

System

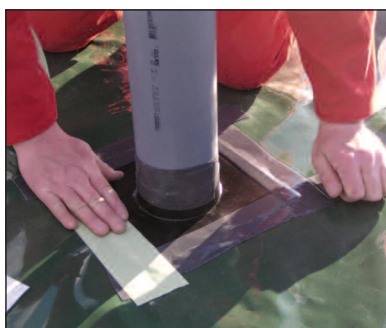
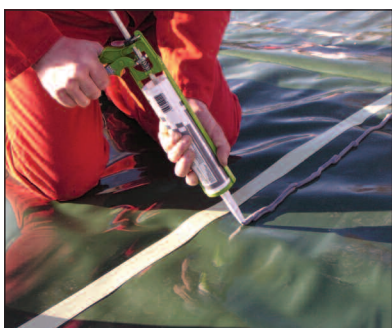
Platon®

RadonStop 400

Complete and simple system!

Platon RadonStop 400 is a non-reinforced polyethylene film with high strength and flexibility. The film is supplied in 4m widths and is installed with overlaps which are sealed with sealer and sealing tape of butyl. As part of the system, a complete component programme is supplied, with preformed details for sealing around pipes and for strengthening corners.

The details are connected to the film simply and effectively with sealer and overtape.

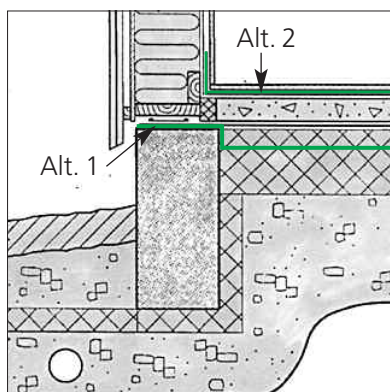


Approved in 2 categories!

Platon RadonStop 400 is used as radon and damp proof membrane in slab on ground construction. The system is intended for category B (laid under the concrete slab, protected in the upper insulation layer) and category C (laid direct on the concrete slab) in accordance with SINTEF's recommendations. The illustration shows the alternative installation principles:

Alt. 1: Category B

Alt. 2: Category C



Radon – an invisible enemy!

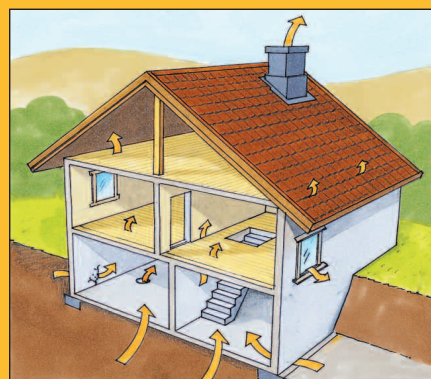
Radon is an invisible inert gas without smell, which is formed during the decomposition of uranium (U-238). It exists in variable quantities in the building foundation and may be transported both with air and water. High concentrations of radon gas are found in alum slate, granite, loose soil and moraine deposits. How much radon that will percolate into the building from the ground is almost impossible to predict, before the building is erected and taken into use. The decomposing substances from radon are called radon daughters. These affect human beings when inhaled and may lead to lung cancer. (Estimated to cause 5 to 15% of all instances of lung cancer in Norway every year).

If combined with smoking, the health risk is increased considerably.

The radon concentration is quoted in Becquerel radon per cubic meter of indoor air (Bq/m^3).

For new building, action should be taken if the year's average for radon concentration is more than 200 Bq/m^3 indoor air. If the radon concentration is more than 400 Bq/m^3 , more extensive action should be taken.

The limiting value is being discussed at European level, and may be lowered to as low as 80 Bq/m^3 indoor air in the future!



System Platon®



RadonStop 400

Components in the system:

- **Platon RadonStop 400**
Film (4 x 25 m)
- **Platon RadonStop Pipe Gaskets**
(32, 50, 75, 110, 125 mm)
- **Platon RadonStop Drain Gasket**
(180 mm)
- **Platon RadonStop 2-part Corner Cloak**
(External and internal corner)
- **Platon RadonStop Sealing Tape**
(Rolls @ 20 m)
- **Platon RadonStop Overtape**
(Rolls @ 20 m)
- **Platon Sealer**
(Patron @ 0.3 liter)



Product specifications:

Materiale, thickness:	Polyethylene 0.4 mm
Roll dimensions:	4 x 25 m (100 m ² per roll) 4 x 12 m (48 m ² per roll)

Product characteristics:

