

Threshold solutions



**Excellent solutions
are more than
just ramps!**



excellent systems as

INVENTOR'S NOTES

Threshold ramps

Excellent started as an industrial enterprise, with our tiles being used for flooring, in particular for protecting the backs and legs of standing employees, as well as for slip-resistant bathroom floorings.

In 1996, we started supplying products for the Rehab industry. Industrially, our floorings and ramps are used for e.g. trucks weighing up to 10 tons, so the use of floorings and ramps for wheelchairs of 150-500 kg is peanuts in comparison.

We started out making ramps for thresholds. These immediately proved popular. We received comments such as: "No more tearing my stockings on sandpaper and knocking the top of my foot when it gets caught under the plates." At the same time, our ramps are stable due to their solid construction, so they do not rock about like most plates.

The first fair we participated at was in Fredericia, Denmark, in 1997, where we introduced **corners** for our threshold ramps. This was an innovative development that considerably facilitated transport across the ramps for users as well as home-care staff.

The next new development in threshold ramps was the **plate plug**. The plate plug allows a ramp to be installed without screwing and drilling into the floor, tiles or threshold, and at the same time it makes it easy to move and reinstall the ramp, e.g. in connection with cleaning.

Since then, we have added **wood colours**, so that there are now ramps available that match wooden floors.

By far the most popular type of ramp in Denmark is the **threshold ramp**. Access across thresholds is often considered to be an insignificant problem merely solved by any available means, leading to daily problems for users and home-care staff.

On the following pages, we would like to demonstrate the problems as well as possible threshold solutions.

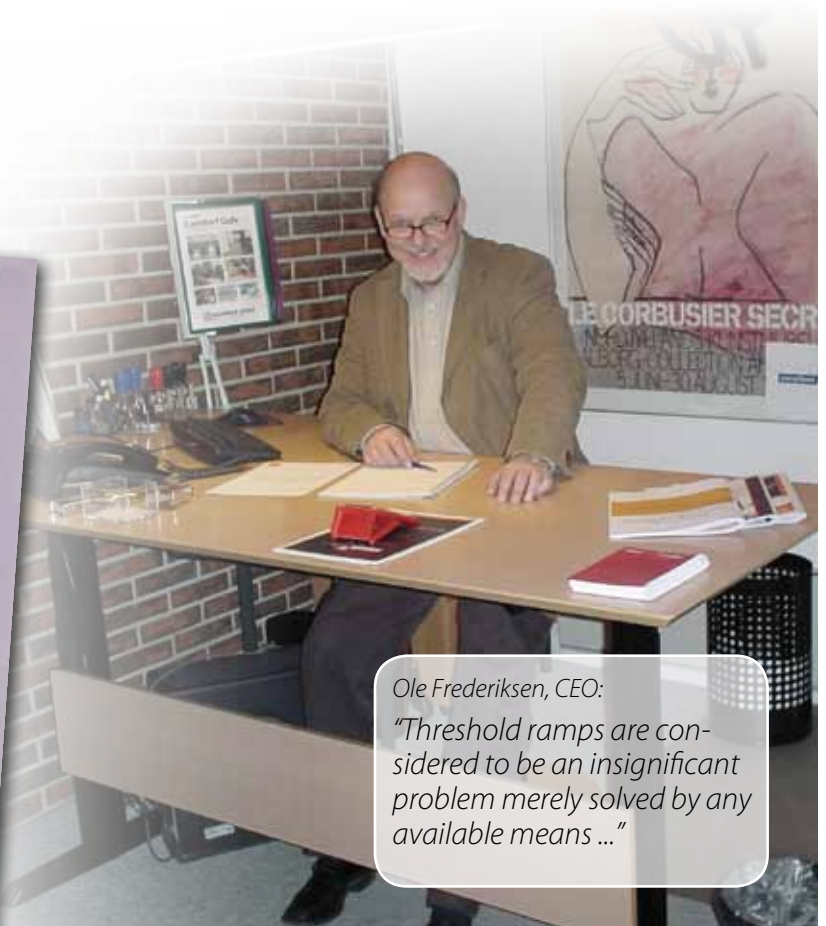
As we are a well-established enterprise (awarded the AAA rating from Dun & Bradstreet), we also have the resources to develop and face challenges in the coming years.

Kind regards,

Excellent Systems A/S



Ole Frederiksen
CEO



Ole Frederiksen, CEO:
"Threshold ramps are considered to be an insignificant problem merely solved by any available means ..."

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In traffic, asphalt ramps are always provided with corner ramps.

Should it not be equally easy for people using walkers or wheelchairs to move around their own homes without problems?



Our ramps are exceptionally strong and are widely used as ramps on public roads, e.g. in Italy.

