

**Icoma Oy
Kausala**

Teknos FR fire-retardant paint

Painted solid wood panels manufactured and fitted as follows:

Option 1:

Product:

- Massive wood spruce panel with a finely sawn surface, nominal thickness 19 - 57 mm
- Primer: Teknosafe 2407, application 3-sides (front surface and sides) at least 315 g/m² wet (unthinned). On planed back surface application at least 250 g/m² wet (unthinned). If the back surface is a finely sawn surface, then application at least 315 g/m² wet (unthinned).
- Top coat: Teknos Nordica EKO 3330-03 water-thinned paint. Application no more than 165 g/m² wet (unthinned) on front surface and sides. If the back surface is top-coated, then on planed sawn back surface application no more than 60 g/m² wet (unthinned), on a finely sawn back surface application no more than 165 g/m² wet (unthinned)

- Wood protection agent Teknol Aqua 1410-01 (application no more than 120 g/m²) acceptable under Teknosafe 2407.

Base of the fitted panel:

- Board conformant with Euro-classes A1 or A2-s1,d0 at least 12 mm thick and with a density of at least 525 kg/m³.

Fastening:

- Panel fastened mechanically onto the base using supporting rails. Air gap caused by supporting rails maximum 44 mm.

Option 2:

- Massive wood spruce panel with a planed surface, nominal thickness 19 mm
- Primer: Teknosafe 2407, application 3-sides (front surface and sides) at least 315 g/m² wet (unthinned). On planed back surface application at least 250 g/m² wet (unthinned).
- Top coat: Teknos Nordica EKO 3330-03 water-thinned paint. Application no more than 165 g/m² wet (unthinned) on front surface and sides. If the back surface is top-coated, then on planed sawn back surface application no more than 60 g/m² wet (unthinned) (the amount of Teknosafe 250-315 g/m²) or no more than 165 g/m² wet (unthinned) (the amount of Teknosafe at least 315 g/m²)

Base of the fitted panel:

- Board conformant with Euro-classes A1 or A2-s1,d0 at least 12 mm thick and with a density of at least 525 kg/m³.

Fastening:

- Panel fastened mechanically onto the base using supporting rails. Air gap caused by supporting rails maximum 44 mm.

Option 3:

- Massive wood spruce panel with a planed surface, nominal thickness 18 mm
- Primer: Teknosafe 2407, application at least 250 g/m² wet (unthinned) on all sides.
- Top coat: Teknos Oy waterborne acrylic industrial system, application no more than 60 g/m² wet (unthinned)

Base of the fitted panel:

- Plaster board (with paper surface) or similar board conformant with Euro-classes A1 or A2 at least 12 mm thick and with a density of at least 525 kg/m³.

Fastening:

- Panel fastened mechanically onto the base using supporting rails. Air gap caused by supporting rails maximum 44 mm.

Fire safety class of options 1-3: B-s1, d0

(Classification reports: PX18030-2; BMT/RFP/F14055/05; BMT/RFP/F14056/03)

Teknos FR fire-retardant paint

Painted solid wood panels manufactured and fitted as follows:

Tuote:

- Solid or glued spruce panel, thickness 19 - 57 mm.
- Covering thickness at least 9,5mm
- Wood density according to natural variation
- Primer Teknosafe 2407 (all colors), application 4-sides at least 350 g/m² wet (unthinned).
- Top coat:
 - Teknos Nordica EKO 3330-03 -water based paint. Color white. Application at maximum 150 g/m² wet (unthinned) on front side and on sides. If the back side will be painted, Application at maximum 150 g/m² wet (unthinned)
 - or
 - Teknosafe Flame Protect 2408. All colors Application at maximum 150 g/m² wet (unthinned) on front side and on sides. If the back side will be painted, Application at maximum 150 g/m² wet (unthinned)
 - or
 - Teknoclad 3370/3371. All colors. Application at maximum 100 g/m² wet (unthinned) on front side and on sides. If the back side will be painted, Application at maximum 100 g/m² wet (unthinned)
- Wood protection agent Teknol 1411-01 or 1415-01 possible under Teknosafe 2407.

Base of the fitted panel:

- Board conformant with Euro-classes A1 or A2-s1,d0 and with a density of at least 525 kg/m³.

