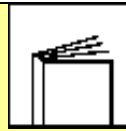




Automotive System

Nax CRYSTAL 9905

(Mirror Image Clear 2K 2:1)



Technical Information

Version 1, 02/2013



Technology

PRODUCT DESCRIPTION

NAX CRYSTAL 9905 Mirror Image Clear 2K, an innovative high solids automotive finish with incorporation of CyGLAZ Technology to integrate superb toughness, high flexibility and excellent chemical resistance. The product is specially designed to exhibit excellent mar and scratch resistance to withstand day to day wear and tear e.g. car wash, acid rain, bird droppings etc., to ensure longer lasting beautiful look.



Paint system

- High Performance, High scratch resistant clear.
- Suitable for repairing of highly scratch resistant OEM finishes and for any refinish paint system.

Suitable Substrates

- Nax Premila 8000 series base coats
(after a minimum flash-off time of 10 minutes @ 30°C)



Substrate preparation

- Must be applied on top of a clean, dry, dust free base coat surface (use of tack rag is suggested to remove dirt & dust particles from the base coat surface).

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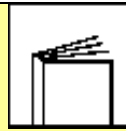
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Application Guide



Mixing ratio 2 to 1

100 parts by volume – NAX CRYSTAL 9905 Mirror Image Clear
50 parts by volume – NAX CRYSTAL 905 2K Hardener
Thinner – Not required (5% Nax Premila Reducer 500 or 503 can be used for handling ease if necessary)

Pot Life 4 hours @ 20°C
3 hours @ 25°C
2 hours @ 30°C

Coverage 6.0 to 7.0 sq.m / litre @ 45 to 60µ dry film thickness (in 2 coats)

Application window Temperature 15°C to 38°C & Relative Humidity – 20% to 85%
(Lower temperatures may slow down the curing rate),



Spraying viscosity

Viscosity/sec	@ 20°C	@ 25°C	@ 30°C
Ford Cup # 4	17 to 18	16 to 17	14" to 15"



Spray gun Set-up

Gravity Feed HVLP
full pattern, flow – 3 turns Full pattern
from fully closed set-up,

Nozzle size & Spray pressure

1.3 – 1.4 mm, 1.3 mm
1.5 – 2.0 bar (20-30 psi) 2.0 bar (maximum 0.7 bar at the air cap)

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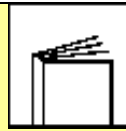
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

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Application

	Number of spray coats	<p>2 single coats</p> <ul style="list-style-type: none"> • Light to medium first coat • Full wet second coat <ul style="list-style-type: none"> ○ Recommended dry film thickness – 45 to 60µ ○ Clean the spray gun immediately after use
	Flash-off time	<ul style="list-style-type: none"> • Between coats - 5 to 10 minutes @ 30°C / 60% R.H. • Set time prior to force drying @ 60°C – 0 to 10 minutes <p><i>* The specified flash times may vary with temperature & air velocity in the spray booth.</i></p>
	Drying times	<p>Flash-off time 0-10 minutes prior to moving the car or car part into a pre-heated drying oven (booth @ 60°C.</p> <p>All drying times listed below relate to standard application and object temperature.</p> <p>The time required for the spray booth to reach an acceptable air temperature to enable the heat transfer of 60°C to the object needs to be considered.</p>

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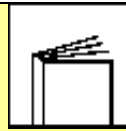
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Drying times

Air dry conditions

Climate conditions*	@ 20°C	@ 25°C	@ 30°C
Dirt free time (minutes)	~ 75	~ 60	~ 45
Dry to handle (hours)	~ 7 to 8	~ 5 to 6	~ 4 to 5
Dry to polish (hours)	~ 10 to 12	~ 6 to 7	~ 5 to 6

* Relative Humidity ~ 60%

Force dry @ 60°C (effective metal temperature)

- Dirt free time ~ 10 minutes
- Tack free time ~ 20 minutes
- Dry to handle ~ 30 minutes
- Hard dry ~ 40 minutes*
(or after cool down @ 30°C / 60% R.H. for 30 to 60 minutes)
- Complete through hardening of the clear coat will be achieved after approximately 72 hours @ 25°C.