International awards won



1st prize – Paris 2002
Le Trophée Autonomic



1st prize – London 2002
Independent living



1st prize – Montreal 2003
Innovation award

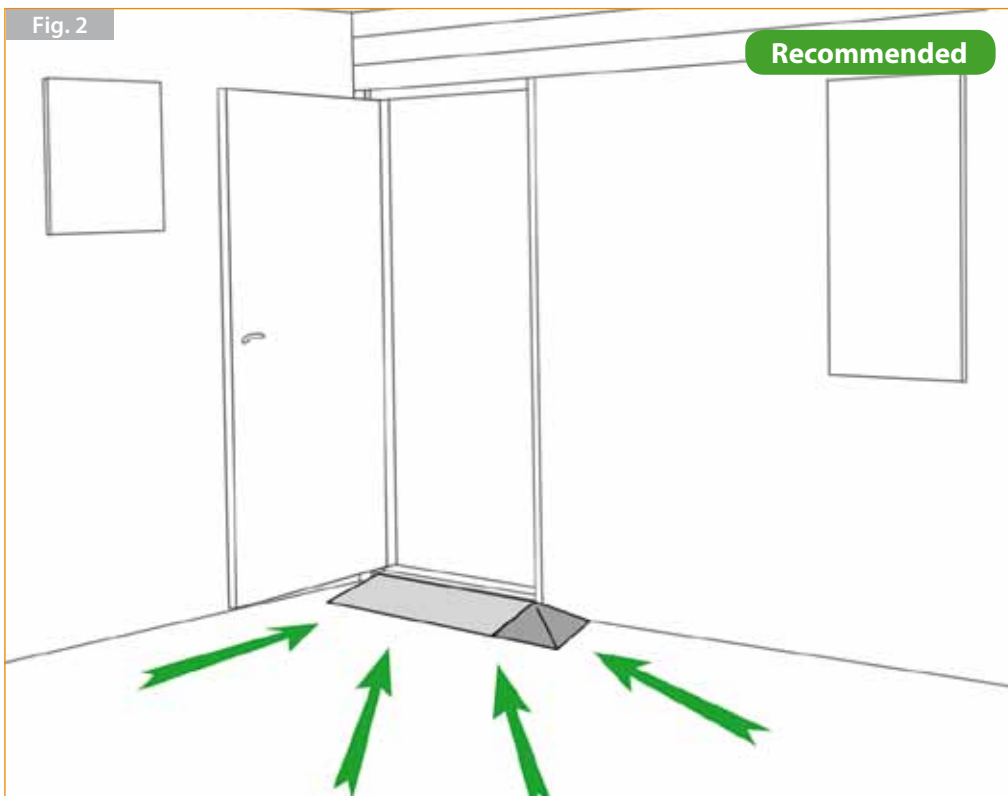
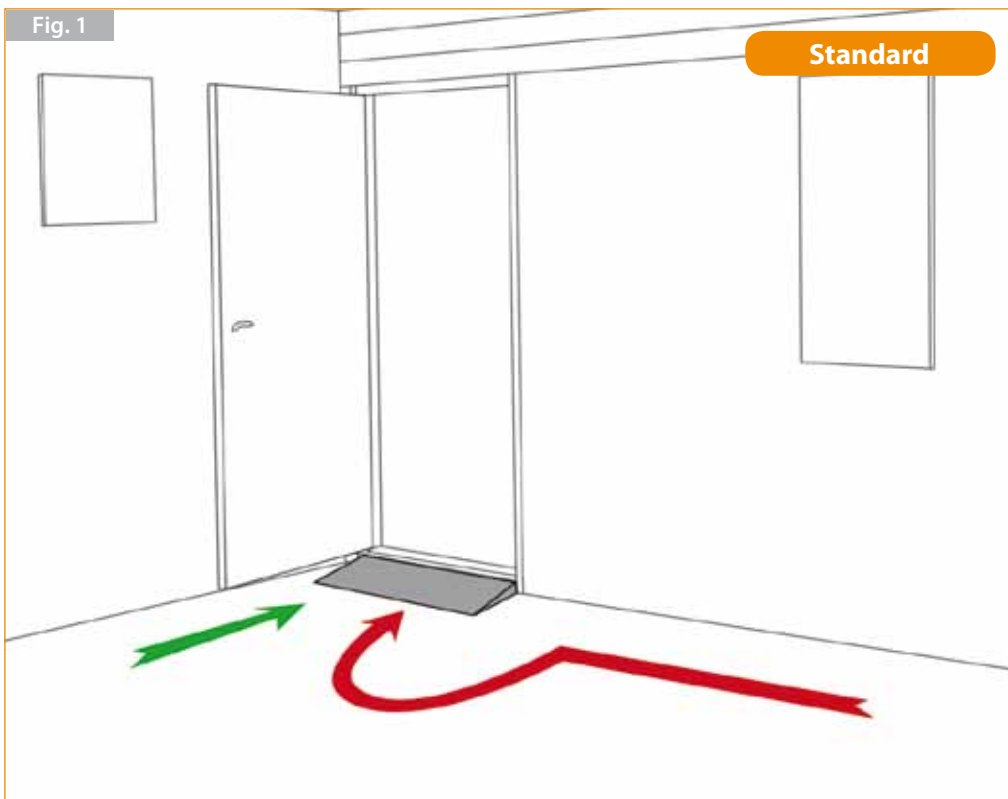


1st prize - Newcastle 2000
Most innovative new design

CORNER DOORS

To ease access for this type of threshold it is recommended to fit cornered ramps.

All Flexiloc ramps can be adjusted to the last millimetre – both height wise and with wise!

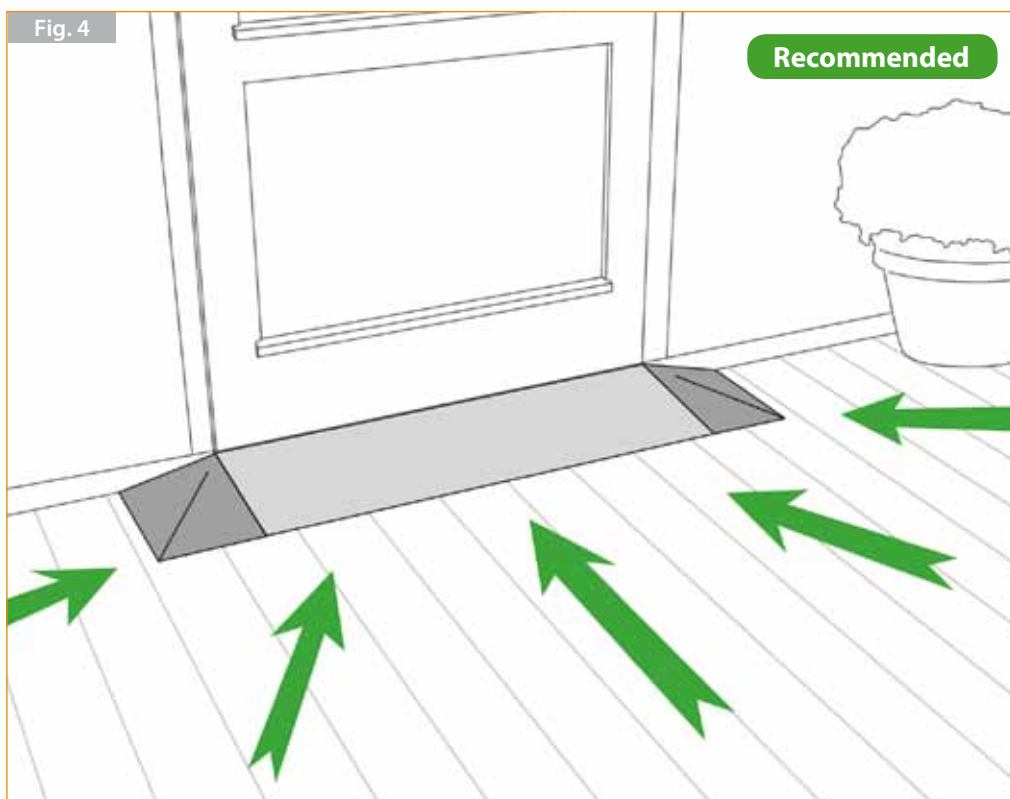
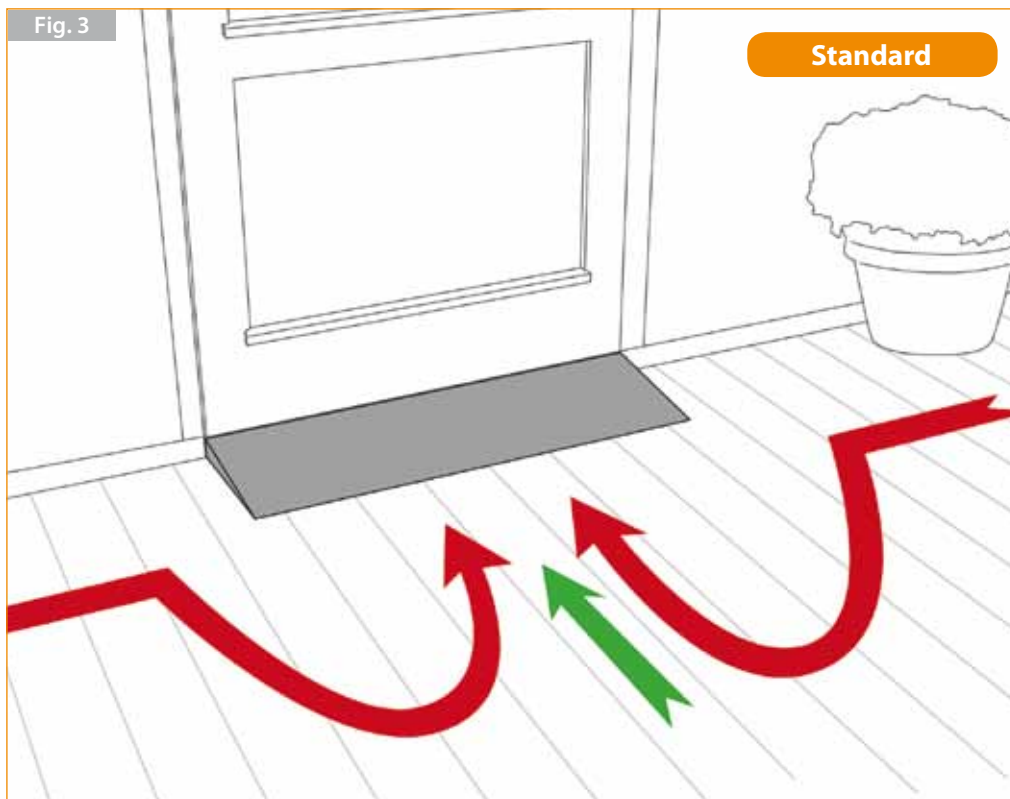