Fastening:

- Fastening mechanically onto the base with or without supporting rails.
- Wood battens, which fire safety class is D-s2,d0 or better
- Valid for vertical and horizontal arrangements

Product's fire safety class:B-s2,d0

(ClassificationK115/A/2022)

Teknos FR fire-retardant paint

Painted solid wood panels manufactured and fitted as follows:

Product:

- Solid glued spruce panel with finely sawn surface,
glued from lamellas and glueline downright from the surface (gluelam board)
 - Nominal thickness 25 - 57 mm
 - Maximum total width of the panel made by glueing 322 mm
 - The minimum density of ready-made panel 437 kg/m^3 and the minimum weight for m^2 11.3 kg/m^2
- Primer: Teknosafe 2407, application 3-sides (front surface and sides) at least 315 g/m^2 wet (unthinned). On planed back surface application at least 225 g/m^2 wet (unthinned).
- Top coat: Teknos Nordica EKO 3330-03 water-thinned paint. Application no more than 165 g/m^2 wet (unthinned) on front surface and sides.

- Wood protection agent Teknol Aqua 1410-01 (application no more than 120 g/m^2) acceptable under Teknosafe 2407.

Base of the fitted panel:

- Board conformant with Euro-classes A1 or A2-s1,d0 at least 12 mm thick and with a density of at least 525 kg/m^3 .

Fastening:

- Panel fastened mechanically onto the base using supporting rails. Air gap caused by supporting rails maximum 44 mm.

Product's fire safety class: B-s1, d0

(Classification report BMT/RFP/F15069/03)

Teknos FR fire-retardant paint

Painted solid wood panels manufactured and fitted as follows:

Product:

- Solid or glued spruce panel,
glued from lamellas and glueline downright from the surface (gluelam board)
 - Nominal thickness 19 - 57 mm
 - The minimum density of spruce 400kg/m³
- Wood protection agent Teknol Aqua 1410-01 (application 100- 120 g/m²) or Superwood (application about 120g/m²) acceptable under Teknosafe-coating.

Options for coating:

- Teknosafe 2407-00 (all tones), application at least 350g/m² on 4 sides
- Teknosafe 2407-00 (white), application at least 350g/m² on 4 sides and top-coating Nordica Eco 330-03 (white), application at maximum 150g/m² on 4 sides
- Teknosafe 2407-00 (all tones), application at least 350g/m² on 4 sides and top-coating Teknosafe Flame Protect 2408 (all tones), application at least 150g/m² on 4 sides
- Teknosafe 2407-00 (aall tones), application at least 350g/m² on 4 sides and top-coating Teknoclad 3370/3371 (all tones), application at maximum 100g/m² on 4 sides.

All coating amounts above are for unthinned coatings.

Base of the fitted panel:

- Board conformant with Euro-classes A1 or A2-s1,d0 with a density of at least 525 kg/m³.

Fastening:

- Panel fastened mechanically onto the base using supporting rails or without rails. Air gap caused by supporting wooden rails (reaction to fire at least D-s2,d0)

Product's fire safety class: B-s1, d0

(Classification report K107/2022)

Teknos Flame Guard-fire retardant lacquer

Lacquered solid wood panels manufactured and fitted as follows:

Option 1:

Product:

- Wooden raw-material
 - The fire safety class of wood at least D-s,d0
 - Minimum density of panelling 338 kg/m^3
 - Minimum thickness of panelling 8,0 mm.
- Lacquering Teknosafe Flame Guard 2467-10, application $180\text{-}220 \text{ g/m}^2$ wet (unthinned) on 3 sides.
- Lacquering Teknosafe Flame Protect 2468-00, all tones.
 - application $72\text{-}88 \text{ g/m}^2$ (unthinned) on 3 sides
 - or
 - totally without coating (2468-00)

Base of the fitted panel:

- Wood based board (the fire safety class at least D-s,d0) or other base board (the fire safety class at least A1- or A2-s1-d0)
- The density of material at least 510 kg/m^3
- The thickness of material at least 10,0 mm

Fastening:

- Panel or cladding fastened to the base mechanically without supporting rails

Option 2:

Product:

