

COMPANY WITH
MANAGEMENT SYSTEM
- UNI EN ISO 9001 -
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Sherwin-Williams Italy S.r.l. – con unico socio
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P. IVA: IT 00494251200 - R.E.A. n. 313180
Cap. Soc. Euro 2.626.182 I.V. - Codice Mecc. Bo 014531

Company under the direction and coordination of The Sherwin-Williams Company, USA

Technical Data Sheet

AM0546/XX HYDROPLUS: WATERBORNE HARMONIZING PROTECTIVE WOOD STAIN FOR EXTERIORS

Supersedes previous issue dated 11/28/12

DATE 07/26/13



Colours	
	00 clear
	51 chestnut
	66 hedge green
	80 oak
	82 pine
	84 Brenner walnut
	85 larch
	88 brown walnut
	89 teak
	90 mahogany
	92 walnut
	93 pale walnut
	94 medium walnut
	95 dark walnut
	N0 transparent

The AM0546/XX waterborne protective wood stains, colours 51, 66, 84, 88, 90, 92, 93, 94, 95 overcoated with waterborne topcoat AZ21XX/89, 92, 93, 95 (minimum thickness: 300 micron wet) have been awarded the prestigious certification **CATAS CQA** by the wood research & development institutes CATAS (Italy).

The AM0546/XX waterborne protective wood stains, colours 84, 88, 92, 94 overcoated with waterborne topcoat AZ21XX/89, 92, 93, 95 (minimum thickness: 300 micron wet) have been awarded the prestigious national certification **CATAS CQA PLUS** and international certification **CATAS WKI PREMIUM** and **CATAS WKI PREMIUM PLUS** by laboratory CATAS and Fraunhofer Wilhelm-Klauditz-Institut WKI, German Institute of research and development.

These awards certify that the coating system described above complies with the European Standard **UNI EN 927-2** and additional requirements of the technical specifications established by **CATAS WKI PREMIUM COATING SYSTEMS FOR EXTERIOR WOOD**.

N.B.: DATA PROVIDED ON THIS TECHNICAL DATA SHEET CORRESPOND TO OUR BEST KNOWLEDGE AND EXPERIENCE. WE ASSURE CONSISTENCY ON THE CHEMICAL-PHYSICAL CHARACTERISTICS OF OUR PRODUCTS, WITHIN THE TOLERANCE LIMITS SPECIFIED ON OUR TECHNICAL DATA SHEETS. RESPONSIBILITY OF FINAL RESULT OF PRODUCT APPLICATION IS FULLY UP TO THE USERS, WHO SHALL MAKE SURE THAT THE PRODUCT CORRESPONDS TO THEIR OWN NEEDS WITH REGARD TO APPLICATION SYSTEM, TO SUBSTRATES USED AS WELL AS TO WORKING CONDITIONS.
WARNING: ACTUAL VISCOSITY OF SOME PIGMENTED AND/OR THIXOTROPIC PRODUCTS MAY DIFFER FROM THE VISCOSITY SHOWN ON THE TECHNICAL DATA SHEET. DIFFERENCES ARE TO BE REGARDED AS ACCEPTABLE IF WITHIN 30% MAXIMUM.

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The AM0546/XX waterborne protective wood stains have also passed extreme tests of outdoor durability obtaining excellent results in Florida certified by authoritative American laboratory Q-Lab, and the EVERSUMMER test in Florida and Australia certified by international laboratory ATLAS.

With the EXTREME external exposure test, longer than one year and according to the European standard EN 927-3, the cycle AM0546/xx and AZ21xx/xx achieved the highest quality levels rising simultaneously the triple exposure in Ohio, Mexico and Russia.

Area of use:	Door and window frames and any other wooden item exposed outdoors.
Types of wood:	Softwood, meranti, plywood panelling made in okume, finger-joint laminated board.
Method of use:	Flow-coating, dipping.
Thinning:	If thinning is required, use drinking water from 5% to 10%.