For only £3.00 (the price of one corner), you can considerably increase accessibility across the threshold ramp...

CENTRE DOORS

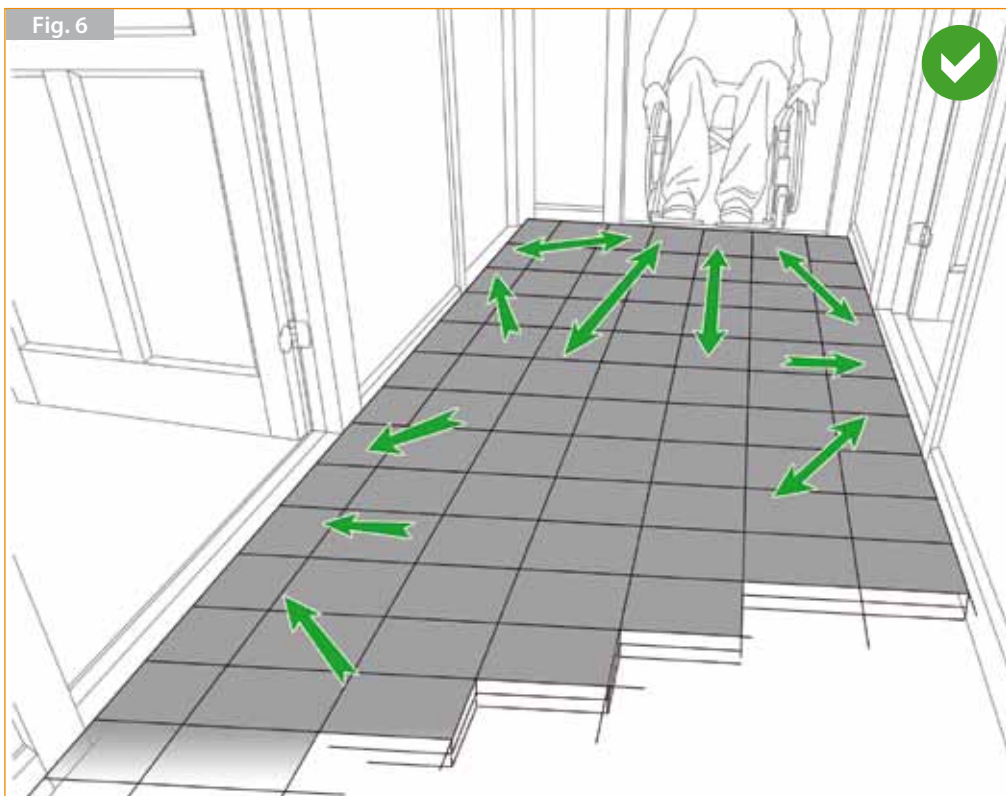
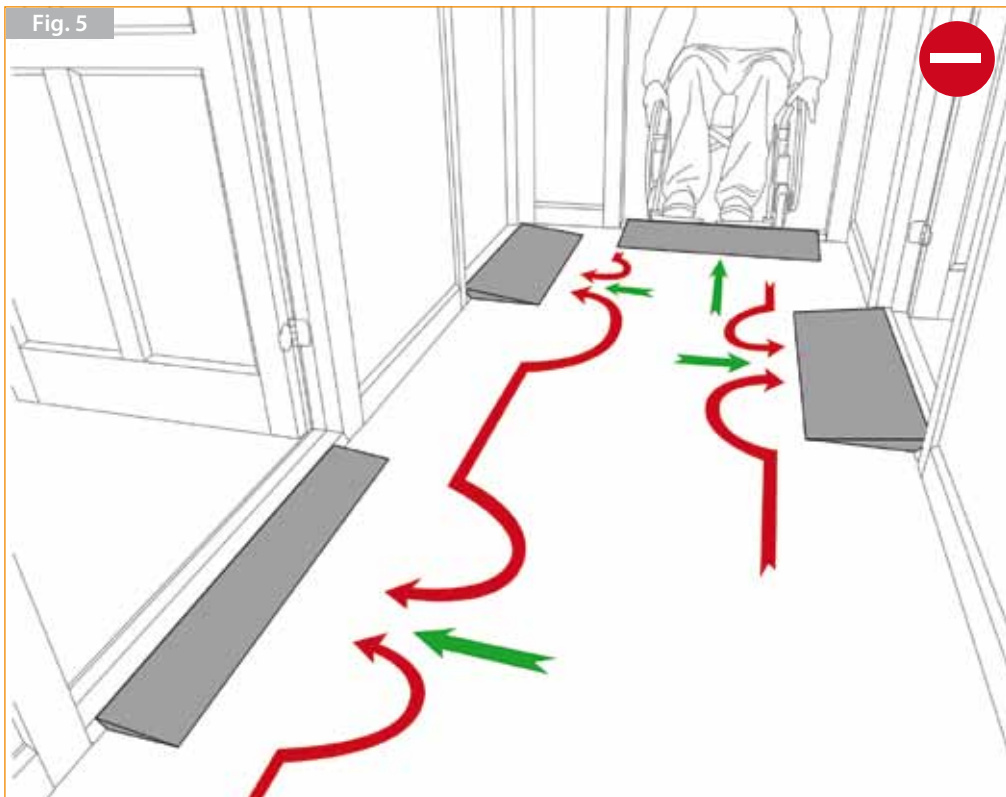
For these doors, corner ramps are actually twice as important.

