



*Maintenance Guide for  
SiOO:X Wood Protection Products*

**SiOO:X**  
WOOD PROTECTION

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# *Overview*

The SiOO:X Impregnation system utilizes naturally occurring elements, including silicon, potassium, plant materials, and water. It is designed to work in harmony with wood, a natural and renewable resource. Wood is a complex material that poses specific challenges regarding protection from environmental impacts and longevity. SiOO:X has undergone extensive research and has been proven over many years in demanding environments to provide long-lasting protection when properly applied and maintained.

SiOO:X acts as a penetrant rather than forming a film coating like oil or water-based paints. It offers benefits that both low- and high-build paint systems cannot provide. SiOO:X reinforces the wood's surface texture, protecting it against ultraviolet damage, mould, fungi, algae, and insect attacks. Importantly, the treatment allows the wood structure to remain breathable.

When using the SiOO:X Clear product, the wood grain—and any natural staining imperfections—will be visible. In contrast, the pigmented products can mask these imperfections while still revealing the wood's grain profile.

For optimal performance and appearance, SiOO:X should be applied to quality timber with the correct moisture content. The surfaces must be properly prepared to allow adequate penetration, and thorough application of each treatment stage should be completed in specified environmental conditions. After treatment, the wood should be dried and stored correctly before use. All approved SiOO:X distributors and applicators meet our factory treatment quality standards.



It is the customer's responsibility to ensure they purchase from approved distributors and applicators. Additionally, the design and installation of the timber structure should follow sound practices. No wood protection system, including SiOO:X, can fully mitigate issues arising from poor design or flawed detailing that leads to moisture penetration. SiOO:X performs exceptionally well when used correctly on cladding structures designed and installed according to effective rain screen principles. If necessary, seek professional advice.

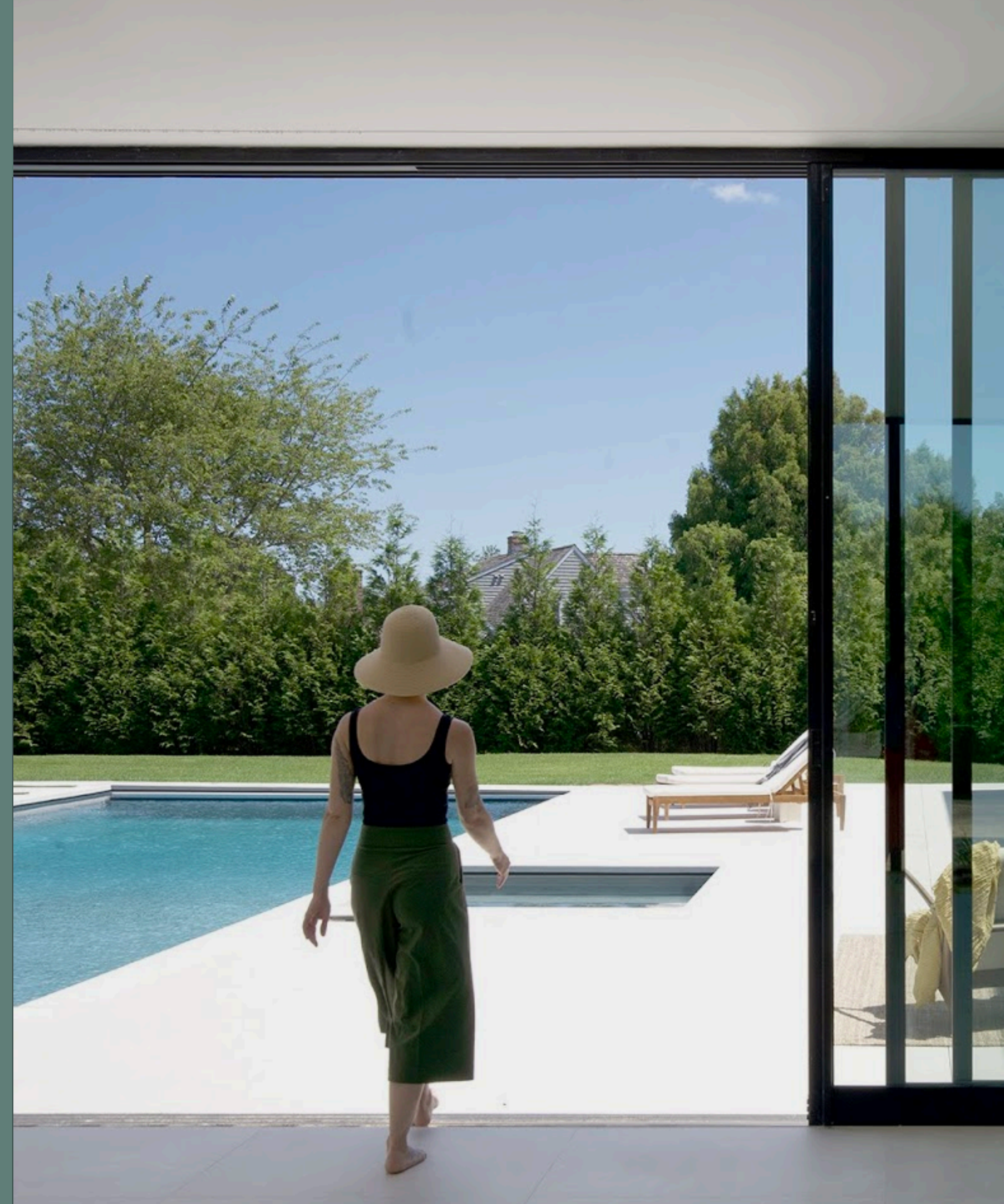
After installing SiOO:X treated timber, it is crucial to care for and maintain it. Timber surfaces, regardless of treatment, require ongoing care. Regularly removing accumulated dirt and early-stage algae or fungi through a maintenance program will help sustain an attractive appearance. Most projects experience little to no impact from algae and fungi; however, this can vary by environment. For extensive guidance on cleaning and care, visit the [sioox.com/pro/gb](https://sioox.com/pro/gb) website. The need for cleaning does not indicate a flaw in the treatment; rather, it's an essential aspect of maintenance with any product.



