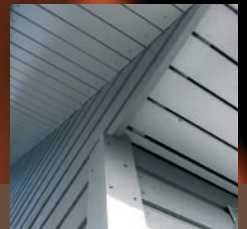


Teknos FR Facade & Teknos FR Panel

Fire retardant paint systems





New opportunities with Teknos' fire-retardant paint systems

Teknos FR Façade and Teknos FR Panel

Teknos FR Façade for exterior and interior opaque woodwork; and Teknos FR Panel for colourless and opaque non-weathered woodwork are fire-retardant paint systems.

These product systems allow a unique opportunity for wood to be used where this has not previously been possible for fire safety reasons. Teknos FR Façade as well as Teknos FR Panel provides architectural freedom and allows wood to be used in built-up areas and on tall buildings.

Teknos FR Façade – the industrial paint system for exterior and interior use consists of: TEKNOSAFE 2407 Fire Retardant Paint, an intermediate treatment of NORDICA EKO 3330 and an on site application of one layer of NORDICA EKO HOUSE PAINT.

Teknos FR Façade holds the below B-s1,d0 classification according to EN 13501-1 for the following timber façade systems:

- 19 mm planed face spruce with 350 g/m² TEKNOSAFE 2407 and up to 150 g/m² NORDICA EKO 3330
- 19 to 57 mm extended application classification on sawn face spruce with 350 g/m² TEKNOSAFE 2407 and up to 150 g/m² NORDICA EKO 3330
- 19 mm sawn face spruce with TEKNOL AQUA 1410 + 350 g/m² TEKNOSAFE 2407 and up to 150 g/m² NORDICA EKO 3330
- Classified EXT for outside use according to NT Fire 054 (CEN / TS 15912 / EN 16755)
- Performance requirement according to SP Fire 105

Fire-resistant classification of Teknos FR Façade:

- B-s1,d0 for surfaces in accordance with EN 13501-1
- K₁10 and K₂10 for claddings in accordance with EN13501-2

Teknos FR Panel – the industrial paint system for non-weathered surfaces consists of: TEKNOSAFE 2467 Fire Retardant Paint, or a system approach (service life DRF INT1 and INT2) consisting of: TEKNOSAFE 2467 Fire Retardant paint and one layer of TEKNOCLEAR AQUA 1331-01 (ID 2560953)

Teknos FR Panel currently holds B-s1,d0 classification for the following types of timber cladding and panel systems:

- 200 g/m² TEKNOSAFE 2467
- 200 g/m² TEKNOSAFE 2467 with up to 100 g/m² TEKNOCLEAR AQUA 1331-01 (ID 2560953)

Please note, the classification reports cover TEKNOSAFE 2467 and TEKNOSAFE 2467 with TEKNOCLEAR AQUA 1331-01 (ID 2560953), applied on any wood based substrate of Class D-s2,d0, with a density equal to or greater than 338 kg/m³ and a thickness of at least 8.0 mm.

Fire-resistant classification of Teknos FR Panel:

- B-s1,d0 for surfaces in accordance with EN 13501-1



The protective charcoal layer.

EUROCLASSES AND THE TARGET SAFETY LEVEL

EURO-CLASS	TARGET SAFETY LEVEL
A1	No contribution to fire even under fully developed fire conditions
A2	Only negligible contribution to fire even under fully developed fire conditions; no spread of fire from the area of the primary fire in the fire development phase
B	In the fire development phase, no spread of fire from the area of the primary fire and very limited contribution to the fire
C	Under the conditions of a fire in the development phase, very limited spread of fire and limited energy release and ignitability
D	Under the conditions of a fire in the development phase, limited spread of fire and acceptable energy release and ignitability
E	In the case of a very small fire (match flame) acceptable reaction to fire (ignitability, flame spread)
F	No requirements concerning the reaction to fire

ADDITIONAL ASSESSMENT CLASSES FOR SMOKE DEVELOPMENT AND BURNING DROPLETS / PARTICLES

Smoke development	s3 (there are no restrictions regarding smoke development) s2 (the fully released amount of smoke, and the rise in smoke development are restricted) s1 (stricter criteria than for s2 must be fulfilled)
Burning droplets / particles	d2 (there are no restrictions) d1 (burning droplets not longer than the defined time) d0 (dripping fire debris is not permitted)

Surface quality and appearance

To achieve the quality, also in terms of fire-resistance and appearance of the surface treated with TEKNOSAFE, technical guidelines stated in the Technical Datasheets must be followed.

