Autowave® MM Optima

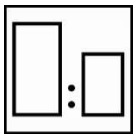
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Description

The Autowave MM Optima is a comprehensive, one-stop, waterborne basecoat application system known for its excellent hiding properties. It facilitates the application of all basecoat layers using a wet-on-wet technique, without flash-off between coats, which increase efficiency and is designed to improve productivity. Autowave Optima MM must be used in conjunction with a specified Sikkens clearcoat to provide protection from the environment



Gently shake the Autowave MM Optima can prior to use
Metallic MM toners must be hand stirred before first use
Stir color formula before adding Autowave Optima WB Activator



100 Autowave MM Optima

0-30* Activator Optima WB Activator / Activator Optima WB Activator Plus

*When using toner MM Z145 mixing ratio is maximum 100-10
*When using colors containing toner MM W120 mixing ratio is minimum 100-10



Use Sikkens measuring stick

14 Blue



Spray gun set-up:

1.2-1.3
1.4 (application in HT/LH conditions)

Application pressure @ spray gun air inlet:

1.7-2.2 bar (25-29psi)
HVLP max at air cap 0.6-0.7 (10psi)



Application solid colors:

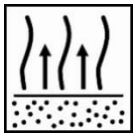
1 + 0.5 coats

No flash-off between coats

Application effect colors:

1 + 0.5 coats

No flash-off between coats



Prior to clearcoat application:

Until completely matt and dry



Clearcoat application
See clearcoat T.D.S.



Use suitable respiratory protection
Akzo Nobel Car Refinishes recommends the use of a fresh air supply respirator.

Read complete TDS for detailed product information

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Suitable substrates

Existing OEM finishes.
Sikkens preparatory products as per product TDS, except for Washprimer 1K CF
Colorbuild Plus
Autosurfacer UV
Primer Surfacer EP II
RFU Wet Bed (Blending Agent / C063)

Products and additives

Product: Autowave MM Optima toners

Activators: Autowave Optima Activator WB
Autowave Optima Activator WB Plus (Recommended to use with toner Z145)

Additives: Autowave Optima WB Hardener
Autowave Optima Blending Agent
Autowave Separator
Autowave Guncleaner

No plasticizer required for application on plastic car parts

Basic raw materials

Water based acrylic dispersion

Surface preparation



Final sanding step P600
For detailed surface preparation see TDS S8.06.02



Final sanding step P1000
For detailed surface preparation see TDS S8.06.02



Remove contamination using an appropriate cleaner

Autowave® MM Optima

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Mixing



Gently shake Autowave MM Optima toners for better pour viscosity
Stir Autowave MM Optima Metallic toners thoroughly before first use.



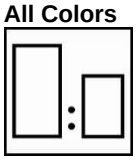
The Autowave MM Optima color formula must be stirred thoroughly directly after mixing the formula

Activators

WB Activator – add the required amount of the WB Activator to the Autowave MM Optima color formula based on the relative humidity, application temperature, size of the vehicle to paint and surrounding air flow

WB Activator Plus – especially designed for the Autowave MM Optima Z145 deep black toner for optimal viscosity and application properties

All Colors



100	Autowave MM Optima
0-30*	Activator Optima WB Activator / Activator Optima WB Activator Plus

***Colors with toner MM W120 minimum mixing ratio is 100-10 with WB Activator – WB Activator Plus**

MM Z145

100	Autowave MM Optima
0-10	Activator Optima WB Activator Plus

MM C063

Colors mixed without a formula or pure Autowave Optima MM toner (except MM Z145) MUST be mixed with the MM C063 Converter to maintain the appropriate system properties.

60:40	Autowave Optima MM Toner / Autowave Optima MM Toner C063
0-30	Activator Optima WB Activator / Activator Optima WB Activator Plus

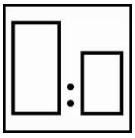
Blending Agent

60:40	Autowave Optima Blending Agent / Autowave Optima MM Toner C063
0-25	Activator Optima WB Activator / Activator Optima WB Activator Plus

Autowave Optima WB Hardener

Autoclear Aerodry
When recoated with Autoclear Aerodry, Autowave Optima WB Hardener MUST be added to sustain the optimal system properties.

- For complete panel application, add the WB Hardener to basecoat color.
- When blending the basecoat color, add the WB Hardener to the Blending Agent “wet-bed” and apply this wet-bed over the complete panel before the basecoat color application. With this method, there is no need to add WB Hardener to the basecoat color.



