SINTEF Technical Approval

TG 20069

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Valid until 01.12.2027

Provided listed on
www.sintefcertification.no

SINTEF confirms that

OLDROYD® Xs

has been found to be fit for use in Norway and to meet the provisions regarding product documentation given in the regulation relating to the marketing of products for construction works (DOK) and regulations on technical requirements for building works (TEK), with the properties, fields of application and conditions for use as stated in this document

1. Holder of the approval

Oldroyd AS
Isdammen 25
3962 Stathelle
Norway
www.OLDROYD.no

2. Product description

OLDROYD® Xs is a diffusion resistant membrane with a structured surface. The product is supplied as roll-product and is produced of polypropylene (PP) with a density of 910 kg/m^3. The product has a nominal thickness of 0,5 mm. The product is made with a pattern of intersecting channels to gain an overall thickness of 2 mm, see figure 1. The membrane has flat jointing flanges on each side.

Measures and tolerances are shown in table 1.

Product specifications for additional accessories to mount OLDROYD® Xs are given in Table 3.

Table 1
Measures and tolerances for OLDROYD® Xs, Type V

Property	Test-method EN	OLDROYD® Xs	Unit	Tolerance
Spec. weight	1849-2	0,5	kg/m^2	± 10 %
Total height	1849-2	2	mm	± 5 %
Std. roll width	1848-2	2,08	m	+ 1 % / - 0 %
Std. roll length	1848-2	20	m	+ 1 % / - 0 %

3. Fields of application

OLDROYD® Xs can be used in buildings in hazard classes 1-6 in fire classes 1-3 as moisture barrier on concrete floor or concrete slab under floating floor of plates, lamella- or laminated parquet, levelling mortar or floating floor screed. An example of floor setup is shown in in principle in figure 5. Moisture barrier can be used both for new buildings and for refurbishment.

Moisture barrier can be used in floor constructions with imposed traffic loads category A and B according to EN 1991-1-1:2002 up to 3,0 kN/m^2 evenly distributed load and 2,0 kN point load.

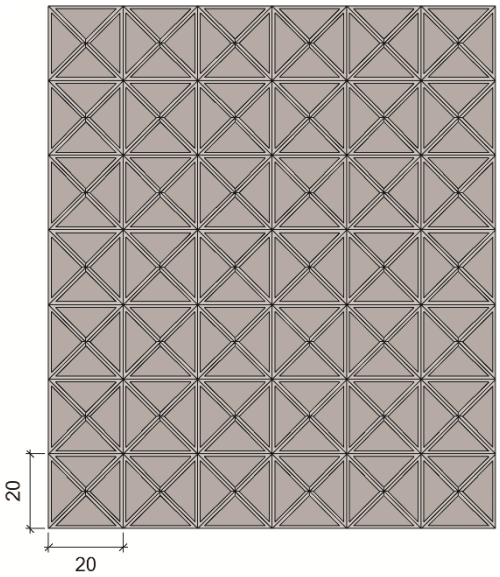

Fig. 1
OLDROYD® Xs with intersecting channels. Total thickness 2 mm.

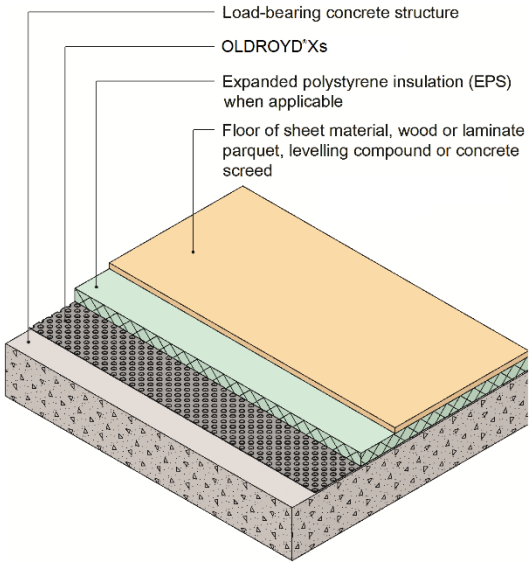

Fig. 2
Example for a floor construction with OLDROYD® Xs.

Table 2
Material properties for OLDROYD® Xs

Property	Test method EN	OLDROYD® Xv		Unit
		DoP[1)]	Control limit[2)]	
Watertightness 2 kPa, 24 hours	1928	tight	tight	-
Water vapour resistance	1931	-	≥ $1x10^{12}$ ≥ 200	m^2sPa/kg m (equivalent air layer thickness, s_d)
Tensile strength L T	12311-2 (A)	> 450 > 400	≥ 450 ≥ 400	N/50 mm
Elongation L T	12311-2 (A)	- -	≥ 25 ≥ 25	%
Shear resistance of joint	12317-2	-	≥ 190	N
Puncturing - Impact v/23°C - Static load	 12691[3)] 12730[3)]	 > 500 > 20	 ≥ 500 ≥ 20	 mm kg
Deformation at load after 60 hours	13967, Annex B	-	≤ 0,4 ≥ 250	mm deformation kN/m^2 load

[1)] Manufacturers Declaration of Performance, DoP
[2)] Control limit shows values, product need to satisfy during internal factory production control and audit testing
[3)] Tested on hard support

Table 3
Material specifications for associated installation components for OLDROYD® Xv products

Component	Material type	Description	Dimensions	
Butyl joining tape [1)]	Butyl rubber	Butyl-tape for sealing of joints for OLDROYD® Xs.	Width: Length:	50 mm 10 m
Butyl joining Flextape [1)]	Butyl rubber	Flexible butyl-tape for sealing of joints for OLDROYD® Xs.	Width: Length:	100 mm 10 m

1) MATERIAL IS NOT INTENDED FOR USE INSIDE OF THE VAPOUR BARRIER.

