Technical data sheet

Pyrolan Ionic Base KDI 5390

Boron-free **flame retardant** made from organic phosphorous compounds, for the **impregnation** of **wood and wood-based materials**

PRODUCT DESCRIPTION

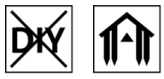
General

Water-based, flame retardant impregnation treatment, developed especially for the boiler pressure method, to improve the fire behaviour of wood and wood-based materials. The natural surface and inherent colour of the wood are hardly changed by the product. No formation of white salt efflorescence upon contact with moisture. Minimal wear of cutting tools (e.g. planer blades).
The product has been formulated without the use of biocidal agents to protect against blue stain and wood-destroying fungi.

Special properties and standards

- **EN 13501-1 (fire behaviour)**
  Confirmed by an external test certificate.
- **NF P 92-501**
  Fire behaviour according to French building material regulations: M1
- **Biodegradable**
  Confirmed by an external test certificate.

Application area

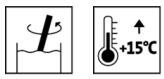


For interior wall and ceiling paneling and roof trusses.

Application in combination with a suitable topcoat system.

PROCESSING

Processing instructions



- Please stir the product before use.
- The temperature of the product and object, and the room temperature must be at least + 15 °C.
- The optimal conditions for use are between 15 - 25 °C with a relative atmospheric humidity between 80 %.
- The coating system used must not have a negative influence on the fire behaviour of the flame retardant impregnation.
- To retain the flame retardant effect of the treated substrate, the maintenance intervals of the protective coating must be observed.
- In order to ensure full impregnation, the individual layers of wood should always be stacked using intermediate battens.
- Plastic rods are recommended as interlayers.
- As a result of the possible extraction of wood substances during the impregnation process, discolouration of the impregnation solution may

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occur in some wood species. Timbers impregnated subsequently may take on a dark colour due to this.

- It is recommended to provide the impregnation unit with a suitable protective coating. Therefore please contact your plant manufacturer.
- Wood moisture measurements for wood impregnated with Pyrolan Ionic Base KDI (5390) can only be taken using the oven-drying method. Conventional measuring devices, which determine the wood moisture using electrical conductivity, are unsuitable.
- Depending on the type of wood, the wood moisture has a considerable influence on the absorption capacity during the impregnation process.
- Any change in the processing sequence, environmental conditions, non-observance of instructions or the use of products not listed may have an unfavourable effect on the result.

Application technique

Method of application	Boiler pressure impregnation Recommended impregnation cycle
Pre-vacuum	15 mins at 0.7 bar
Pressure phase	120 mins at 9 bar
Final vacuum	15 mins at 0.7 bar
Quantity to be used	This will depend on the fire prevention standard in question, the type of wood and the selected impregnation cycle. In general, quantities of 120 - 200 kg of Pyrolan Ionic Base KDI/ m^3 will fulfil the requirements of ÖNORM EN 13501-1 Class b.

The product is ready to use.

The shape and surface condition of the workpiece as well as the type of application influence the actual consumption.

Accurate values for consumption must be obtained by applying trial coats in advance.

Drying times

(at 23 °C and 50 % rel. humidity)

We recommend drying the impregnated material immediately after treatment in a drying chamber.

Cleaning the working equipment

With water immediately after use.

SUBSTRATE

Type of substrate

Wood and wood-based materials

Substrate property

The substrate must be dry, clean, capable of holding the paint, free from separating substances such as grease, wax, silicone, resin etc. and free from wood dust, as well as tested for suitability for coating.

Indications of algae, fungi or insect infestation and bark residue are to be removed.

As far as possible, all mechanical processing steps, such as cutting to size, planing, profiling, notching, drilling, splitting, milling are to be completed before impregnation.

Metallic fastening elements may only be attached after impregnation.

Wood moisture	< 25 %

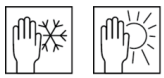
COATING SYSTEM

Impregnation	1 x Pyrolan Ionic Base KDI (5390)
Wood sanding	Before applying a topcoat, the wood surface can be lightly sanded.
Subsequent coating	1 x Pyrolan Ionic Top UV 100 (5391) or 1 x Lignovit Walzgrund (5345) or 1 x Legno Öl (7006) or 1 x Legno Color (7007) Wood and wood-based materials that have been impregnated with Pyrolan Ionic Base KDI (5390) and then given a topcoat should not be subjected to the combined stress of high levels of moisture and mechanical abrasion (e.g. by brushing when wet). This could lead to a loss of adhesion between the wood and topcoat.

ORDERING INFORMATION

Size of trading unit	1000 l container
Colour shades / Glosslevels	Pyrolan Ionic Base KDI (5390000200)
Supplementary products	Legno Color (7007) Legno Öl (7006) Lignovit Walzgrund (5345) Pyrolan Ionic Top UV 100 (5391) Please refer to the corresponding technical data sheets of the products.

FURTHER DETAILS

Durability / storage 	Min. 1 year(s) in the original sealed containers. Make sure the product is protected against moisture, direct sunlight, frost and high temperatures (above 30 °C).
Technical specifications	VOC content: Limit value according to Directive 2004/42/EC for Pyrolan Ionic Base KDI (Cat. A/d): 30 g/l. Pyrolan Ionic Base KDI contains < 1 g/l VOC.
Safety information 	The product is only suitable for the industrial and professional use. It is recommended to use safety gloves and safety glasses while processing. During work, do not eat, drink or smoke. Further information on the subject of safety during transport, storage and handling as well as disposal can be found in the relevant safety data sheet. The current version can be accessed on the Internet at **www.adler-lacke.com.**