All Flexiloc ramps can be adjusted to the last millimetre – both height wise and with wise!



MULTIPLE-DOOR HALLWAYS

In many houses, all rooms open into a single hallway. Instead of the users having to go up-down-up-down, a much better solution is to raise the hallway flooring. If the hallway is carpeted, the carpet can be placed on top of the raised floor.

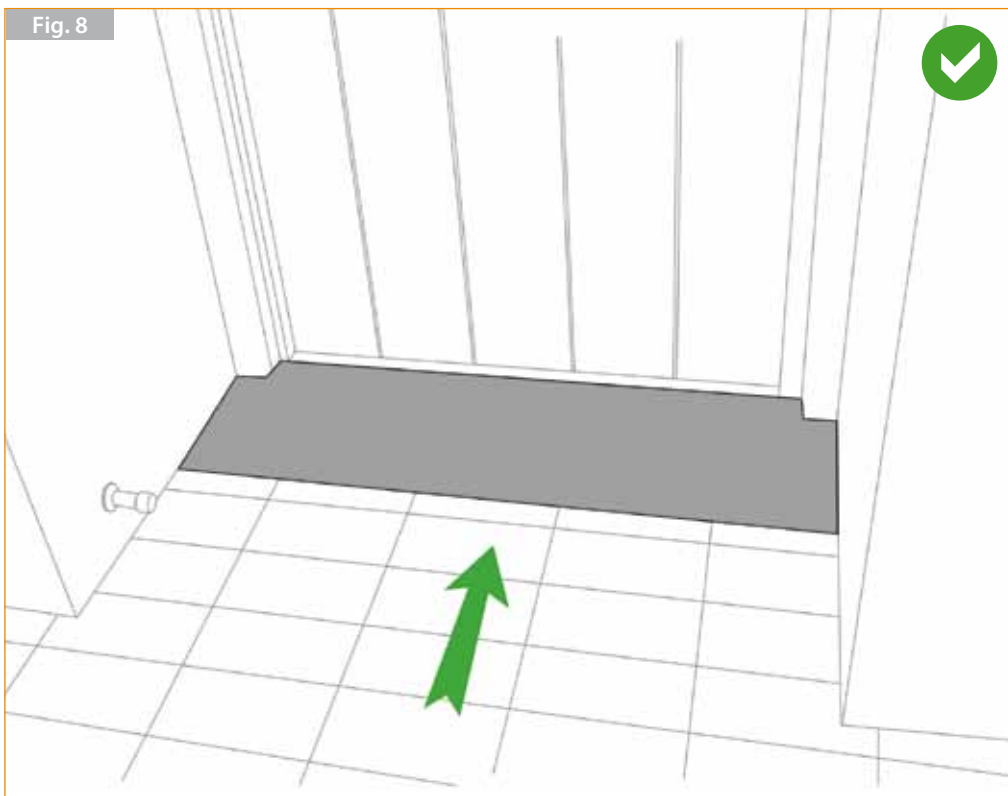
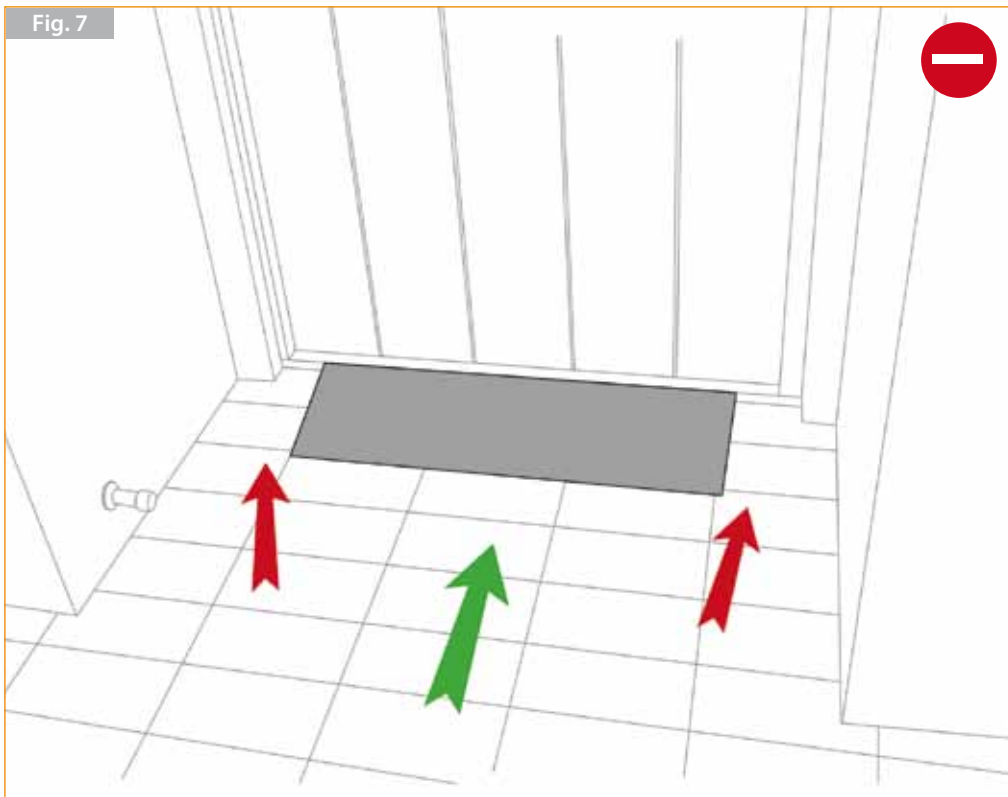


Naturally, this is only done after consultation with an occupational therapist..

DEEP-SEATED DOORS

When a ramp is made for this type of door, it is important that the ramp extends all the way to the adjoining frames/walls, so that walkers are not "caught" by these holes.

All Flexiloc ramps can be adjusted to the last millimetre – both height wise and with wise!



A GREEN PRODUCT

We all want this planet to be a nice and healthy place to live – not just for ourselves, but also for future generations.

This has always been a guiding principle for us – as private individuals as well as in our company policy. This is why we use non-toxic products in our production.

The type of plastic we use in the ramp system is usually referred to as PELD or PEHD.

