

**So many promising
new products**

**A historical
certainty
[HYDRO
GOLD]**



SAYERLACK®
INNOVATIVE WOOD SOLUTIONS

[HYDRO GOLD]

QUALITY AND DURATION SINCE 1999



At a time in the history of outdoor paints when the elixirs of youth for doors and windows are being celebrated, **Sayerlack is proud of an important record: HYDRO GOLD paints, the range of patented paints guaranteed by Sayerlack for up to 18 years, launched 13 years ago.**

In 1999, Sayerlack formulators began research on **HYDRO GOLD**, in collaboration with prestigious international institutions. We have always been pioneers in the field of paints. The search for innovation and to go beyond both our own limits and those of the marketplace is the challenge that attracts us most. Outdoor paints are the ideal terrain for putting oneself to the test.

We are aware that winning performances are based on team effort: in order to ensure the quality and durability of doors and windows it is necessary that wood suppliers, door or window manufacturers, the paint manufacturer, certifying bodies and the end customer all work together. It is possible to obtain quality doors and windows that last over time only if there is an overall awareness of the problems involved and if experiences are shared.

This is how Sayerlack works: we have always designed our products working together with suppliers, customers and certifying bodies. We test raw materials with suppliers, and paint, wood and product-type combinations together with our clients.

Certifying agencies confirm the results obtained. This is how we create paints that have a custom-made product quality and a versatility that makes them universal. Superior quality products become part of a range, and are suited to the needs of every client.

HYDRO GOLD is the cutting edge of our outdoor product range: INTERNATIONALLY PATENTED and guaranteed to last up to 18 YEARS.

PAINTING CYCLES

Sayerlack offers the **HYDRO GOLD** product line, to be applied on coniferous and broad-leaf wood, in 3 different painting cycles:

TRANSPARENT HYDRO GOLD CYCLE for coniferous wood

AM 303/84, 89, 90, 93

Transparent primer for coniferous wood

Drying time 2/4 hours

AM 603/91

Intermediate transparent coat

Drying time 2/4 hours

The day after - automatic brushing or manual sanding

AZ 9030/86

Thixotropic transparent topcoat - gloss 30

Can be stacked after 24 hours at 20°C

TRANSPARENT HYDRO GOLD CYCLE for broad-leaf wood

AM 306/89, 90, 93

Transparent primer for broad-leaf wood

Drying time 2/4 hours

AM 603/91

Intermediate transparent coat

Drying time 2/4 hours

The day after - automatic brushing or manual sanding

AZ 9030/86

Thixotropic transparent topcoat - gloss 30

Can be stacked after 24 hours at 20°C

PIGMENTED HYDRO GOLD CYCLE for coniferous and broad-leaf wood

AM 309/13

Pigmented primer

Drying time 2/4 hours

AM 609/13

Pigmented thixotropic primer

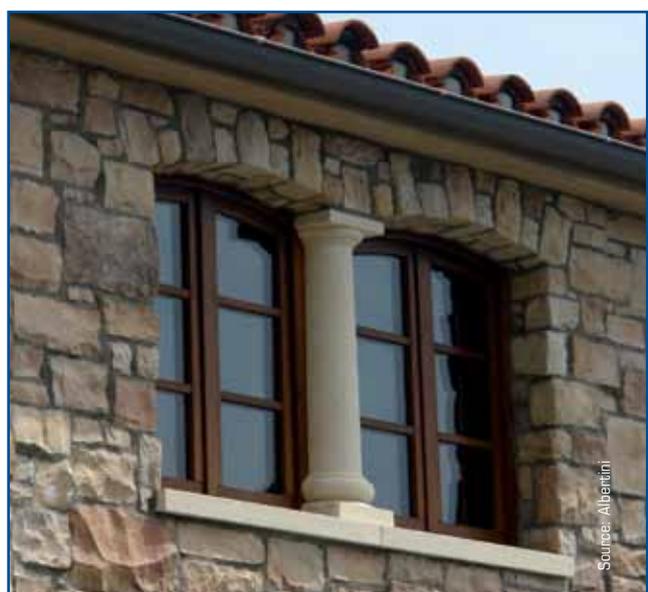
Drying time 2/4 hours

The day after - automatic brushing or manual sanding

AZ 9030/13, 41

Thixotropic pigmented topcoat - gloss 30

Can be stacked after 24 hours at 20°C



Source: Albertini



Source: Albertini

External doors and windows: problems and solutions

SUNLIGHT, WATER AND BIOLOGICAL AGENTS

An outside facing door or window undergoes continuous attacks from sunlight, various forms of water (rain, snow, frost and damp) and biological agents (fungi, moulds and insects). Sunlight and atmospheric agents attack both the wood and the paint film; fungi and insects, instead, attack only the wood.

SUNLIGHT

The sunlight that reaches the Earth's surface is made up of a wide spectrum of radiation, which can be divided into three classes:

ULTRAVIOLET RADIATION has a destructive effect both on the wood and on the protective film;

VISIBLE RADIATION causes wood colour variations but does not have sufficient energy to break down the strong chemical bonds of the paint;

INFRARED RADIATION transports heat, accelerating the above degradation phenomena.

