	50°C :	70 minutes	80 minutes	Dust free	40-50 mins.	60 minutes	Handleable	6 hours	8 hours	Into Service :	16 hours	24 hours	<p>Bake at metal temp. of :</p> <table border="0"> <tr> <td></td> <td style="text-align: center;"><u>P210-872</u></td> </tr> <tr> <td>70°C :</td> <td>15 minutes</td> </tr> <tr> <td>60°C :</td> <td>25 minutes</td> </tr> <tr> <td>50°C :</td> <td>50 minutes</td> </tr> </table> <p>Into service : When cool</p> <p>Air-dry (20°C) :</p> <table border="0"> <tr> <td>Dust free</td> <td>20-30 mins.</td> </tr> <tr> <td>Handleable</td> <td>4 hours</td> </tr> <tr> <td>Into Service</td> <td>12 hours</td> </tr> </table>		<u>P210-872</u>	70°C :	15 minutes	60°C :	25 minutes	50°C :	50 minutes	Dust free	20-30 mins.	Handleable	4 hours	Into Service	12 hours
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Express and Super Express Process

	Express System	Super Express System
	P190-6690 3 parts P210-870 1 part P850-16** series thinners 0.6 parts P190-6690 3 parts P210-870 1 part P850-14** series thinners 0.5 parts	P190-6690 3 parts P210-870/-872 1 part P852-1689 0.6 parts Note: P190-6690 thinned with Express Thinner P852-1689 is not recommended for use over Aquabase™
	18-20 secs. DIN4 at 20°C	18-20 secs. DIN4 at 20°C
	Pot life at 20°C : 30-45 mins	Pot life at 20°C: 20 mins
It is recommended that the clearcoat is activated and thinned just prior to application. With Express systems application should be completed as soon as possible after activation/thinning.		
	Fluid Tip Gravity Fed : 1.2-1.4 mm Suction Fed : 1.4-1.6 mm Pressure : 0.7 bar/10 psi max (air cap)	Fluid Tip Gravity Fed : 1.2-1.4 mm Suction Fed : 1.4-1.6 mm Pressure : 0.7 bar/10 psi max (air cap)
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Express and Super Express Process

	<p>0 - 5 minutes flash-off required before baking (depending on oven type)</p>	<p>0 - 5 minutes flash-off required before baking (depending on oven type)</p>
	<p>Bake at a metal temp. of :</p> <p>60°C : - 15 minutes 50°C : - 30 minutes</p> <p>Into service : when cool</p> <p>Air-dry (20°C) :</p> <p>Dust free - 20 mins. Handleable - 2 hours Into Service - 8 hours</p>	<p>Bake at a metal temp. of :</p> <p>60°C : -870/10 minutes, -872/20 minutes 50°C : -870/20 minutes, -872/40 minutes</p> <p>Into service : when cool</p> <p>Air-dry (20°C) :</p> <p>Dust free - 15 - 20 mins Handleable - 1½ - 2 hours Into Service - 6 - 8 hours Depending on hardener used (-870 or -872)</p>
	<p>Short-wave : 8 - 15 mins full power (depending on colour and equipment)</p>	



General Process Notes

FADE-OUT PROCESS

P190-6690 2K HS Plus Clearcoat may be faded-out using the **Aerosol Fade Out Thinner P850-1621** or **Express Blender P273-1105**. Please refer to the Fade-out / Blending Processes Technical Data Sheet M1000V for details of the technique to achieve a successful repair.

CHOICE OF HARDENER AND THINNER

- P210-877** Ideal for processing large jobs at very high application temperatures (>34°C). Gives a 40 minutes at 60°C metal temperature bake system.
- P210-875** Gives a standard 35 minutes at 60°C metal temperature bake system suitable for all types of job.
- P210-872** Ideal for faster processing of medium-sized repairs (e.g. up to a front end) giving a 25 Minutes at 60°C metal temperature bake.
- P210-870** Allows fast processing of small to medium sized jobs, with a 15 minutes at 60°C metal temperature bake time.