One quality parameter using TEKNOSAFE compared to the traditional fire impregnated timber is that TEKNOSAFE 2407 does not release salts to the surface of the coated timber in the presence of rain and/or high ambient humidity.

What happens during a fire

In the event of a fire, the paint swells to form a durable, protective foam layer, creating an insulating effect which prevents flammable gasses from being released from the wood.

If the fire lasts, the upper part of the wood substrate turns to charcoal, but without igniting, and as a result of these properties, wood treated with TEKNOSAFE 2407 is also able to protect underlying materials from fire, and is approved for classes K₁10 and K₂10.

Manufacturer's production process

For the manufacturer of fire-retardant timber products where TEKNOSAFE is applied as part of an industrial process, a required amount (see Classification specification) of TEKNOSAFE is applied under carefully controlled conditions. After application, the fire retardant paint is dried – either conventional or forced by utilizing a drying tunnel.

The intermediate coat or topcoat is then applied – and again in a controllable system where the applied amount (see Classification specification) can be measured. After final drying the fire protected timber product is checked and labelled prior to dispatch and delivery to the construction site.

Installation at the construction site

Follow the manufacturer's guidelines for the various timber and board products. Galvanized nails should be used.

For further and more detailed information we recommend to check "Technical guideline for Europe" – "Fire safety in Timber Buildings".

Certification / quality assurance

For timber products, structural timbers and board materials, the EU has introduced Product Standards, in accordance with which all timber manufacturers have to document their own products before they can be sold within the European market.

Fire-retardant wood based products must, at the manufacturers site be certified by a "Notified Body" who issues a "Certificate of Constancy of Performance" following a prior inspection of the manufacturer's production facilities and documentation setup. The Product Standard requires that the manufacturer have a quality control system in operation. All products treated with fire-retardant products from Teknos are adapted to the Construction Product Regulation no. 305/2011 and can consequently be CE-marked.



"Tree" in Bergen, Norway, the world's tallest wooden house – 52 meters high and 14 storeys. Teknos has supplied TEKNOS FR Façade and TEKNOS FR Panel.

Contact us

A phone-call to Teknos is a quick and efficient way of getting useful advice for anyone considering using Teknos FR Façade, Teknos FR Panel, or any other Teknos products within our extensive range. Our technical customer service is always on hand to provide you with support as part of the work in developing your optimal surface coating solution and application system.

For further information, visit our website at www.teknos.com

Teknos Group Companies

Teknos Oy

Helsinki factory, Head office
Takkatie 3
P.O.Box 107
FI-00371 Helsinki
FINLAND
Tel. +358 9 506 091
sales@teknos.fi

Teknos Oy

Rajamäki factory
Perämatkuntie 12
P.O.Box 14
FI-05201 Rajamäki
FINLAND
Tel. +358 9 506 091
sales@teknos.fi

Teknos A/S

Industrivej 19
DK-6580 Vandrup
DENMARK
Tel. +45 76 93 94 00
teknos@teknos.dk

Teknos AB

Head office in Tranemo
Limmarredsv. 2, P.O.Box 211
SE-514 24 Tranemo
SWEDEN
Tel. +46 325 619 500
info@teknos.se

Teknos AB

Vedevåg factory in Vedevåg
Industrigatan 7
SE-711 72 Vedevåg
SWEDEN
Tel. +46 581 645 900
info@teknos.se