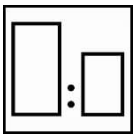
100	Autowave Optima Basecoat Color / Blending Agent
5	Autowave Optima WB Hardener *(stir thoroughly)*
0-30	Activator Optima WB Activator / Activator Optima WB Activator Plus *(stir thoroughly)*

Autowave® MM Optima

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Autowave MM Optima WB Hardener (cont'd)

Under the Hood colors
Engine bays or other interior or exterior areas can be painted with Autowave MM Optima basecoat without the need for recoating with a clearcoat by adding WB Hardener to the basecoat color



100	Autowave MM Optima – Under the Hood Color
10	Autowave Optima WB Hardener *(stir thoroughly)*
0-30	WB Activator *(stir thoroughly)*

Points of attention

Filtering For optimum straining use waterborne suitable paint strainers, size: 125µm.

Application In the event of a black pre-coat requirement i.e. special effect colors, use deep black MM Z145 RTS

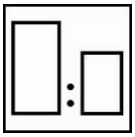
Solvents Avoid contact between waterborne products and any solvents

Spray gun set-up / application pressure



Spray gun	Fluid tip – set-up	Application pressure @ spray gun air inlet:
Gravity feed	1.2-1.3	1.7-2.2 bar (25-29 psi)
	1.4 (application in HT/LH conditions)	HVLP max 0.6-0.7 (10 psi)

Pot-life



All mixed Autowave Optima colors	1 month @ 20°C
Autowave Optima colors with WB Hardener	1 hour @ 20°C
Autowave Optima metallic colors containing SE8NB and/or SE8ND	1 day @ 20°C

Application process



Solid Colors
First, apply an even flowing wet coat (80% opacity) with a 15-20 cm (6-8 inches) application distance. Followed directly by applying an intermediate coat (reaching full opacity) with a 15-20 cm (6-8 inches) application distance from the panel surface



Metallic and effect basecoat color application
First, apply an even flowing wet coat (80% opacity) with a 15-20 cm (6-8 inches) application distance. Followed directly by applying an intermediate coat (reaching full opacity) with an increased spray-gun distance of 30-40 cm (12-16 inches) from the panel surface

Note It is strongly recommended to produce a sprayout sample to check the colour accuracy prior to completing the repair.
Fade out of Autowave MM Optima can be completed on:

- Existing finish, prepared according to TDS S8.01.10
- A wet bed application using Blending Agent RTS mixture

Autowave® MM Optima

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Application process (cont'd)

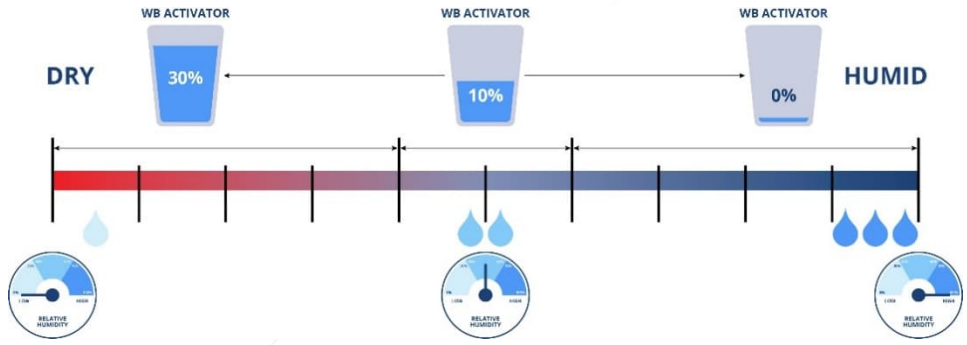
Flash-off
Allow the basecoat to flash-off until completely matt and dry before clearcoat application

Autowave MM Optima drying and air acceleration

Humidity and airflow will influence the Autowave MM Optima flash off times. This can be reduced using air accelerator systems with a **minimum distance** of 1 meter from the object
When heat is used for drying, allow object to cool down to application temperature before proceeding with color or clearcoat application

Autowave MM Optima Climate Guide

General guide	
Relative Humidity 60%-100%	Add - 0% - 10% WB Activator
Relative Humidity 40%-60%	Add - 10% WB Activator
Relative Humidity 40%-0%	Add - 10% - 30% WB Activator