As wood ages, it naturally changes and can develop visible imperfections. Such behaviour is inherent to wood, which can move and splinter. Depending on the species, wood may also emit extractives, and spores present during the felling may later manifest as staining fungi. A spotted appearance can develop, but it is non-threatening, typically disappears with time, and can be improved with cleaning. Any such spotting is not caused by the SiOO:X treatment.

Cleaning SiOO:X treated surfaces is easier because the treatment toughens the surface, reducing cracking and splintering. The resulting lustrous surface promotes effective maintenance.

When evaluating your SiOO:X treated surface, remember that it will not have the smooth, painted finish that completely conceals the wood's natural beauty. Over time, close examination may reveal surface imperfections, but from a distance, the wood will still look attractive. These imperfections may come and go with aging and weathering. SiOO:X is designed to mimic the natural aging and maturing of wood, developing a silver-grey weathering patina while providing unmatched durability and protection that lasts a long time. This is what we refer to as "Designed by Nature."



# *Protection and Aesthetics*

The SiOO:X system penetrates the wood substrate and interacts with moisture and environmental conditions. Over time, the treatment cures, forming a network of silica within the surface substrate. By applying sound design principles along with suitable maintenance interventions to enhance material properties, you can achieve excellent performance with SiOO:X treated timber and sustain a bright aesthetically pleasing appearance. The beneficial protective property changes conferred by SiOO:X in the timber substrate remain throughout the lifetime of the timber product and do not change.

When planning a cost calculation over a 40-year period, the SiOO:X system requires repainting twice. Additionally, an extra surface protector may be needed between treatments, particularly during the initial 4–8 years. However, this decision ultimately rests with the building owner.



# *Future Maintenance*

1. Maintenance is vital to sustain the appearance of the structure and to ensure long life. Dirt can build up particularly on horizontal surfaces and with everyday use some surfaces can be scraped and damaged.
2. If dirt is allowed to establish it can be a source of food for algae. Algae can form on any surface whether treated or otherwise. The key is to clean dirt away and any algae which does form.
3. The cleaning of SiOO:X treated surfaces is easy to achieve as the surfaces are toughened by the treatment and cracking and splinting is resisted. The treated surface facilitates effective maintenance.
4. The structure surfaces should be surveyed regularly and any dirt deposits or debris brushed away where possible. This and occasional washing with a hose will keep the surfaces clean and defend against algae growth.
5. Periodically, and after the winter period, inspect the structure and if there is any algae growth on the surface, use a surfactant cleaner such as the SiOO:X Maintenance Wash to remove any algae and staining. If heavy washing is carried out it is recommended that the surface is recoated locally with the specified SiOO:X Premium Surface Protector to reseal the surface. In the case of any severe algae formation, stronger agents should be used to remove it. Advice on this should be sought from Russwood/ Sioo. Apply a coat of the specified SiOO:X Surface Protector to the cleaned area.



6. If the structure extends to ground level it may be subject to operational wear such as scratching and scuffing. Minor surface damage can be repaired by applying the specified SiOO:X Surface Protector to the affected area.
7. If the integrity of the surface treatment is breached through physical damage apply the specified SiOO:X Wood Protector once to the affected area followed by the SiOO:X Premium Surface Protector.
8. If the surface is marked by graffiti, to remove, follow the recommendations in 5.
9. If the pigmented products have been used, over some time there may be some local wash out of the pigment. If this occurs the specified SiOO:X pigmented Premium Surface Protector can be reapplied to the affected area. SiOO:X is a silicate based penetrant which cures fully over a period of three years and forms a network of silica crystals in the timber substrate. A natural silver greying takes place so if there is any pigment wash out it will be increasingly less noticeable making it unnecessary to apply more pigmented treatment.
10. The SiOO:X treatment gives a surface finish which is bright and properly maintained will last for 10 years and beyond. There are projects in the field which have shown this performance. The key is to keep the treated surfaces clean.



11. At the end of treatment life there is no "fall off the cliff" failure. The silica deposited in the timber is there permanently. There will be a gradual darkening of the surface and it is an aesthetic judgement on the timing to reapply.
12. When it is decided that the treatment is to be redone again the whole structure should be thoroughly cleaned and the complete SiOO:X system should be re -applied over the spring/summer period in dry calm weather conditions.
13. At any time when applying SiOO:X for maintenance, the treatment instructions must be adhered to with the required agitation of the fluid and the application made onto dry surfaces in suitable dry and calm weather conditions with a temperature above 6 degrees centigrade.



# *Planning and Budgeting for Maintenance*

The Sioo recommended cycle for cleaning and maintenance is:

- Cleaning - periodically
- Maintenance re-application - minimum every 15 years depending on exposure and environment

Refreshing of surfaces with Surface Protection – an extra SiOO:X Surface Protector coat may be needed between treatments, particularly during the initial 4–8 years. However, this decision ultimately rests with the building owner.

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