Product property	Value	Unit	Method
Radon resistance	5.8 x 10 ¹¹	m ² .s.Pa/kg	SP Method
Tensile strength MD/CMD	400/400	N/50 mm	EN 12311-2
Elongation MD/CMD	600/700	%	EN 12311-2
Resistance to shear of joints	>100	N/50 mm	EN 12317-2
Dimensional stability, MD/CMD	-0.5/+0.1	%	EN 1107-2
Flexibility at low temperature	< -30	°C	EN 495-5
Resistance of tearing, MD/CMD	100/100	N	EN 12311-2
Resistance to impact	30	mm	EN 12691
Resistance to static loading	100	N	EN 12730
Water vapour resistance	700 x 10 ⁹ 135**	m ² .s.Pa/kg m	BS 3177
Airtightness – construction	2*	l/min	NBI Method 167/01

* Measured at pressure difference of 30 Pa

** Water vapour resistance of RadonStop 400 corresponds to 135 m equivalent stationary air layer

Technical approval:

RadonStop 400 has been tested by SINTEF Building and Infrastructure. SINTEF have issued a technical approval which gives information on areas of use and how to solve important detailing. The technical approval provides documentation of the characteristics of the system. SINTEF Technical Approval no. 2387.



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Dry and healthy buildings

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System Platon®

RadonStop 400



Radon and damp proof membrane for
floors and foundations

Dry and healthy buildings



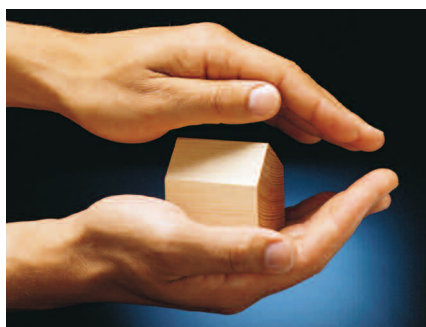
**Radon
Stop**

Safe and effective radon protection!



Radon and health risk

Health risk with radon has in recent years received increased focus. Radon is found in different



types of building foundations and the radioactive substance may penetrate into the building as a result of air leaks in the floor or foundation

construction. Radon is both invisible and without smell, and will pose a significant health risk in large concentrations.