** Under low temperature ambient conditions (less than 20°C) drying behaviour might be slower especially in terms of hard dry for polishing. Hence, it is preferable to force dry the system @ 60°C for 45 to 60 minutes to ensure complete cure and maintain productivity in terms of handling / polishing time.*

Recoat time

Recoat with itself after complete drying cycle however, sanding is necessary after 24 hours to ensure good adhesion – P500 (dry) or P800 (wet).

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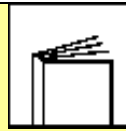
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Dirt removal Gloss restoration Polishing & waxing procedure

Dirt & minor imperfections can be polished out after the mentioned air-dry times or after a full-bake at 60°C object temperature followed by cool down of the object to ambient temperature.

- Carefully de-nib using P1500 or finer with soap and water; blow air & dry the sanded area
- Machine sanding with P3000 is recommended to avoid sanding marks & minimize orange peel effect (use of soft interface pad is recommended at speed ~ 1500 rpm)
- **Compound** using **Fast cut compounding paste** with a wool compounding pad and an air or electric buffer at 1400 to 2000 rpm.
- **Polish** using **standard fine polishing paste** with a foam polishing pad and an air or electric buffer at 1400 to 2000 rpm (reduce pressure as polish begins to dry and buff to a high gloss).
- Remove any remaining residue using Detailing Cloth.

Recommended **3M™ Finesse-it™ SRC for better results (especially if the polishing process is being carried out after 48 hours).*

Note:

- Ready to polish approximately 1 hours after cool down to ambient temperature
- Polishing preferably needs to be carried out within 48 hours as longer waiting time will results in increased hardness of the paint film thereby making polishing harder as well.
- Polishing can be done mechanically (preferable) or manually.
- Nax Crystal 9905 Mirror Image Clear is a hard & scratch resistant clear coat and so to get excellent results especially for gloss restoration, polishing needs to be done as per the recommended procedure especially if it done after longer curing time after application of the clear coat.
- Please approach TECHNICAL SERVICES DEPARTMENT, NIPPON PAINT THAILAND AUTOMOTIVE REFINISH BUSINESS UNIT for further information on detailed polishing procedure.

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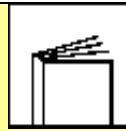
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Product Storage

- Store in a cool & dry area (avoid temperature above 40°C)
- Product shelf-life (Part A & B) ~ 12 months when stored unopened at 25°C

REMARKS

- For repair of damaged parts coated it is necessary to thoroughly sand the parts prior to re-spray to avoid adhesion issues.

VOC Data:

VOC as packaged (g/L)	480g/L
VOC Ready for Use (g/l)	480g/L
Ready for Use Weight Solids (%)	52%
Ready for Use Volume Solids (%)	47%

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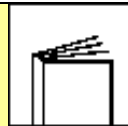
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Product Handling & Safety (for professional use only)

						<p>Please refer to Material Safety Data Sheets for full health & safety details and product can labels. Safety & Risk Phrases: Hardeners contains polyisocyanates and therefore safety precautions must be taken while use</p>
	Respiratory Mask	Safety Goggles	Protective Clothing	Protective Gloves	Safety Shoes	



Waning

- Flammable liquid and vapor
- Harmful, if swallowed
- Toxic, if inhaled (vapor)
- Causes skin irritation
- Causes serious eye irritation
- May causes allergy or asthma symptoms or breathing difficulties if inhaled
- Toxic to aquatic life
- Store in a closed container.
- Avoid release to the environment.
- Keep away from heat/sparks/open flames/hot surfaces.
- Keep container tightly closed.
- Do not allow to get in eyes, on skin, or on clothing.
- Wear protective gloves/protective clothing/eye protection/face protection.
- IF INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- IF COMES IN CONTACT WITH EYES: Rinse cautiously with excess water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

For further information please contact:

TECHNICAL SERVICES DEPARTMENT, NIPPON PAINT AUTOMOTIVE REFINISH BUSINESS UNIT

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