WATER

Water, in its various forms, passing through the paint film, can cause damage mainly to the wood. If the wood becomes too wet it can be easily attacked by fungi and moulds. Furthermore, because of dampness, wood undergoes dimensional changes, alternately swelling and shrinking, if the paint film does not easily compensate for these changes it can become detached from the wood.

BIOLOGICAL AGENTS

The main biological agents that damage wood are fungi. Fungi can be divided, according to the damage they cause to wood, into moulds and staining organisms and wood destroying fungi. Moulds and staining organisms cause colour changes in wood without altering its mechanical strength. We can include bluing moulds and fungi among these. Wood destroying fungi or wood-decaying fungi cause the wood to be completely destroyed.



SAYERLACK'S WAY

Choosing a suitable wood and designing the door or window so as to avoid water accumulations and sharp edges, are the phases that precede painting. They are fundamental for guaranteeing long life to windows and doors.

In order to guarantee protection from damaging agents, paint must:

- manage to **SCREEN** the wood from the stronger radiation;
- **LIMIT** water and moisture absorption while at the same time maintaining the necessary permeability needed to allow any water that has accumulated in the wood to evaporate;
- be **ELASTIC** in order to allow it to adjust to dimensional variations in wood;
- **PRESERVE** wood from attacks by biological agents;
- retard **LIGNIN** decay.

All these properties must be ensured over time.

**THE SOLUTION IS
HYDRO GOLD
BY SAYERLACK:
GUARANTEED TO
LAST OVER TIME.**

[**HYDRO
GOLD**]

THE HYDRO GOLD PROJECT

The HYDRO GOLD project, which ran for more than 3 years, included three main phases:

1. **STUDYING** the causes of wood and paint film deterioration and studying the ways in which damage to the paint substrate surface arises.
2. **FORMULATING** paint products according to research into wood and paint film protection, in order to obtain maximum protection.
3. Accelerated natural and artificial **AGEING TESTING** on new paint products applied to wood.

During the third phase of the project, Sayerlack chose **Q-LAB WEATHERING RESEARCH SERVICE** in Florida as its partner. A cycle of products applied to wood substrates was tested under extreme climatic conditions in order to certify their very long outdoor durability.

Sayerlack and Q-LAB: a winning combination

THE Q-LAB AGEING TEST: ARTIFICIAL AND NATURAL TESTING



The ageing tests carried out were:

Accelerated artificial ageing

This simulates outdoor exposure using machines according to the EN 927-6 standard.

Painted samples undergo three months of consecutive exposure to combined UV lamp, water spray and vapour, for an overall total of 2,016 hours, as follows:

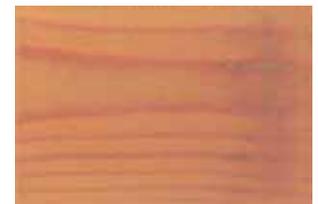
- 576 three-hour cycles for a total of 1,728 hours where each cycle comprises 2 phases:
the first of 2 hours and 30 minutes at +60°C with UV lamps, and the second of 30 minutes with water spray with no UV lamps.
- Each 48 cycles there is a 24 hour condensation phase at +40°C, with no water spray and with no UV lamps for a total of 288 hours.

A cut in the film is made in the lower part of each sample in order to make the test even more exacting.

The result shows how in the sample totally protected using the **HYDRO GOLD** series there were no alterations to the original primer colour. There was also a strong resistance to water penetration in the cut area.



CONVENTIONAL PRIMER
AND TOPCOAT



HYDRO GOLD PRIMER
AND TOPCOAT

Natural ageing

Exposure to outdoor agents at a 45° to the horizontal inclination is provided for according to the EN 927-3 standard.

Painted samples were exposed simultaneously for two years at Pianoro (Bologna, Italy) and at Homestead (Florida, USA).



Sayerlack chose Florida because the climatic conditions in which **Q-LAB Weathering Research Service** operates are the most challenging for the tests to be carried out on the wood samples treated with outdoor paints

- tropical climate
- very high humidity
- abundant rains
- high average annual temperature
- high overall annual sunlight
- large difference between daytime and night time temperature

RESULTS OBTAINED

The results obtained were exceptional and it was only after having received certification in these climatic conditions that Sayerlack launched **HYDRO GOLD** on the market. This is a new and extraordinary product line, which, with its specific internationally-patented painting cycle, is able to guarantee:

A 18 YEAR LIFESPAN ON WINDOWS 10 YEAR LIFESPAN ON EXTERNAL SHUTTERS

Q-LAB

Q-LAB WEATHERING RESEARCH SERVICE

Exterior wood products subjected to accelerated artificial ageing tests according to the EN 927-6 standard, and to natural ageing according to the EN 927-3 standard.

TEST NO: HCP-001
REPORT NO: 4
DATE: July 11, 2002
DATE EXPOSED: July 11, 2000
DURATION: 24 months
TYPE: Direct Inland, 45° South-Florida

SPECIMENS:
138 coated wood panels
RADIATION LOG:
TOTAL = 12.498,47 MJ/m²
TUVR = 596,34 MJ/m²

NOTES: evaluated per ISO 4628.

Specimens were inspected and evaluated directly on the rack, then brought in the laboratory for conditioning at room temperature. Specimens were examined for cracking, flaking, chalking and mildew, then washed with deionized water and rated for color and gloss change.



We kindly thank  for providing us his photos.



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