- Wooden raw-material
 - The fire safety class of wood at least D-s,d0
 - Minimum density of panelling 433 kg/m^3
 - Minimum thickness of panelling 18,0 mm.
 - Lacquering Teknosafe Flame Guard 2467-10, application $180\text{-}220 \text{ g/m}^2$ wet unthinned) on 3 sides (or at least on 3 sides, if fastened with supporting rails)
- Lacquering Teknosafe Flame Protect 2468-00, all tones.
 - application $72\text{-}88 \text{ g/m}^2$ wet (unthinned) on 3 or 4 sides
 - or
 - totally without coating (2468-00)

Base of the fitted panel:

- Wood based board (the fire safety class at least D-s,d0) or other base board (the fire safety class at least A1- or A2-s1-d0)
 - The density of material at least 338 kg/m^3
 - The thickness of material at least 8,0 mm
 - Fastened to the base with supporting (maximum thickness 40mm) or without supporting rails
- or

- Fire safety class A1 board
 - Minimum density of board 38 kg/m³
 - Minimum thickness of board 20 mm
 - Fastening without supporting rails

Fastening:

- Panel or cladding fastened to the base mechanically

Product`s fire safety class: B-s1,d0

(Classification reports N°-20/RC-66 ja N°-21/RC-05)

Teknos Flame Guard-fire retardant lacquer

Lacquered solid wood panels manufactured and fitted as follows:

Option 1:

Product:

- Wooden raw-material
 - The fire safety class of wood at least D-s2,d0
 - Minimum density of panelling 338 kg/m³
 - Minimum thickness of panelling 8,0 mm.
- Lacquering Teknosafe Flame Guard 2467-10, application 225-275 g/m² wet (unthinned) on 3 sides.
- Lacquering Tecnoclear Aqua 1331-xx or Hydropur 2K 7590, all tones.
 - application at maximum 88g/m² (unthinned) on 3 sides

Base of the fitted panel:

- Wood based board (the fire safety class at least D-s2,d0)
 - The density of material at least 510 kg/m³
 - The thickness of material at least 10,0 mm

Fastening:

- Panel or cladding fastened to the base mechanically without supporting rails

Option 2:

Product:

- Wooden raw-material
 - The fire safety class of wood at least D-s2,d0
 - Minimum density of panelling 433 kg/m³
 - Minimum thickness of panelling 18,0 mm.
- Lacquering Teknosafe Flame Guard 2467-10, application 225-275 g/m² wet (unthinned) on 3 sides (or on 4 sides, if fastened with supporting rails)
- Lacquering Tecnoclear Aqua 1331-xx or Hydropur 2K 7590, all tones..
 - application at maximum 88g/m² (unthinned) on 3 or 4 sides

Base of the fitted panel:

- The fire safety class at least D-s2,d0
 - The density of material at least 338 kg/m³
 - The thickness of material at least 8,0 mm
 - Fastened to the base with supporting (maximum thickness 40mm) or without supporting rails

Fastening:

- Panel or cladding fastened to the base mechanically

Product`s fire safety class: B-s1,d0

(Classification report N°-21/RC-52)

Teknos Flame Guard-fire retardant paint

Painted solid wood panels manufactured and fitted as follows:

Product:

- Wooden raw-material
 - The fire safety class of wood at least D-s2,d0
 - Minimum density of panelling 433 kg/m^3
 - minimum thickness 18mm as solid panel
- or
- Minimum density of panelling 338 kg/m^3
 - Minimum thickness 8mm and is directly mounted to a second substrate of wood board, which minimum density is 510 kg/m^3 , which minimum thickness is 10mm and which fire safety class is at least D-s2,d0.
- or
- Minimum density of panelling 338 kg/m^3
 - Minimum thickness 8mm and is directly mounted to a gypsum plaster (or to other substrate with fire safety class A1 or A2-s1,d0), which density is at least 510 kg/m^3 and which thickness is at least 10mm.
- Primer Teknosafe Flame Guard 2457, application at least 250 g/m^2 wet (unthinned) on 3 sides.
- Top coat Teknosafe Flame Protect 2458-00
 - application at maximum 100 g/m^2 wet (unthinned) on 3 sides.
- All colors

Base of the fitted panel or of the panel and substrate combination:

- Mineral wool with fire safety class A1, which thickness is at least 20mm and which density is at least 38 kg/m^3
- or
- Gypsum plasterboard or any end use substrate with fire safety class A1 or A2-s1,d0, which density is at least 510 kg/m^3 and which thickness is at least 10mm.

