



Product description

NT DECO is a waterborne translucent fire retardant.

The product is available in a wide range of translucent colours. It is suitable for both interior and exterior use on various wood-based products. Post-processing with other coatings is not recommended and will compromise the reaction to fire performance properties.

Certification

Wood products treated with NT DECO can either be certified according to CE marking procedures, where a standard for this exists or according to national, legal rules. Please check in your market for local building regulations.

Field of application

NT DECO is suitable for the treatment of various wood and wood-based products.

- EN 14915+A1 Solid wood panelling and cladding
- EN 16351:2018 Cross-laminated timber
- 13986:2004+A1:2015 Wood-based panels for use in construction
- EN 14080:2013 Glued laminated timber and glued solid timber

Technical information

Attributes

NT DECO improves the reaction to fire performance of wood-based products together with a decorative coloured semi-translucent or clear finish.

The product has excellent UV protection properties and is resistant to severe weathering.

Colours

NT DECO is available in a wide range of translucent colours. For more information on available colour options visit www.nordtreat.com/en/fire-retardants/nt-deco

Emission classification(s)

Certified M1, Indoor Air Comfort, LEED v4 (low-emitting product) and meets BREEAM, A+ and AgBB classification requirements.

Reaction to Fire classification

Reaction to Fire performance is specific to product end-use. Please contact an authorised Nordtreat treatment facility for a full list of available wood products and Reaction to Fire classification.

Pigment stability and final film formation occur in 7-14 days after processing.

Full reaction to fire properties reaches needed Euroclass classification in 2 months, once the flame retardant has cured completely in optimal conditions.

Classification table of commonly available NT DECO treated certified wood products

Wood species	Product type	Thickness	Air gap behind the cladding	Substrate behind air gap	NT DECO retention	Additional coatings / primers	Colours	EN 13501-1 Reaction to Fire classification
Spruce	Panel or cladding	18 mm or more	With or without	A1/A2 materials	350 g/m ²	No additional coatings or primers	All colours	B-s1, d0
Larch	Panel or cladding	20 mm or more	With or without	A1/A2 materials or B-s1,d0 membrane	350 g/m ²	No additional coatings or primers	All colours	B-s1, d0
Cedar	Panel or cladding	20-25 mm	With or without	A1/A2 materials or B-s1,d0 membrane	350 g/m ²	No additional coatings or primers	All colours	B-s1, d0
Spruce	Cross-laminated timber (CLT)	90 mm or more	Free standing construction	N/A	350 g/m ²	No additional coatings or primers	All colours	B-s1, d0
Pine	Glue Laminated Timber (Glulam)	130 mm or more	Free standing construction	N/A	150 g/m ²	200 g/m ² NT NEUTRA as primer	All colours	B-s1, d0
Pine	Log walls	130 mm or more	Free standing construction	N/A	150 g/m ²	200 g/m ² NT NEUTRA as primer	All colours	B-s1, d0

Maintenance and Durability of reaction to fire performance

INT1 - Dry conditions

Moisture content in the materials corresponding to a temperature of 20 °C and the relative humidity of the surrounding air exceeding 65 % only for a few weeks per year. Permanent use in interior dry applications (e.g. wall and ceiling products).

Surfaces in dry conditions treated with NT DECO require maintenance treatment only in case of mechanical damage occurring to treated surfaces. Surfaces with mechanical damage exceeding 3 mm in depth should be maintenance treated without delay by applying 350g/m² of NT DECO to the affected surface.

INT2 - Humid conditions

Moisture content in the material corresponds to a temperature of 20 °C and a relative humidity of the surrounding air exceeding 85 % only for a few weeks per year. Permanent use in interior dry applications (e.g. wall and ceiling products).

Surfaces in humid interior conditions treated with NT DECO which are protected from direct UV-radiation and weathering, such as the back-sides of facade cladding will maintain their fire-retardant properties for the usable lifetime of the wood product. In the case of prolonged exposure to direct weathering (direct rain, UV radiation), affected surfaces should be maintenance-treated by applying 175 g/m² of NT DECO on the affected surfaces.

EXT - Exterior conditions

Permanent use in exterior applications (e.g. facade claddings, exterior conditions).

Surfaces in exterior conditions treated with NT DECO such as facade cladding will maintain its reaction to fire classification for at least five (5) years when fully exposed to weathering. After five (5) years treated surfaces should be inspected for maintenance needs. Affected surfaces should be maintenance-treated by applying 175 g/m² of NT DECO on the affected surfaces.