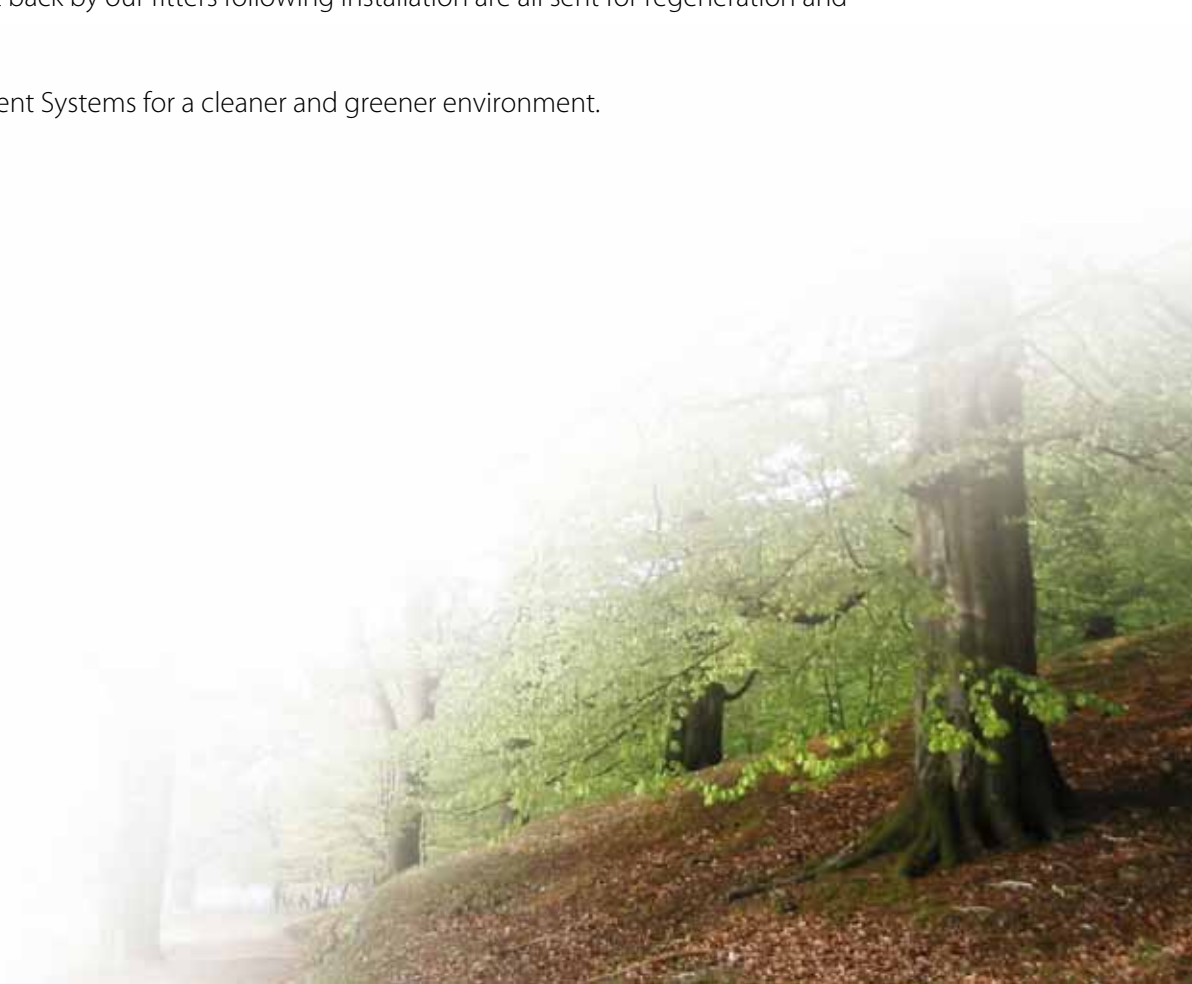
PELD and PEHD are both polyethylenes consisting exclusively of carbon and hydrogen. Our products contain no softeners, such as phthalates or similar compounds. Because our products are injection-moulded (a melting process under pressure), they contain no solvents that can be released to the surroundings as VOCs (volatile organic compounds). Because the polyethylenes only consist of carbon and hydrogen, when incinerated they only turn into carbon dioxide and water. Polyethylene does not contain chlorine and therefore will not form or emit hydrochloric acid in the event of fire.

The raw materials and colorants used in our ramp system are approved by the health authorities and are completely non-toxic. Please refer to the tests from the Danish Technological Institute.

Apart from being non-toxic, PELD and PEHD can also be regenerated 100% and then recycled for other applications.

There is thus no waste from our production, as any erroneous products and shortened items brought back by our fitters following installation are all sent for regeneration and recycling.

Choose Excellent Systems for a cleaner and greener environment.



MOUNTING PAD

Used to hold tiles and ramps if other fixing options are inadequate. The double adhesive allows sticking to smooth surfaces. Furthermore, there is room for a screw through the Mounting Pad on e.g. rough wooden and concrete surfaces.

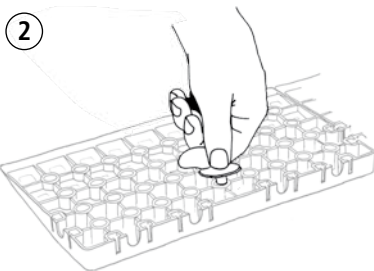
Particularly suitable for installing ramps and tiles in bathrooms and on very smooth surfaces.



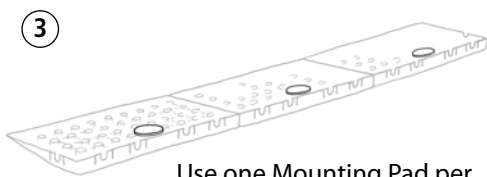
Installation



Carefully clean the area where the ramp is to be installed.



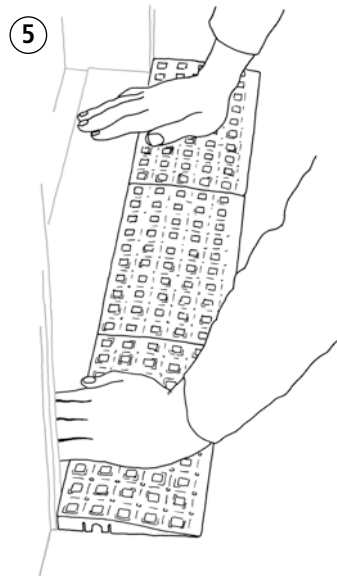
Push the Mounting Pad into place on the bottom of the ramp.



Use one Mounting Pad per ramp section.

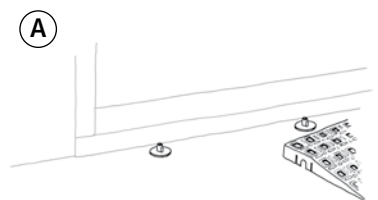


Remove the protective paper on the Mounting Pad.



Place the ramp in the desired position, and push it down as shown.

Cleaning

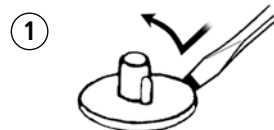


It is now easy to remove the ramp as required.



It is also possible to clean under the ramp and then reinstall it.

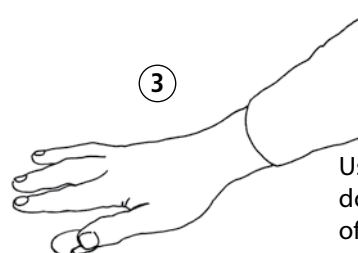
Disassembly



Insert a screwdriver under the Mounting Pad, and lift upwards.



The plastic part and the adhesive patch are constructed in such a way that the plastic part will always detach from the adhesive patch. This is to ensure that tiles etc. are not pulled apart.