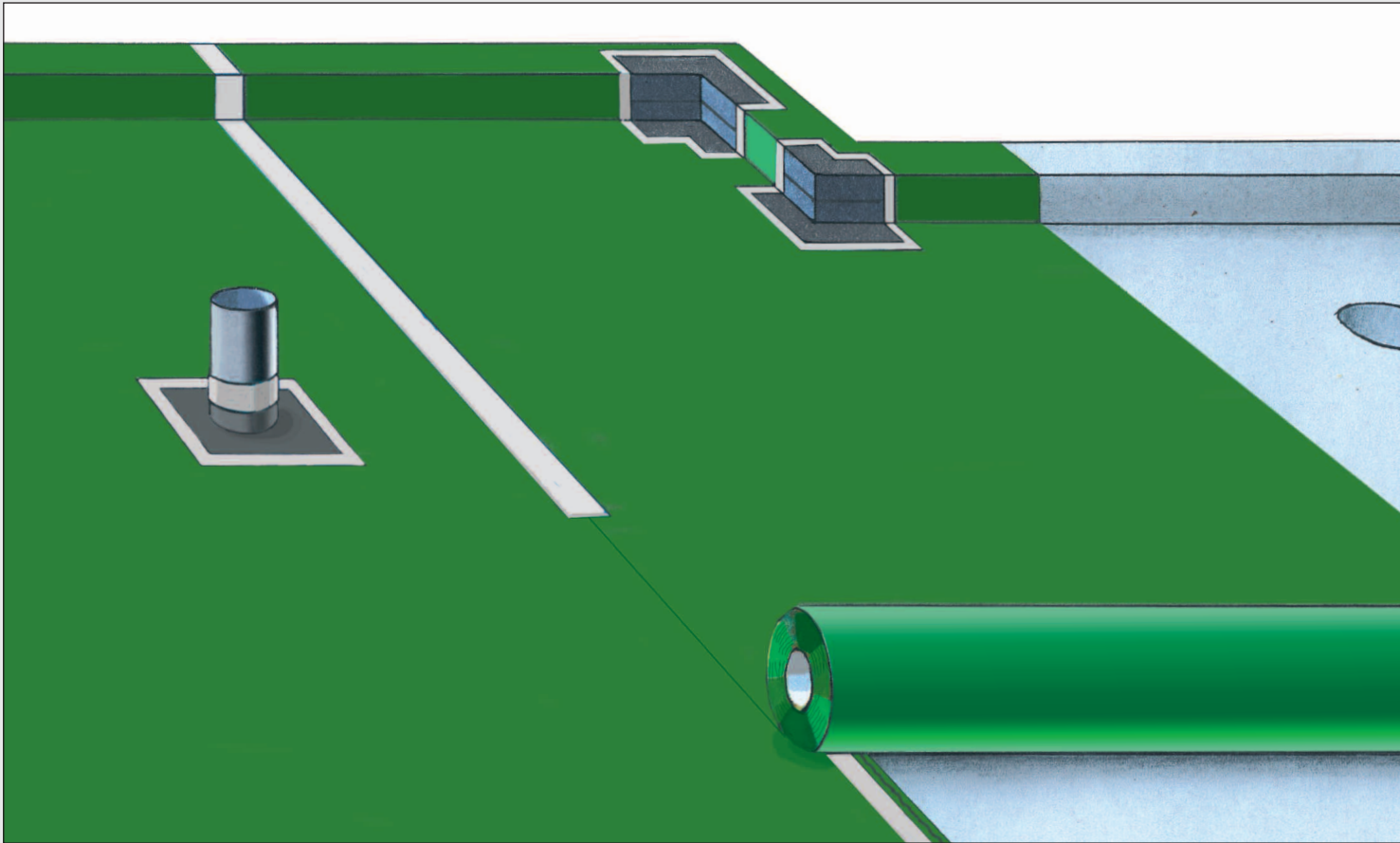
In the guidance to the technical

regulations in the Norwegian Plan and Building Law, it is stated that if the year's average of radon concentration in a room is more than 200 Bq/m³, then action should be taken.

RadonStop is the solution

Platon RadonStop 400 prevents air leaks from the ground and provides a safe and effective protection against dangerous concentrations of radon gas from penetrating into the building. RadonStop acts at the same time as a robust and solid damp proof membrane.

Installation instructions



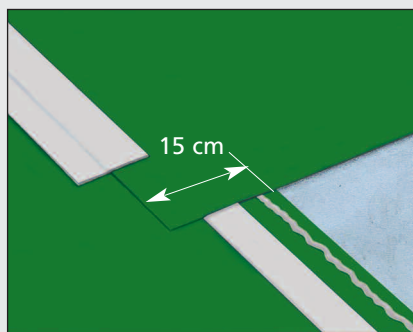
General conditions

Platon RadonStop 400 is installed based on the same principle for both category B (laid under the concrete slab, in the upper insulation layer) and category C (laid direct on the concrete slab). The film is rolled out and laid with overlap of approx. 15 cm in all joints. All overlaps, pipe details and corner cloaks are sealed tightly with sealer, sealing tape and/or overtape. Minimum temperature for installing the sealing systems is $+5^{\circ}\text{C}$ (at lower temperatures use heated tent).

Minimum temperature should be maintained for at least 12 hours for satisfactory curing. On application of the sealing systems the contact surfaces should be dry and clean, free from dust and dirt.

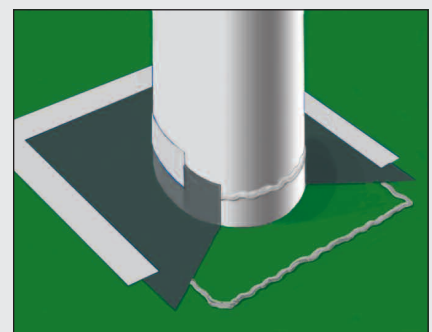
To avoid damage the film should be protected immediately after installation.

Heating cables should not be placed in direct contact with the film (minimum 5mm non-flammable material between cable and film).



Joints

All joints should be installed with approx. 15 cm overlap. Draw the overlying film away. Lay out a strip of sealer and install sealing tape along the outer edge of the lower film. Remove the release paper from the sealing tape, working from the centre and to each end in turn. Seal the overlap by pressing the joint together. Seal the leading edge of the overlap with overtape.



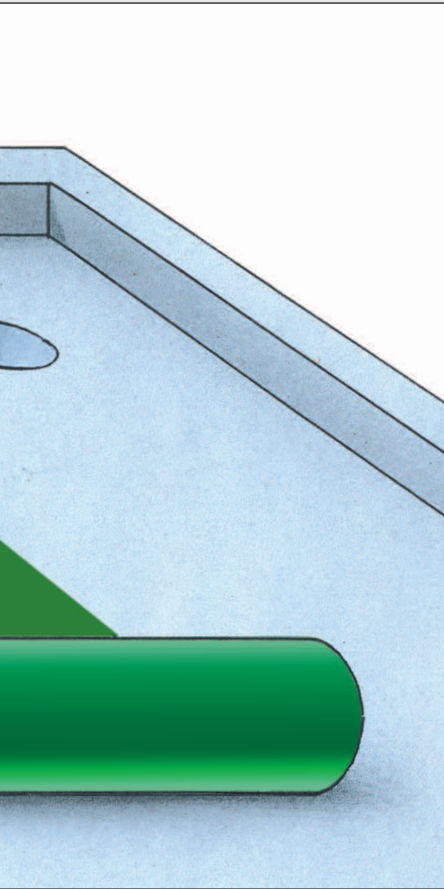
Pipes

Cut out and adjust the film accurately to the pipe. Then lay out a strip of sealer onto the film as shown in the illustration. Apply sealer also to the pipe.