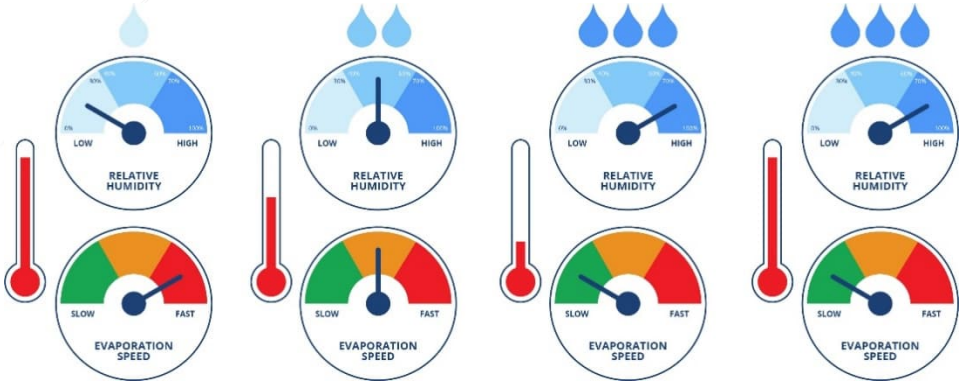


DRY – LOW HUMIDITY
HIGH TEMPERATURE
FAST BASECOAT FLASH-OFF

MODERATE HUMIDITY
MODERATE TEMPERATURE
MODERATE BASECOAT FLASH-OFF

HUMID – HIGH HUMIDITY
LOW TEMPERATURE
SLOW BASECOAT FLASH-OFF

HUMID – HIGH HUMIDITY
HIGH TEMPERATURE
VERY SLOW BASECOAT FLASH-OFF



Film thickness

By recommended application; Autowave MM Optima colors: 8-21 µm.
The total dry layer thickness of Autowave MM Optima should never exceed 30 µm.

Autowave® MM Optima

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Masking

Autowave MM Optima surface can be masked and taped after it is completely matt and dry

Denibbing

Allow Autowave MM Optima to flash-off until completely matt and dry. Lightly sand the contaminated basecoat surface with a P1000, preferably soft backed dry sanding paper. Next, thoroughly remove any sanding dust residue before reapplying Autowave MM Optima.
Apply the Autowave MM Optima basecoat color by recommended application.

Do NOT apply multiple lighter coats as this will result in a coarse basecoat surface.
See Technical Bulletin - Autowave MM Optima Blending Technique for process steps; color blending after denibbing.

Recoatable with

All Sikkens clearcoats listed below:
Autoclear 2.0, Autoclear LV Superior, Autoclear LV, Autoclear Mix and & Matt, *Autoclear Aerodry, Autoclear WB 2.0,
When recoated with Autoclear Aerodry* it is mandatory to add 5% Autowave Optima Hardener to the: Autowave MM Optima and / or Blending Agent*
*Please refer to the Autoclear Aerodry TDS S1.05.28

Recoat time

Maximum 24 hours at 20°C

Should this maximum time be exceeded, abrade the surface and apply another coat

Material usage

By using the recommended application, the theoretical material usage at 1 µm is ± 160 m²/liter RTS mixture

The practical material usage depends on many factors i.e. shape of the object, roughness of the surface, application techniques, pressure and application circumstances

Cleaning of equipment

Clean and rinse the spray gun thoroughly with Autowave Guncleaner
Purge the spray gun with Activator WB prior to Autowave MM Optima use

- *Do not use any conventional thinner unless removing dried Autowave Optima MM deposits*
- *Do not soak the spray gun for longer periods either with Autowave Guncleaner or Activator WB*

VOC

The EU limit value for this product (product category: IIB. d) in ready to use form is max. 420 g/liter of VOC.
The VOC content of this product in ready to use form is max. 380 g/liter

	lb./gallon	**g/liter**
EU directive		
Autowave Optima MM	**< 3.5**	**<420**

Autowave® MM Optima

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Storage



Product shelf-life is determined when products are stored unopened at 20°C (*70°F)*
Avoid too much temperature fluctuation

- *For optimal performance, store opened products at application temperature*
- *Maximum transport and storage temperatures between 3°C-35°C (37°F-95°F)*
- *Frost or extended storage at low and high temperature causes gelling / lumps in Autowave Optima MM toners after which they no longer can be used*
- *For product shelf-life data see TDS S9.01.02 "Shelf-life CR Products*

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Churchward, Southmead Industrial Estate
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FOR PROFESSIONAL USE WITH SUITABLE HS&E EQUIPMENT

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advices given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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