Use your thumb to "nudge" the double-sided adhesive patch off the subfloor.

LUMINOUS RAMP MARKING



For older and visually impaired people using the ramp, it can sometimes be difficult to see the ramp during the evening/night – or if there is a power failure.

Excellent Systems has developed luminous locks that can be installed in the ramp to show the position of the ramp. Simple and effective.

SAFETY INSTRUCTIONS

For the use of Excellent Systems' plastics modules for floors and ramps for people with disabilities and users of wheelchairs, rollators and other vehicles.

Mounting:

- When erecting floors or ramps, see the instructions supplied, with accompanying guidance CD-ROM if applicable. These must be followed in full. Otherwise, floor or ramps must be mounted by authorised staff. Mobility World Ltd accepts no responsibility for injuries caused by incorrect mounting.
See also EN 12182, including page 21 table 2 concerning distances between e.g. erected ramps and other parts of the building. This distance must be less than 35 mm or more than 100 mm. Ramps and platforms must always be mounted on a firm and even surface in accordance with the above-mentioned instructions.
- When erecting a ramp, please note that any kind of gradient may cause difficulties for a wheelchair user/person on foot. All ramps erected must therefore be assessed in relation to the individual user and the local authority regulations, and be constructed in such a way that there is a reasonable relationship between the gradient and the user's physique. The individual builder/fitter is responsible for providing the ramp with the necessary signage in accordance with locally applicable rules for the prevention of fall accidents. If the desired gradient cannot be achieved in the space available, possibly with a resting platform, the user must have a helper available when negotiating the ramp.
- During erection of the ramp, loose bits such as screws etc. may be swallowed or otherwise cause damage. These bits should

therefore be kept away from children and others incapable of looking after themselves.

- Check that the ramp is correctly assembled and mounted before it is put into service in order to avoid injuries during subsequent use.
- Depending on their height, ramps may require a guiding edge. A guiding edge is used to prevent vehicle wheels from accidentally running over the edge of the ramp, with the associated risk of personal injury. The height at which a ramp requires a guiding edge varies from country to country. See the local regulations, which must be observed at all times. If a guiding edge is required, the edge system supplied by Excellent Systems A/S can be used. The edge system has been designed to fit the ramp system and has been tested for the purpose.
- In public spaces and/or where heavy traffic by users on foot and wheels is anticipated, it is an advantage to construct the ramp with contrasting colours.
The use of a different colour, e.g. yellow at the bottom and top of the ramp, will make it easier for the users to see when they are moving up and down the ramp, which is particularly helpful for visually impaired users.

Use/application:

- The Excellent modules are designed as floor and/or ramp modules and must be used in accordance with the instructions. Any use of the modules which does not comply with the instructions will be regarded as incorrect use/misuse, which is strongly discouraged. Excellent Systems A/S accepts no responsibility if the modules are incorrectly used/applied.
- The modules are exclusively designed for users on foot, in wheelchairs or users of

rollators. The modules have a load capacity of 800 kg/m².

- The floor and/or ramp modules come with surface holes as standard. Their purpose is to strain away as much water, dust and soil as possible. At the same time, the holes help distribute friction and reduce acoustic noise.
The holes are square and measure 11 x 11 mm. Attention should therefore be drawn to the possibility of especially young children putting their fingers in the holes, with the associated risk of their getting stuck. Young children therefore should not be allowed on the floor/ramp unsupervised. If a child is laid on the floor, an underlay in the form of a blanket or similar is recommended. The blanket should cover an area larger than the child's immediate reach.
- In locations frequented by persons with stilettos or other pointed footwear, tiles/ramps of the Excellent type WITHOUT holes should be used. These modules may be of another colour, so that their position is clearly indicated.

Maintenance etc.:

- Regular maintenance, including cleaning and checking that the mounting remains intact, is crucial if the qualities of the floor/ramps are to be retained.
- The modules of floors and ramps used indoors should be vacuumed and washed at suitable intervals. The floor/ramp should also be lifted for cleaning underneath when necessary. If the modules are accidentally soiled by "body liquids" such as diarrhoea, they should be disinfected. The modules tolerate disinfection with all known cleaning agents. They can also be autoclaved. The cleaning frequency and extent should be agreed with the occupational therapist.
- Modules used outdoors can also be cleaned with all known cleaning agents and by

steam cleaning, if required. The cleaning frequency and extent should be agreed with the occupational therapist. In areas exposed to frost, the risk of ice formation should be noted. As ice reduces friction, it is essential that the modules are cleaned, possibly by steam cleaning or other heat application, and then sanded or salted. See the guidelines issued by the local authorities. The ramp owner is responsible for regularly assessing the usability of the ramp as a result of the weather conditions and drawing attention to reduced usability/risk of falling by signage as required or alternatively temporarily discontinuing the use of the ramp.

Warning/Note:

- According to the Danish Technological Institute, the modules (the polyethylene) will begin to decompose at temperatures far above their usage temperature (at approx. 300°C) and give off mainly hydrocarbons, which are not particularly toxic or aggressive. Complete combustion of polyethylene almost exclusively produces carbon dioxide and water, i.e. non-toxic compounds. Excellent modules therefore should not be erected/mounted above flammable materials, which might cause a fire to start below or alongside the modules, as the ramps cannot be used as escape routes in such cases.
- See also the local supplier's additional safety instructions, which must likewise be followed/observed in full.
- Contact the local supplier in case of any doubt about mounting, use or maintenance of the floor/ramp, as incorrect mounting, use or maintenance can involve a risk of injuries. Excellent Systems A/S accepts no responsibility in the case of incorrect assembly/mounting, use or maintenance.

TAILOR-MADE RAMPS

We do much more than just threshold solutions. On the following pages are a few examples.

Corner ramp in front of an Italian bank – note how the ramp is fitted around the column.

If the threshold is worn in the middle, it is easy to adapt the ramp accordingly.



Special ramp with platform and two down ramps. The ramp is fitted with a kerb.



Ramp from main door with an integral corner.



Ramp built into a sloping base and adapted using corners.

TAILOR-MADE RAMPS

Three kindergarten ramp installations.



Ramp built around a platform. Note the corners of the platform.



Ramp with turning platform and kerb. Florence, Italy.



Indoor ramp with corner constructed on top of steps in the house. Lausanne, Switzerland.



Patio door ramp with corners and resting platform at inclines.