Place the gasket over the pipe and press well to the sealer. Finally seal the edges of the gasket with overtape.

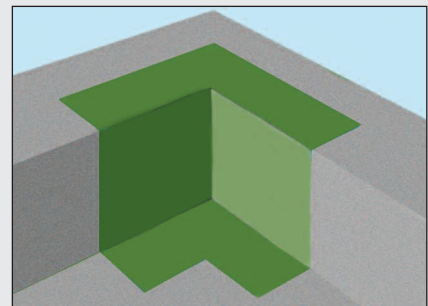
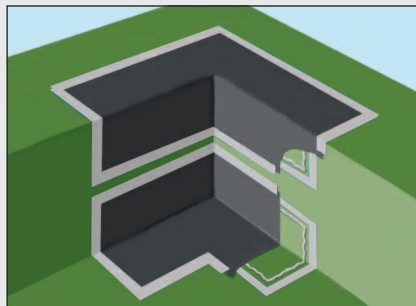
NB! Dimensional changes

The membrane may shrink and expand with temperature changes over night, with or without direct sunshine. The dimensional changes may be up to 1.5%. Take account of this during installation by allowing slack.



Corners

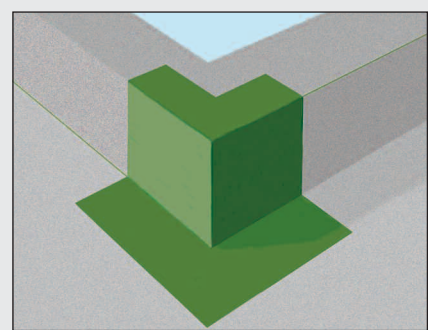
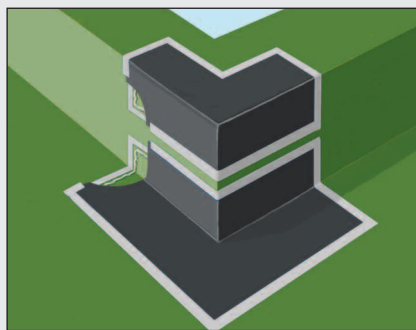
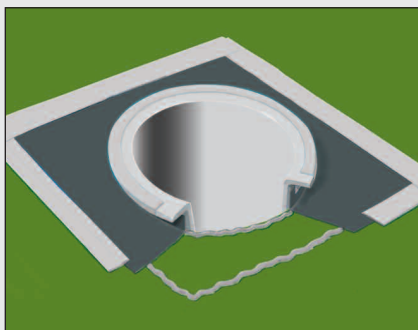
In all corners it is recommended to use preformed 2 part corner cloaks. These give both sealed and more robust corner finishes. The corner cloaks comprise of a lower and upper part which fit into both external and internal corners. On the few occasions that preformed corner cloaks do not fit, cloaks may be made on site from RadonStop 400 as shown in the illustrations below on the right.



Internal corner

Fold and fit the film to the internal corner. If necessary cut away surplus film, so that the film lies evenly and close up against the substrate. Begin with the lower part of the 2 part corner cloak. Lay out a strip of sealer and install sealing tape as shown in the illustration.

Remove the release paper from the sealing tape and then press the corner cloak well against the sealer and sealing tape. Finally seal the edges of the cloak with overtape. Then install the upper part of the 2 part corner cloak in a similar way.



Drain

Cut out and adjust the film precisely to the drain. Then lay out a strip of sealer onto the film as shown in the illustration. Apply sealer also around the up-stand of the drain at the base, below the flange.

Place the gasket over the drain and press well against the sealer. Finally seal the edges of the drain gasket with overtape.

External corner

Fold and fit the film to the external corner. Begin with the lower part of the 2 part corner cloak. Lay out a strip of sealer and install sealing tape as shown in the illustration.

Remove the release paper from the sealing tape and then press the corner cloak well against the sealer and sealing tape. Finally seal the edges of the cloak with overtape. Then install the upper part of the 2 part corner cloak in a similar way.