Technical characteristics

Solids content (%):	AM0546/00, N0	13 ± 1
	AM0546/XX	15 ± 1
Specific gravity (kg/l):	1.020 ± 0.030	
Viscosity (DIN 2 at 20°C):	48" ± 3"	

General characteristics

Drying time (50 g/m ² at 20°C):	Touch dry:	60'
	Through dry:	4 hours
	Stackable:	4 hours
	Sandable (180-220 grit paper):	16 hours
	Overcoatable:	16 hours
Forced air drying (50 g/m ² at 30°C):	Through dry:	60'
	Stackable:	At oven exit.
	Sandable (180-220 grit paper):	4 hours
	Overcoatable:	4 hours
Spreading rate (m ² /kg):	12 ÷ 18	
Shelf-life (months):	15	

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AM0546/XX are waterborne protective wood stains suitable for preserving softwood exposed to the outdoor environment, to avoid attacks of fungi and molds. AM0546/XX ensures limited creation of darker spots near the headgrain and limited creation of gray areas on the over-absorption areas on softwoods such as spruce and hemlock. Because of the harmonizing ingredients used, AM0546/XX tends to create a soft sediment: stir well before use. The colored versions have been formulated with clear iron oxides which ensure excellent light fastness and absorb UV radiation thus preventing lignin destruction. This is the reason why clear systems, those carried out using clear protective wood stain, are not recommended: since they do not contain iron oxides, they cannot ensure a sufficient protection. In order to adjust color shades it is possible to add up to 3% of the following pastes: XA4034/72 (black), XA4034/08 (red), XA4034/52 (yellow). AM0546/N0 is pigmented with pigmented paste XA2006/XX until maximum 3%.

Timbers for coloured systems

The most suitable timbers are softwood. Also meranti and okume may be used.

For hardwood we recommend AM0549/XX series.

Do not use steel wool to prepare the bare timber because this gives rise to the formation of stains.

Preparation of the bare wood

Carefully clean the surface of the wood, which is to be well dried (14-16% humidity) and free from grease, wax or resin traces.

Waterborne products tend to raise the wood fibre and produce rough surfaces.

A thorough sanding is particularly important: we recommend progressive sanding with 120-150-180 grit sanding papers.

Recommendations for flow-coating application

Make sure there is no pigment sedimentation on the bottom of the can.

During flow-coating application, the water evaporation may occur, in this case it is necessary to add water to 5% at beginning of application.

It is necessary to add water during application in relation to the room temperature.

In case of application by flow-coating or dipping, to eliminate the foam which forms and affects flow, add 0.05%-0.1% of XA4024/00. Use XA4024/00 as is, do not mix with water or solvents.

In hot weather, if it is necessary to slow down drying in order to improve flow, add 2%-4% XA4026/00 (to be added to fresh product only once).

Drying

For the drying of waterborne wood stains, the temperature of environment, wood and product must be above 15°C and relative humidity preferably between 65% and 85%.

In case of forced drying, do not use ventilation and heating in the first meters of the tunnel so as to improve flow.

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Basecoat and topcoat application

AM0546/XX must be overcoated with Hydroplus waterborne basecoats and/or topcoats for exteriors.

Shelf life of protective wood stains

Once the can has been opened and the product used, the waterborne protective stain is susceptible to the attack of bacteria, yeast and fungi commonly present in the air, which can cause rotting, as evidenced by a foul smell, increase in viscosity, surface mould and colour change. This can also occur in products left for a long time in dipping or flow-coating tanks, especially in the summer. To increase the storage life of products after use, use drinking water and clean the system frequently (preferably with disinfectant solutions).

After use, to increase storage life of the product inside the opened can, we recommend adding 0.1% of XA4051/00 directly into the product can, stir for a few minutes and then close the lid.

As a disinfectant for equipment use a solution at 2% in water of XA4051/00. As to method of use, please refer to the technical data sheet of XA4051/00.

Special instructions

- Stir the product thoroughly before use.
- Store at temperatures above 5°C (since it can be damaged by the cold) and below 35° C.
- Coating residues (washing water, booth water, used coatings) must be disposed of in accordance with applicable current legislation. Do not pour residues down drains.
- Please refer to the relevant Material Safety Data Sheet for safety information.
- AM0546/XX waterborne protective wood stains are available in the following packing size: 6lt, 25lt, 199lt, 200lt, 970lt.

WARNING: NATURAL RESIN ESCAPE.

Many timber species, especially conifers such as **pine, larch, douglas fir and spruce**, contain large quantities of natural resin in capillaries and resin sacs near knots. It is virtually impossible either to eliminate this resin by drying out the wood or to use coatings to block it. Sooner or later the heat of the sun will cause the resin to escape. Nonetheless, the only real damage is to the aesthetic appearance of the material and the quality of the film is not affected.