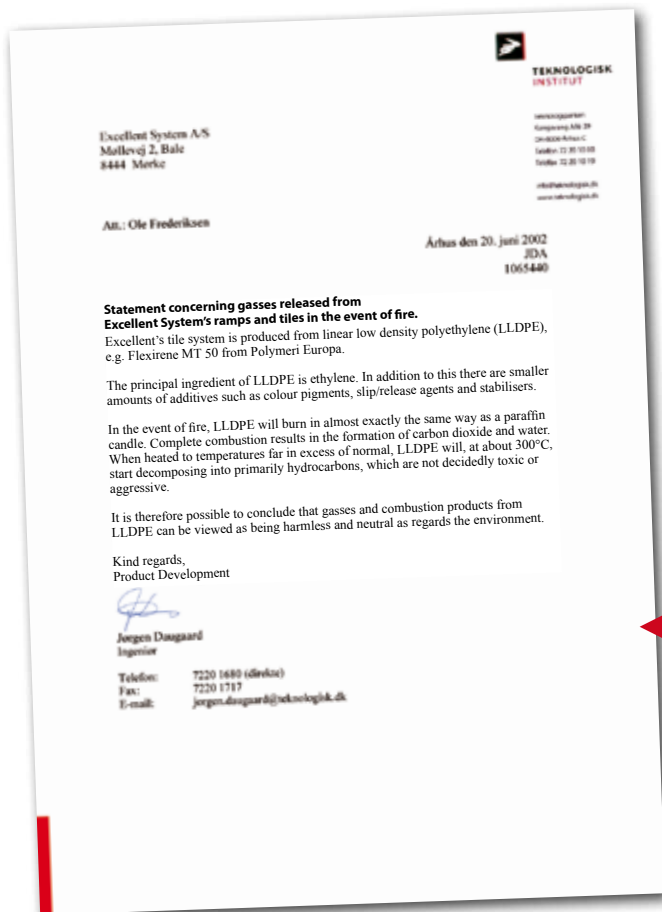
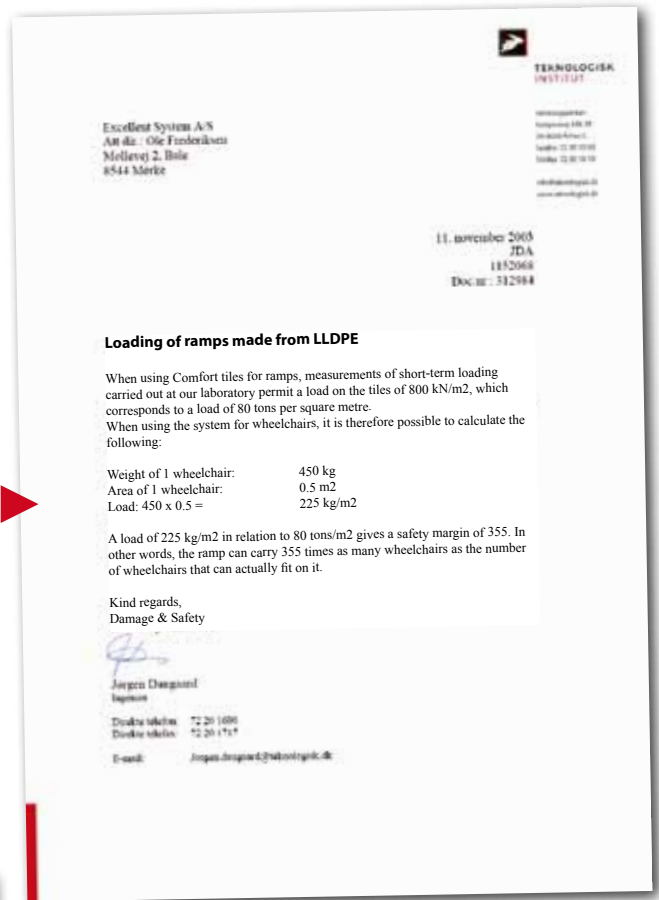


TESTS

In cooperation with institutes such as the Danish Centre for Assistive Technology (HMI), the German FGK and the Danish Technological Institute (DTI), Excellent Systems has run numerous tests, including: Ramp durability (HMI), Stress test (DTI), Non-toxic – a GREEN product (DTI) and Slip resistance test (FGK).

The following two pages contain copies of the individual tests as well as test results. For further information, please contact Mobility World Ltd on 0870 740 7782.

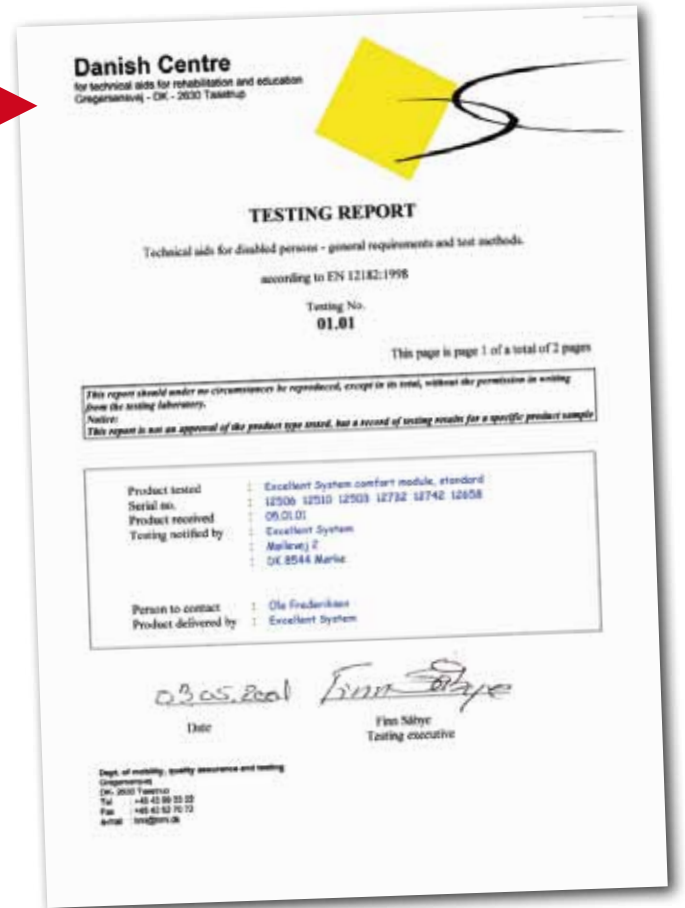
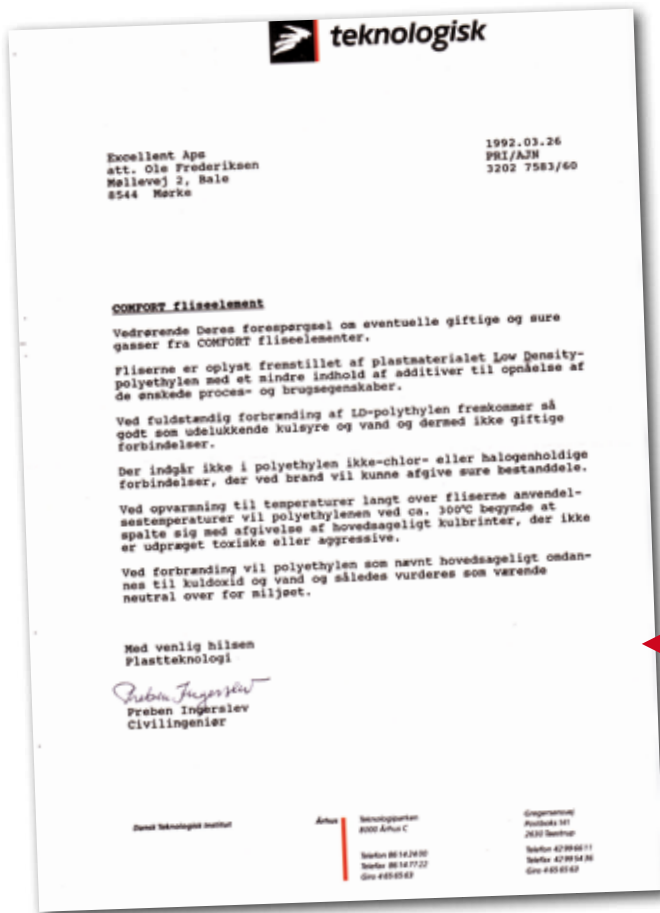
Stress test from the Danish Technological Institute. Test result extract: "The ramp can carry 355 times the number of wheelchairs that can actually fit on it."