Fastening:

- Panelling or the panel and substrate combination mounted with or without air gap
- Supporting rails wood or non-combustible
- Horizontal and vertical orientation

Product's fire safety class: B-s1, d0

(Classification report O100352-147289-15)

Teknos Flame Guard-fire retardant paint

Painted solid wood panels manufactured and fitted as follows:

Product:

- Wooden raw-material
 - The fire safety class of wood at least D-s2,d0
 - Minimum density of panelling 433 kg/m^3
 - minimum thickness 18mm as solid panelor
 - Minimum density of panelling 338 kg/m^3
 - Minimum thickness 8mm and is directly mounted to a second substrate of wood board, which minimum density is 510 kg/m^3 , which minimum thickness is 10mm and which fire safety class is at least D-s2,d0.or
 - Minimum density of panelling 338 kg/m^3
 - Minimum thickness 8mm and is directly mounted to a gypsum plaster (or to other substrate with fire safety class A1 or A2-s1,d0), which density is at least 510 kg/m^3 and which thickness is at least 10mm.
- Primer Teknosafe Flame Guard 2467-10, application at least 250 g/m^2 wet (unthinned) on 3 sides.
- Top coat
 - Teknosafe Flame Protect 2468-00
 - application at maximum 100 g/m^2 wet (unthinned) on 3 sides.or
 - Uvilux 651
 - application at maximum 12 g/m^2 wet (unthinned) on 3 sides.or
 - Teknocoat Aqua 1864-62
 - application at maximum 45 g/m^2 wet (unthinned) on 3 sides.
- All colors

Base of the fitted panel or of the panel and substrate combination:

- Mineral wool with fire safety class A1, which thickness is at least 20mm and which density is at least 38 kg/m^3
- or
- Gypsum plasterboard or any end use substrate with fire safety class A1 or A2-s1,d0, which density is at least 510 kg/m^3 and which thickness is at least 10mm.

Fastening:

- Panelling or the panel and substrate combination mounted with or without air gap
- Supporting rails wood or non-combustible
- Horizontal and vertical orientation

Product's fire safety class: B-s1, d0

(Classification report O100352-147289-10)

Tikkurila fire-retardant paint

Painted solid wood panels manufactured and fitted as follows:

Product:

- Massive wood spruce panels with tongue-groove joint
 - Thickness of panels at least 20 mm
 - Minimum thickness of panelling at least 12 mm
 - Wood density according to natural variation
- Primer: Tikkurila Fontefire WF -paint: application 3-sides (front surface and sides) at least 350 g/m² wet (unthinned). On planed back surface application at least 175 g/m² wet (unthinned).
- Top coat Tikkurila Ultra Pro -paint. Application no more than 100 g/m² wet (unthinned) on front surface and sides.
- Color of the top coat paint white or tinted.

Base of the fitted panel:

- The fire safety class of base board Euroclasses A1-s1-d0 or A2-s1-d0

Fastening:

- Panelling fastened mechanically onto the base using supporting rails from spruce (rails can be with no fire-retardant painting) or fastened directly to the base without supporting rails.
- Panel or cladding in vertical or horizontal orientation
- With vertical or horizontal joints

Product's fire safety class: B-s1, d0

(Classification report: K22/A/2016)

Tikkurila fire-retardant paint

Painted solid wood panels manufactured and fitted as follows:

Product:

- Solid wood panels with tongue-groove joint
 - Thickness of panels 19 - 21 mm and density of panel at least 460 kg/m³
 - Minimum thickness of panelling at least 13 mm
 - Wood density according to natural variation
- Primer: Tikkurila Fontefire WF -paint: application 3-sides (front surface and sides) at least 350 g/m² wet (unthinned). On planed back surface application at least 175 g/m² wet (unthinned).
- Top coat Tikkurila Ultra Pro WF -paint: Application no more than 100 g/m² wet (unthinned) on front surface and sides.
Extra topcoat Tikkurila Ultra Matt WF -paint: Application no more than 100 g/m² wet (unthinned) on front surface and sides.
- Color of the top coat paint white or tinted.