For more information about NT DECO durability and maintenance of reaction to fire performance please visit www.nordtreat.com or contact manufacturer or a local distributor.

Application methods

NT DECO is suited for both industrial (brush-machine, vacuum-spray, flow-coater, Airmix spray) or manual (with a brush, spray) treatment. Application in several thin layers yields the highest finish quality.

Specific gravity of substance: 1,15 kg/l
Coverage of 1 litre: 3,3 m²
Amount of application in litres: 0,31 l/m²

Instructions of use

Storage

Store at temperatures 5-30° C:

- Clear NT DECO: 1 year from the date of manufacture on the packaging label
- Pigmented NT DECO: maximum 2 months from the date of manufacture on the packaging label

Conditions of use

The wood surfaces to be treated must be cleaned and free of dust, dirt and loose particles. In the case of planed surfaces, roughening the surface by sanding or brushing prior to treatment ensures better impregnation.

Ensure the following recommended conditions during the application and drying:

Product temperature+15+25 °C
Air temperature.....+15 +50 °C
Relative humidity..... max 65 %
Wood humidity.....12..... 20 %

Application

Stir well before use. Do not dilute, the product is ready for use. Once opened, ensure that the containers are re-closed firmly. If the container has been subject to repeated openings, check the suitability of the material for the intended purpose.

The surface must be covered from all four (4) sides, 3-4 times with fine sawn or rough surfaces and 4-6 times with smooth planed surfaces to achieve a total consumption of 350g/m², with 2 hours intervals (or approx. 6-10 min, in 55-65° C), depending on the type of wood, air temperature, humidity level, etc.

Excessive (approx. 10 hours) drying between coats might result in poor impregnation of the adjacent coats.

Pigmented NT DECO needs continuous mixing during application due to low viscosity in order to avoid precipitation of pigments and binders.

As the fire retardant is a transparent product, the various staining and surface treatment methods or different wood types may cause discolouration of stain tones compared to colour charts. It is advised to test the stain tones before application on large surfaces.

Drying time

- Touch dry: 48 h at +20° C and average humidity of <65 %.
- Final surface: 7-10 days at +20° C and average humidity of <65 %.

Actual drying time depends on the temperature, humidity, type of wood, surface layer thickness and room ventilation.

Post-processing

NT DECO is not designed to be coated by lacquering or subsequent processing with film-forming coatings and such post-processing would affect the reaction to fire classification.

In case of mechanical damage of the treated surface (breaking of the coating film caused by an outside force), it is mandatory to carry out on-spot repairs in accordance with the maintenance guidelines.

If the treated boards are sawn or cut the bare wood surface must be treated with NT DECO. Observe temperature, RH and drying time.

Cleaning of equipment

Water. Clean used tools from the extra product before cleaning. Do not discharge to the sewer or ground.

Waste handling and environment

Do not discharge to the sewer or ground. Collect all product waste and deliver to applicable waste handling. Product waste needs always to be demolished based on local authorities' approval. An empty, dry package can be placed in mixed waste.

NT DECO treated wood products can be discarded as wood waste.

VOC

Very low.

Safety

Observe the Safety Data Sheet requirements. The Safety Data Sheet describes the potential risks and necessary protective equipment. No UN/ADR transportation classification.

For Safety Data Sheet information please visit www.nordtreat.com or contact a local distributor.

Installation instructions of NT DECO treated wood products

If industrially treated wood products are cut at the building site, the cut ends must be treated with NT DECO. Use only stainless steel fixings and high-quality nail guns. Do not treat the wood surfaces with any other coating or priming product, as such treatments might compromise the reaction to fire performance properties.

Maintenance

Brush and rinse of loose parts and dust. Inspect for mechanical damage and replace where necessary. Surface must be dry and clean. Spray or brush a minimum of 175 g/m² of Nordtreat NT DECO. To avoid uneven or cloudy colour appearance, whole surfaces should be treated in one with a tone similar to the original. Maintenance with other coatings is not recommended and will compromise the reaction to fire performance. Contact Nordtreat technical support for more instructions.

Please contact your local distributor or Nordtreat for further information: www.nordtreat.com

The suitability of the treatable material shall be inspected by the manufacturer with respect to his/her requirements regarding quality, colour, and the like, e.g. by a sample staining and/or sample varnishing. The above information is based on our testing and experience. Furthermore, the information does not represent any warranty of any characteristics and thus does not represent a contractual obligation regarding the product. Additionally, the information does not claim any completeness and it is given without any warranties.

The latest version of the Technical Data Sheet and Safety Data Sheet can be found on Nordtreat's website: www.nordtreat.com.