Teknos Deutschland GmbH

Edelzeller Strasse 62
D-36043 Fulda
GERMANY
Tel. +49 661 1080
info@teknos.de

Teknos Norge AS

Industriveien 28
NO-3430 Spikkestad
NORWAY
Tel. +47 31 29 49 00
teknos@teknos.no

Teknos (UK) Limited

Unit E1, Heath Farm
Banbury Road, Swerford
Oxfordshire OX7 4BN
UK
Tel. +44 1608 683 494
sales@teknos.co.uk

Teknos Ireland Limited

Unit 1, Fortwilliam
Industrial Estate
Dargan Crescent
Belfast BT3 9JP
NORTHERN IRELAND, UK
Tel. +44 2890 960670
sales.ni@teknos.co.uk

Teknos Scotland Limited

Nettlehill Road
Houston Industrial Estate
Livingston EH54 5DL
UK
Tel. +44 1506 436222
sales.scotland@teknos.co.uk

Teknos OOO

Butyrskij Val, 68/70, bl.4, of.211
127055 Moscow
RUSSIA
Tel. /Fax +7(495) 967 19 61
teknos.russia@teknos.com

Branch of Teknos OOO

in St.Petersburg
Ul. Novye Zavody, d.56, k.3
198517 Peterhof, Maryino
RUSSIA

Teknos Sp. z o.o.

ul. Ziemowita 59
PL-03-885 Warsaw
POLAND
Tel. +48 22 678 70 04
biuro@teknos.pl

Teknos Oliva Sp. z o.o.

ul. Chwaszczynska 129-149
PL-81-571 Gdynia
POLAND
Tel. +48 58 629 91 62
biuro.gdynia@teknos.pl

Teknos d.o.o.

Cesta na Rupo 67
4000 Kranj
SLOVENIA
Tel. +386 4 236 58 78
Fax +386 4 236 58 79
info@teknos.si

Teknos LLC

50 Artema Str., Office 5B
04053 Kiev
UKRAINE
Tel. /Fax +38 044 359 0333
teknos.ukraine@teknos.com

Teknos OÜ

Laki 3a
EE-10621 Tallinn
ESTONIA
Tel. +372 656 3491
teknos@teknos.ee

SIA Teknos

Gredu street 4a
Riga
LV-1019
LATVIA
Tel. +371 6780 6430
teknos@teknos.lv

UAB Teknos

Savanoriu pr. 349
Kaunas
LT-51480
LITHUANIA
Tel. +370 6710 3108
teknos@teknos.lt

Teknos Coatings (Shanghai) Co., Ltd

Rm 405a-407a
Silver Centre
No. 1388 North Shan Xi Road
Putuo District
Shanghai
CHINA
Tel. +86 21 6149 8582
teknos.china@teknos.com

Teknos Coatings and Paints Private Limited

7 Udyog Bhavan, Sonawala Rd,
Goregaon East
Mumbai – 400063
Maharashtra
INDIA
Tel. +91 22 26861106

Joint Venture Company Manfield Teknos Chemical (Changzhou) Co. Ltd

Contacts via
Teknos Coatings Shanghai office

Teknos Oy

Representative Office
Kiseljova Street 55, rom 12
220002 Minsk
REPUBLIC OF BELARUS
Tel. /Fax +375 17 237 4336
teknos.belarus@teknos.com

Teknos Group Oy

Teknos Group's Parent Company
Takkatie 3
P.O.Box 107
FI-00371 Helsinki
FINLAND
Tel. +358 9 506 091
Fax +358 9 5060 9229
sales@teknos.fi

The Teknos Group

Teknos is one of Europe's leading suppliers of industrial coatings with a strong position in retail and architectural coatings.

Teknos has its own production in seven countries: Finland, Sweden, Denmark, Germany, Poland, Russia and China. In addition, Teknos has sales companies in 16 countries and exports to more than 20 countries via a well-established network of dealers.

Teknos employs around 1 200 staff. Established in 1948, Teknos and is one of Finland's largest family-owned businesses.

● Group companies

● Network of dealers

www.teknos.com

