



Product type

Norflam TT 01 is a water-based low-VOC flame retardant top coat for wood-based panel application for interior use (INT1).

Product description

Norflam TT 01 is a flame retardant top coat for wood application with excellent fire protection properties. Suitable for all wood based products treated with Norflam TP 01 primer.

Norflam TT 01 is available in clear and a limited range of translucent colors.

Norflam TT 01 is intended primarily for industrial use only.

Field of application

Norflam TP 01 + Norflam TT 01 product combination can be used for:

A.) Visible interior (INT1) structures. Industrial application conditions only.

B.) Non-visible interior (INT1) structures. On-Site and Off-Site application methods can be used.

Technical information

Attributes

Norflam TT 01 enables the highest possible flame retardancy for wood (Euroclass B-s1, d0) when used with **Norflam TP 01** primer.

Improves fire protection of challenging wooden structures.

Theoretical net wet spread amount of TT to reach the EuroClass B-s1, d0 is ≥ 150 g/m².

Net coverage with 1 liter is 6,0 m² and net amount of application in liters is 0,17 l/m².

Technical data

Density:	1,11 g/cm ³
Solids:	25 w-%
Volatile organic compound (VOC):	M1, Eurofins GOLD®
Colors:	Clear and limited range of translucent colors
Drying times:	<i>A.) Industrial treatment</i> 12 to 15 min (+55°C/50% RH) between the layers and after the last layer. <i>B.) On-Site / Off-Site treatment</i> 60 to 120 min (+18°C/50% RH) between the layers and 48 hours after the last layer.
Fire performance class:	EuroClass B-s1, d0. Norflam TP 01 200 g/m ² used as a product combination with Norflam TT 01 150 g/m² .

Instructions of use

Application methods

A.) Industrial treatment, visible structures

Norflam TT 01 is suited for airmix-spray, airless-spray and brush line, and needs a sufficient oven system (IR, heated circulating air or equivalent) for drying.

B.) On-Site / Off-Site treatment, non-visible structures

Norflam TT 01 is suited for spraying with high-pressure sprayers, as well as treatment with a paint brush, air drying method possible.

General conditions of use

Norflam TP treated material must be clean and free of dust, dirt and loose particles.

Mix the product well before use as well as during the use. Do not dilute, the product is ready for use. Once opened, ensure that the containers are re-closed firmly.

Informed drying times are guidelines only, actual drying time depends on the treated material, layer thickness, ventilation etc.

Norflam TT 01 is a transparent / translucent product and final result depends on the wood species, wood material and chosen color. It is advised to test the treatment effect before application on large surfaces.

Ensure the following recommended conditions during the application and drying:

Product temperature	+18...+30° C
Air temperature	+18...+35° C
Relative humidity of the air	20..60 %

Always familiarize Yourself with the latest version of the treatment instructions manual for Norflam TP 01 and Norflam TT 01 product combination.

Application

A.) Industrial treatment, visible structures

The surface must be covered from all four (4) sides, **2 times** (2 x 75 g/m²) to achieve a total wet spread amount of 150 g/m², even color and protective film on top of the primer, with intervals as follows:

Norflam TT treatment layers	Temperature	Time	Max. temp	RH
Norflam TT, between the layers	+55 °C	12 to 15 min	+58 °C	50 %
Norflam TT, after final layer	+55 °C	15 min	+58 °C	50 %
Drying and cooling off period	+20 °C	Min. 24 hours	-	50 %

Pigmented Norflam TT 01 needs frequent mixing due to low viscosity in order to avoid pigments precipitating to the bottom of the container and to ensure even color on the surface.

*When an especially smooth finished final surface is needed, the needed wet spread amount of Norflam TP 01 is 220 g/m² to allow a slight sanding to be done to the dried Norflam TP 01 surface **before 150 g/m² Norflam TT 01 application.***

B.) On-Site / Off-Site treatment, non-visible structures

The surface must be covered from all four (4) sides **2 times (2 x 75 g/m²)** to achieve a total consumption of 150 g/m², even color and protective film on top for the primer, with 1 to 2 hour intervals (+18°C/50% RH), depending on the type of wood species, wood material, ventilation, etc.

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

After all the treatments with Norflam TT 01 are done, the surface is left to dry and settle for at least 48 hours (+18°C/50% RH).

Cleaning of equipment

Use warm water to clean the equipment. Mild pH-neutral soap can be used with warm water for more effective cleaning.

To wash the nozzle spray thinner might be needed, as dried binder does not dissolve in the water anymore.

Storage

Store at temperatures from +5 to +30 °C and out of direct sunlight.

Max storage time for Norflam TT 01 is 3 months from the date of manufacture on the packaging label.

Waste handling and environment

Do not discharge Norflam TT 01 to the sewer or ground. Collect all product waste and deliver to applicable hazardous waste handling. Product waste always needs to be disposed of based on local authorities' approval. Empty, dry product containers can be placed in mixed waste.

Norflam TT 01 treated wood products can be discarded as normal wood waste.

Durability, RtF, installation, maintenance and safety

Durability and reaction to fire of the treated surface

Final surface will reach full scratch resistance and fire protection properties in 1 to 2 months as the drying, settling and curing has been completed.

Installation of Norflam TP 01 and Norflam TT 01 treated materials

If industrially treated wood products are modified at the building site, the cut / sawn surfaces must be treated with Norflam TP 01 and Norflam TT 01. Use only stainless steel fixings.

Norflam TT 01 treated surfaces should be cleaned during the final clean-up of the work site to remove any worksite dirt and excess flame retardant residues. Norflam TT 01 surface has to be totally dry at this point.

Maintenance

Interior surfaces treated with Norflam TT 01 do not require separate maintenance or servicing procedures as they are not exposed to weathering.

If the surface is mechanically damaged and the damage is deeper than 3 mm, the damaged area must be repaired as soon as possible with a treatment combination used originally.

Do not treat the wood surfaces with any other coating or primer products, as such treatments might compromise the reaction to fire performance properties and cancel the compliance of the required fire class.

Please, refer to the latest Norflam TT 01 maintenance guide for more information about the installation, final clean-up and maintenance altogether.

Safety

Observe the Norflam TT 01 Safety Data Sheet requirements.

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

Technical support is available at support@nordtreat.com.

The suitability of the treatable material shall be inspected by the manufacturer with respect to his/her requirements regarding quality, color, and the like, e.g. by a sample staining and/or sample varnishing.

The instructions and values in this technical data sheet are based on information obtained from laboratory tests and trials, as well as information obtained from actual applications. Nordtreat is responsible for ensuring that the quality of the product complies with Nordtreat's quality system. Furthermore, the information given 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.

Nordtreat is not liable for damages resulting from incorrect or improper use of the fire protection product. Nordtreat is also not responsible for fire protection treatment, as the conditions and methods of fire protection treatment vary. The prevailing conditions and methods related to fire protection must always be documented in accordance with the instructions of Nordtreat and the authorities.

Norflam is for industrial and professional use only. Nordtreat requires that the actual specialist using the fire protection product has received training for fire protection treatment from Nordtreat and that he is familiar with the documentation of the fire protection product: the treatment instructions, the technical data sheet and the safety data sheet.