The choice of thinner should be made according to application temperature, air movement and size of job. The recommendations below are for guidance only :-

Thinner :	Ideal temperature range :
P850-1692/1491/1492	up to 22°C
P850-1693/1492/1493	20-32°C
P850-1694/1493/1494	above 30°C
P850-1694/1494	above 35°C
P852-1689 Express Thinner	up to 25°C

In general use a slower thinner in fast air movement booths, for large jobs and for high temperature application. Use a faster thinner in slow air movement booths, for small jobs and application at cooler temperatures.

PAINT TEMPERATURE

As with other paint systems, optimum spray application is achieved if the paint is allowed to reach room temperature (20-25°C) before use. This is particularly important for high solids systems. It is strongly recommended that cold paint is warmed to a minimum of 15°C before application. Below this temperature paint application performance may be adversely affected.

INFRA-RED DRYING

Drying times are dependent upon colour and equipment. Refer to manufacturer's instructions for set-up details. When using Aquabase basecoat, it is particularly important to ensure the basecoat is thoroughly dry before applying the clearcoat.

RECOATABILITY

P190-6690, in both standard and express modes, is fully recoatable after the "into-service" times.



General Process Notes

RATIOS FOR MATT, TEXTURE AND FLEXIBLE OPTIONS

Using P565-554, it is possible to reduce the gloss of P190-6690. The addition of P565-7210/7220 can be used to give a textured finish. For use over flexible substrates, P100-2020 should also be used.

Note: The majority of plastics used on cars are considered **Rigid**. These plastics may have some flexibility when painted off the car, but are rigid once mounted. HS+ Clearcoats only require the addition of the Flexible Additive (See **Flexible** chart below) when painting very flexible plastics, mostly found on older vehicles, e.g. foam type.

The following tables, gives a **1L WEIGHT MIX** for various topcoat appearances, ready to spray. The weights in grams are cumulative. **DO NOT TARE** the scale between additions.

Guide for using 2K Thinners P850-1491/1492/1493/1494 & P852-1689

Substrate	Appearance	P190-6690	P565-554	P565-7210	P565-7220	P100-2020	HS Hardener	Thinner 14** or P852-1689
Rigid	Gloss	653g	-	-	-	-	890g	990g
	Semi-gloss	481g	724g	-	-	-	899g	987g
	Matt	386g	776g	-	-	-	916g	987g
	Fine Textured	287g	-	641g	-	-	745g	965g
	Coarse Textured	392g	-	-	708g	-	850g	970g
Flexible	Gloss	532g	-	-	-	635g	867g	984g
	Semi-gloss	250g	481g	-	-	614g	818g	990g
	Matt	210g	562g	-	-	674g	864g	993g
	Matt Textured	210g	-	522g	-	633g	823g	984g
	Coarse Textured	280g	-	-	506g	654g	908g	994g

Guide for using 2K Thinners P850-1692/1693/1694

Substrate	Appearance	P190-6690	P565-554	P565-7210	P565-7220	P100-2020	HS Hardener	Thinner 1692/3/4
Rigid	Gloss	639g	-	-	-	-	870g	977g
	Semi-gloss	481g	724g	-	-	-	899g	980g
	Matt	386g	776g	-	-	-	916g	981g
	Fine Textured	287g	-	641g	-	-	745g	946g
	Coarse Textured	392g	-	-	708g	-	850g	960g
Flexible	Gloss	532g	-	-	-	635g	867g	973g
	Semi-gloss	250g	481g	-	-	614g	818g	975g
	Matt	210g	562g	-	-	674g	864g	982g
	Matt Textured	210g	-	522g	-	633g	823g	970g
	Coarse Textured	280g	-	-	506g	654g	908g	987g

RECTIFICATION AND POLISHING

Polishing is not normally required as P190-6690 has a gloss finish. However, if dirt is a problem, denib with P1500 or finer, then polish by machine using a quality polish such as SPP Polishing System (refer to SPP PDS). Polishing of P190-6690 is easiest between 1 and 24 hours after "into service" drying times.

PAINTING PLASTICS

Use the standard Nexa Autocolor plastics painting system (refer to PDS).