*Extract of test result from environmental test:
 "A non-toxic product,
 harmless to the environment.
 A GREEN PRODUCT!"*

TESTS

Extract of test result from durability test:
 "All test results met the relevant legal and application requirements."



Extract of test result from environmental test:
 "In case of incineration, polyethylene will be converted to carbon dioxide and water and is thus assessed as being neutral to the environment."

SLIP-PROOF?

Slip-proof! A word that should be removed from the dictionary.
 Anyone can fall, trip, tread crookedly or slip on any surface. It is only a question of a series of unfortunate events. This could be new leather shoes, bad lighting etc. – something that happens to all of us. We have even

seen the Danish Queen fall on a staircase. If anything could have prevented that accident, it would have been done, of course.

The correct term in this context is therefore **SLIP-RESISTANT**.

SLIP-RESISTANT

In 2003, the German test institute FGK (FORSCHUNGSINSTITUT FÜR ANORGANISCHE WERKSTOFFE GLAS/KERAMIK GMBH) performed a slip-resistance test of Excellent ramps and tiles.

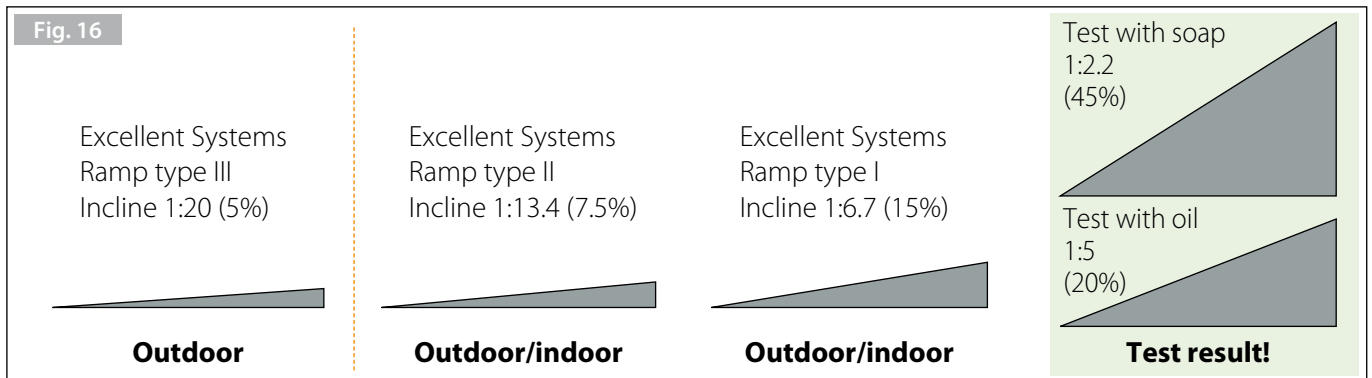
Tiles and ramps were wetted with soapy water and tested manually at gradually increasing inclines. The test was run until the test person slipped on the surface. The test showed that an Excellent ramp has a slip-resistant effect up to an incline of 1:2.2.

The incline of 1:2.2 equates to a ramp 1 metre long and 46 cm high. This incline is very unrealistic for ramps, but shows how slip-resistant our tiles and ramps are in practice. The test was also performed with the test person wearing

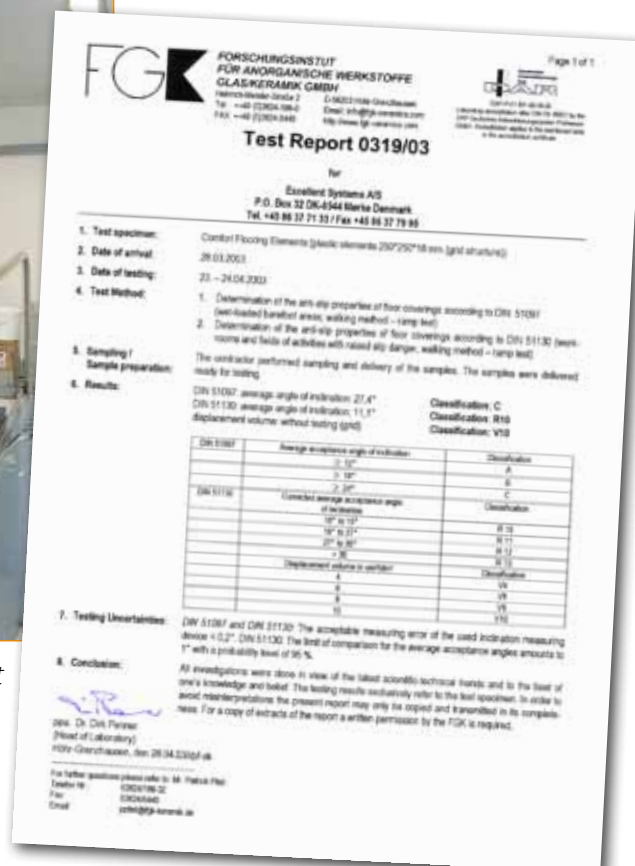
safety shoes smeared with engine oil. Even with this very slippery combination, the ramp was slip-resistant up to an incline of 1:5.

NOTE! In special circumstances, e.g. of frost, snow, ice etc., any surface will become slippery. Also, footwear is very important for the safety of the individual. Therefore, you should always make sure that the ramps are free of snow and ice, and leaves and other material should also be removed from the ramp. If you need instructions concerning cleaning and maintenance of a ramp, please contact Excellent Systems A/S +45 86377133

The calculations were performed and reviewed by Jørgen Meyer, MSc Engineering, chemistry engineer.



The slip-resistance test for Excellent Systems tiles and ramps was performed by the German testing institute FGK.



ICE-LOCK

At Excellent Systems, we are constantly developing our products and experimenting to make them even safer for users.

For instance, for outdoor use, we have developed ICE-LOCK. This is a stainless metal part attached to our ramps and tiles, enhancing the slip-resistant effect when the weather starts to rime and freeze. For further information, please call Tel.: +45 86377133



Importer and installer:



www.hospequip.com.au