Base of the fitted panel:

- The fire safety class of base board Euroclasses A1-s1-d0 or A2-s1-d0

Fastening:

- Panelling fastened mechanically onto the base using supporting rails (maximum thickness 46 mm) (rails can be with no fire-retardant painting) or fastened directly to the base without supporting rails.
- Panel or cladding in vertical or horizontal orientation
- With vertical or horizontal joints

Product's fire safety class: B-s2, d0

(Classification report: K08/2018)

Tikkurila fire-retardant lacquer

Lacquered solid wood panels manufactured and fitted as follows:

Product:

- Solid wood spruce panels with tongue-groove joint
 - Thickness of panels 14 mm
 - Minimum thickness of panelling at least 8.5 mm
 - Wood density according to natural variation
- Primer: Tikkurila Fontefire WF Clear -lacquer: application 3-sides (front surface and sides) at least 200 g/m² wet (unthinned).
- Top coat:
 - Tikkurila Acvilac WF 10 –lacquer: Application no more than 70 g/m² wet (unthinned) on front surface and sides.
 - or
 - Tikkurila Acvi Top DS 25 –lacquer: Application no more than 100 g/m² wet (unthinned) on front surface and sides.

Base of the fitted panel:

- The fire safety class of base board Euroclasses A1-s1-d0 or A2-s1-d0

Fastening:

- Panelling fastened mechanically onto directly to the base without supporting rails
- Panel or cladding in vertical or horizontal orientation
- With vertical or horizontal joints

Product's fire safety class: B-s1, d0

(Classification report: K40/2018 and K40/A/2018)

Tikkurila fire-retardant lacquer

Lacquered solid wood panels manufactured and fitted as follows:

Product:

- Solid wood panels with tongue-groove joint
 - Thickness of panels equal or more than 14 mm
 - Minimum thickness of panelling at least 8 mm
 - Wood density equal or more than 460 kg/m³
- Lacquering: Tikkurila Fontefire -lacquer: application 3-sides (front surface and sides) at least 200 g/m² wet (unthinned).

Base of the fitted panel:

- The fire safety class of base board Euroclasses A1-s1-d0 or A2-s1-d0

Fastening:

- Panelling fastened mechanically directly to the base without supporting rails
- Panel or cladding in vertical or horizontal orientation
- With vertical or horizontal joints

Product's fire safety class: B-s1, d0

(Classification report: K40/2017)

Tikkurila fire-retardant paint

Painted solid wood panels manufactured and fitted as follows:

Product:

- Solid spruce wood panels with tongue-groove joint
- Thickness of panels 22 - 24 mm and density of panel at least 460 kg/m³
 - Minimum thickness of panelling at least 12 mm
 - Wood density according to natural variation
 - Fine precut front and planed back
- Primer: Tikkurila Fontefire WF -paint: application 3-sides (front surface and sides) at least 350 g/m² wet (unthinned). On planed back surface application at least 170 g/m² wet (unthinned).
- Mid coat Tikkurila Ultra Pro WF-M -paint: Application no more than 100 g/m² wet (unthinned) on front surface and sides.
- Top coat Tikkurila Ultra Pro WF10 -paint: Application no more than 100 g/m² wet (unthinned) on front surface and sides.

- Color of the top and mid coat paint white or tinted.

Base of the fitted panel:

- The fire safety class of base board Euroclasses A1-s1-d0 or A2-s1-d0

Fastening:

- Panelling fastened with metal fixings onto the base using supporting studs or fastened directly to the base without supporting rails.
- Panel or cladding in vertical or horizontal orientation
- With vertical or horizontal joints

Product's fire safety class: B-s1, d0

(Classification report: K03/2019)

**Nordtreat fire-retardant paint or surface treatment,
fire-retardant product NT Neutra,**

Solid wood panels surface treated industrially and fitted as follows:

- Wood density according to natural variation
- No other coating on top of the fire retardant surface
- Fire-retardant transparent liquid

Base of the fitted panel:

- Base board mandatory. The fire safety class of base board A1-s1-d0 or A2-s1-d0

Product:

- Solid wood spruce panel, thickness at least 18 mm
- Application at least 350 g/m² (unthinned) wet in total on all sides

Fastening:

- Panel or cladding fastened to the base with or without supporting rails
- Panel or cladding in vertical or horizontal orientation
- With vertical or horizontal joints
- Fixed with metal fixings

Product's fire safety class: B-s1, d0

(Classification report: K05/2016)

**Nordtreat fire-retardant paint or surface treatment,
fire-retardant product NT Deco**

Solid wood panels surface treated industrially and fitted as follows:

- Wood density according to natural variation
- No other coating on top of the fire retardant surface
- The fire-retardant can be tinted by the manufacturer (all tones), liquid

Base of the fitted panel:

- Base board mandatory. The fire safety class of base board A1-s1-d0 or A2-s1-d0

Product:

- Solid wood spruce panel, thickness at least 18 mm
- Application at least 350 g/m² wet in total on all sides

Fastening:

- Panel or cladding fastened to the base with or without supporting rails
- Panel or cladding in vertical or horizontal orientation
- With vertical or horizontal joints
- Studs (supporting) with panel thickness 20 mm or less treated with fire retardant
- Fixed with metal fixings

Product's fire safety class: B-s1, d0

(Classification reports: K21/2016, K21-1/2016 and K01/2017)

**Nordtreat fire-retardant paint or surface treatment,
fire-retardant product NT Deco**

Solid wood panels surface treated industrially and fitted as follows:

- Wood density according to natural variation
- No other coating on top of the fire retardant surface
- The fire-retardant can be tinted by the manufacturer (all tones), liquid

Base of the fitted panel:

- Base board mandatory. The fire safety class of base board A1-s1-d0 or A2-s1-d0

Product:

- Solid wood larch panel, thickness at least 20 mm
- Solid wood cedar panel, thickness 20 – 25 mm
- Application at least 350 g/m² wet in total on all sides

Fastening:

- Larch panel or cladding fastened to the base with or without supporting rails
- Cedar panel or cladding fastened to the base with 40 mm (maximum) supporting rails or without supporting.
- Panel or cladding in vertical or horizontal orientation
- With vertical or horizontal joints
- Supporting rails with larch panel treated with fire retardant
- Fixed with metal fixings

Product's fire safety class: B-s1, d0

(Classification reports: K22/2017 and K36/2018)

**Nordtreat fire-retardant paint or surface treatment,
fire-retardant product NT Deco**

Solid wood panels surface treated industrially and fitted as follows:

- Wood density according to natural variation
- No other coating on top of the fire-retardant surface
- The fire-retardant transparent (all tones), liquid

Base of the fitted panel:

- Substrate must be used with fire classification A1-s1-d0 or A2-s1-d0, density at least 525kg/m³.

Product:

- Wood specie Douglas fir, charred surface facing
- Solid wood charred Douglas fir panel, covering thickness at least 12,5 mm
- Application of the fire retardant equal or more than 350 g/m².
- Additional coating is not allowed

Fastening:

- Panel or cladding fastened to the base with 45 mm (maximum) supporting rails or without supporting.
- Panel or cladding in vertical or horizontal orientation
- With vertical or horizontal joints
- Supporting rails treated with fire retardant

Product's fire safety class: B-s1, d0

(Classification report: K25/2021)

**Nordtreat fire-retardant paint or surface treatment,
fire-retardant product NT Deco**

Solid wood panels surface treated industrially and fitted as follows:

- No other coating on top of the fire-retardant surface
- The fire-retardant can be tinted by the manufacturer (all tones), liquid

Base of the fitted panel:

- Substrate must be used with fire classification D-s2,d0 (or better), thickness equal or more than 8 mm and density equal or more than 338 kg/m³. With or without protective rain screen rated E or better

Product:

- Wood specie spruce
- Minimum covering thickness 11mm and minimum panel thickness 23 mm
- Density of the wood 370 kg/m³ (+/-10%)
- Application of the fire retardant 350 g/m² (+/- 10%) on the front side and on the edges. On the back side the application equal or more than 200 g/m².
- Additional coating is not allowed

Fastening:

- Panel or cladding fastened to the base with supporting rails or without supporting.
- Panel or cladding mounted with mechanical fixation
- Panel or cladding in vertical or horizontal orientation
- With vertical or horizontal joints

Product's fire safety class: B-s1, d0

(Classification report: N° -23/RC-20)