OTHER POINTS TO NOTE

When using 2-pack products it is highly recommended to clean the gun thoroughly immediately after use.



General Process Notes

GUIDELINES FOR WEIGHT MIXING

Where a specific volume of clearcoat mix is required, this may be best achieved by weight mixing, using the guidelines below.

The weights are cumulative - please do **NOT** tare the scale between additions.

WEIGHT MIX GUIDE WITH P850-1692/3/4 LOW VOC THINNERS

Volume of RFU Paint(Litres)	Weight P190-6690	Weight P210-870/-872/-875/-877	Weight P850-1692/1693/1694
0.10 L	64 g	87 g	98 g
0.20 L	128 g	174 g	195 g
0.25 L	160 g	218 g	244 g
0.33 L	211 g	287 g	322 g
0.50 L	320 g	435 g	489 g
0.75 L	479 g	653 g	733 g
1.0 L	639 g	870 g	977 g
1.5 L	959 g	1305 g	1466 g
2.0 L	1278 g	1740 g	1954 g
2.5 L	1598 g	2175 g	2443 g

WEIGHT MIX GUIDE WITH P850-14XX 2K THINNERS & P852-1689

Volume of RFU Paint (Litres)	Weight P190-6690	Weight P210-870/-872/-875/-877	Weight P850-1491/-1492/-1493/-1494 or P852-1689
0.10 L	65 g	89 g	98 g
0.20 L	131 g	178 g	198 g
0.25 L	163 g	223 g	248 g
0.33 L	215 g	294 g	327 g
0.50 L	327 g	445 g	495 g
0.75 L	490 g	668 g	743 g
1.0 L	653 g	890 g	990 g
1.5 L	980 g	1335 g	1485 g
2.0 L	1306 g	1780 g	1980 g
2.5 L	1633 g	2225 g	2475 g



General Process Notes Best Practices with UHS Products

Paint storage conditions

Keep ready for use paint in good conditions to ensure correct viscosity.

RFU temperature above a minimum of 15°C, and ideally over 18°C.
This includes paint, hardeners and thinners.

Mixing and making ready for use

Activate accurately, and by weight where ever possible.

Where mixing must be by volume, only use a round and parallel sided mixing container together with the correct mixing stick. If using a measuring container marked in percentages, you must be sure that the percentages give the correct quantities.

Make sure that Hardeners and Thinners are mixed in well. High solids or high viscosity products can take a little longer to mix in, so a good practice is to stir Hardener in first, then add thinner before stirring again.

Use mixed product as quickly as possible.

Choose the correct Hardener for the required bake cycle.

Keep to the recommended levels of additives.
Do not exceed the recommended level of additives such as Flexibilisers.

Application technique, process and equipment choices

Use correct spraygun set ups, and set up the spraygun correctly.

Use a "Single Visit" application wherever possible, following the advice given in the application section.

Check that the spraybooth is operating effectively. If necessary make an oven check to be sure that metal temperature is reached, especially on low down repair areas.

Nexa Autocolor recommendations are based on time at metal temperature, so this should be allowed for in the bake cycle that is set for the job.



VOC INFORMATION

The EU limit value for this product (product category: IIB.d) in ready to use form is max. 420g/litre of VOC. The VOC content of this product in ready to use form is max. 420g/litre. Depending on the chosen mode of use, the actual ready to use VOC of this product may be lower than that specified by the EU Directive code.

Note:

Combinations of this product with P565-554, P100-2020, P565-7210 or P565-7220 will produce a paint film with special properties as defined by the EU Directive code.

In these specific combinations: The EU limit value for this product (product category: IIB.e) in ready to use form is max. 840g/litre of VOC. The VOC content of this product in ready to use form is max. 840g/litre.

These products are for professional use only, and are not to be used for purposes other than those specified. The information on this TDS is based on present scientific and technical knowledge, and it is the responsibility of the user to take all necessary steps in order to ensure the suitability of the product for the intended purpose.

For Health and Safety information please refer to the material Safety Data Sheet, also available at: www.nexaautocolor.com

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