Where there are problems with odour / degassing from the ground, special solutions need to be used, as e.g. systems with mechanical ventilation of air gaps under the moisture barrier.

4. Properties

Product properties
Product properties of OLDROYD® Xs products are shown in table 2. Product is classified from manufacturer according EN 13967 as Type V.

Properties related to fire
Classification of reaction to fire according to EN 13501-1 is not defined for OLDROYD® Xs.

Sound insulation
Weighted reduction in impact sound pressure $\Delta L_{n,w}$ according to ISO 717/2 is 16 dB for floating floors with 14 mm parquet on OLDROYD® Xv-products. Such flooring on concrete decks with minimum thickness 180 mm satisfy Class C in NS 8175, except for residential housing.

Durability
OLDROYD® Xs is evaluated to have satisfying durability in physical contact to concrete- and mortar materials, based on testing before and after accelerated alkali, climate ageing (NT Poly 161).

5. Environmental aspects

Substances hazardous to health and environment
OLDROYD® Xs contains no hazardous substances with priority in quantities that pose any increased risk for human health and environment. Chemicals with priority include CMR, PBT or vPvB substances.

Effect on indoor environment
The product is evaluated according to SINTEF Technical Approval – Health and Environmental Requirements version 09.05.2022. The product is not regarded as emitting any particles, gases or radiation that have a perceptible impact on the indoor climate, or to have any significant impact on health. The product meets the requirements in BREEAM-NOR v6.0, Emissions from building products according to Hea 02 Indoor air quality.

Waste treatment/recycling
The product shall be sorted as residual waste on the building/demolition site. The product shall be delivered to an authorized waste treatment plant for energy recovery

Environmental declaration
No environmental declaration (EPD) has been worked out for OLDROYD® Xs.

6. Special conditions for use and installation

Design considerations regarding safety in case of fire
OLDROYD® Xs need to be separated at fire cell limiting constructions in a way that fire spread is avoided and the fire cell limiting function is ensured.

OLDROYD® Xs need always to be covered with materials which satisfies actual fire requirements for the room they are used in. Insualtion plates to be used under or over OLDROYD® Xs must be evaluated according to Technical Regulation or to SINTEF Building Research Design Guide:

- 520.339 *Bruk av brennbar isolasjon i bygninger*

Moisture barrier on concrete floors
The building, where OLDROYD® Xs shall be used, is presumed to have a normal indoor climate. OLDROYD® Xs can be laid independently of the moisture content of the underlying concrete construction. OLDROYD® Xs cannot be used where free flowing water can occur.

Floors may be insulated with polystyrene sheets between the waterproof membrane and the floating floor. When parquet flooring or sheet materials are used over insulation it is required to use extruded polystyrene (XPS) or expanded polystyrene (EPS) sheets with a resistance to compression of at least 200 kN/m2 (CS(10)200)). A thin fibre cloth or equivalent should be laid between the insulation and flooring to avoid squeaking.

Regarding covering of XPS or EPS see also to SINTEF Building Research Design Guide:
- 520.339 *Bruk av brennbar isolasjon i bygninger*

OLDROYD® Xs shall be joined by using joining tape. Lengthwise joints are performed with tape between the overlapping flanges of the membrane. Transverse joints are made as butt joints with Butyl Flexbånd across the joint.

Pipes or the equivalent passing through the membrane should be sealed with two rings of joining tape against the concrete floor which must be primed beforehand to bind any dust.

Non load bearing walls which do not have any requirement according to safety in case of fire can be erected directly on the membrane.

Transport and storage
The rolls shall be stored and transported standing vertically on pallets, protected from sunlight. Pallets may be stacked in two levels, providing the stacks are staggered. Caution must be shown when stacking pallets.

7. Factory production control
OLDROYD® Xs is produced of Oldroyd AS, Isdammen 25, 3962 Stathelle, Norway.

The holder of the approval is responsible for the factory production control in order to ensure that OLDROYD® Xs is produced in accordance with the preconditions applying to this approval.

The manufacturing of OLDROYD® Xs and the manufacturer's system for factory production control (FPC) is subject to continuous surveillance in accordance with the contract regarding SINTEF Technical Approval.

Manufacturer of OLDROYD® Xs has a certified quality management system according to EN-ISO 9001.

8. Basis for the approval
The evaluation of OLDROYD® Xs is based on reports owned by the holder of the approval.

The evaluation of design and technical solutions are based on recommendations given in SINTEF Building Research Design Guides.

9. Marking
The rolls of OLDROYD® Xs shall be marked with name of producer, name of product and date of production.

The product is CE marked in accordance with EN 13967

The approval mark for SINTEF Technical Approval No. 20069 may also be used.

10. Liability
The holder/manufacturer has sole product responsibility according to existing law. Claims resulting from the use of the product cannot be brought against SINTEF beyond the provisions of Norwegian Standard NS 8402

for SINTEF

Ola Asphaug
Approval Manager