

REFERENCE

ARMAFLEX ULTIMA



Armaflex[®]
Ultima

Armaflex Ultima in Scandinavia's first clinic for proton therapy

(Skandion Clinic Uppsala, Sweden)

Over the past few years, a state-of-the-art clinic for proton therapy has been built in Uppsala, a city around 70 km to the north of the Swedish capital Stockholm. Proton therapy makes it possible to treat cancer more effectively and with fewer side effects than with conventional methods. The clinic, which is run jointly by the seven Swedish counties, is designed to treat 1,000 patients initially. In the long term, there are plans to admit some 2,500 patients annually. The facility was built by the Swedish property company Akademiska Hus in collaboration with the construction company NCC and is divided into two areas – the treatment unit and the patient hotel. The proton therapy unit is located on the ground floor in a self-contained part of the building with walls up to 3.7 metres thick. This area is designed entirely according to the requirements of the technology that is to be housed here.





For more safety

Smoke-free technical insulation material for greater safety in a fire

For the insulation of the cooling water pipes and air ducts of the air conditioning equipment Incoord AB (Stockholm), one of Sweden's leading consultant engineering companies in energy and climate technology, specified the new Armaflex Ultima made by Armacell. The blue elastomeric foam is the first flexible insulation material to achieve fire class B_L-s1 in the European fire test. The insulation material releases only a minimal amount of smoke in a fire and thus makes an important contribution to the safety of people in buildings.

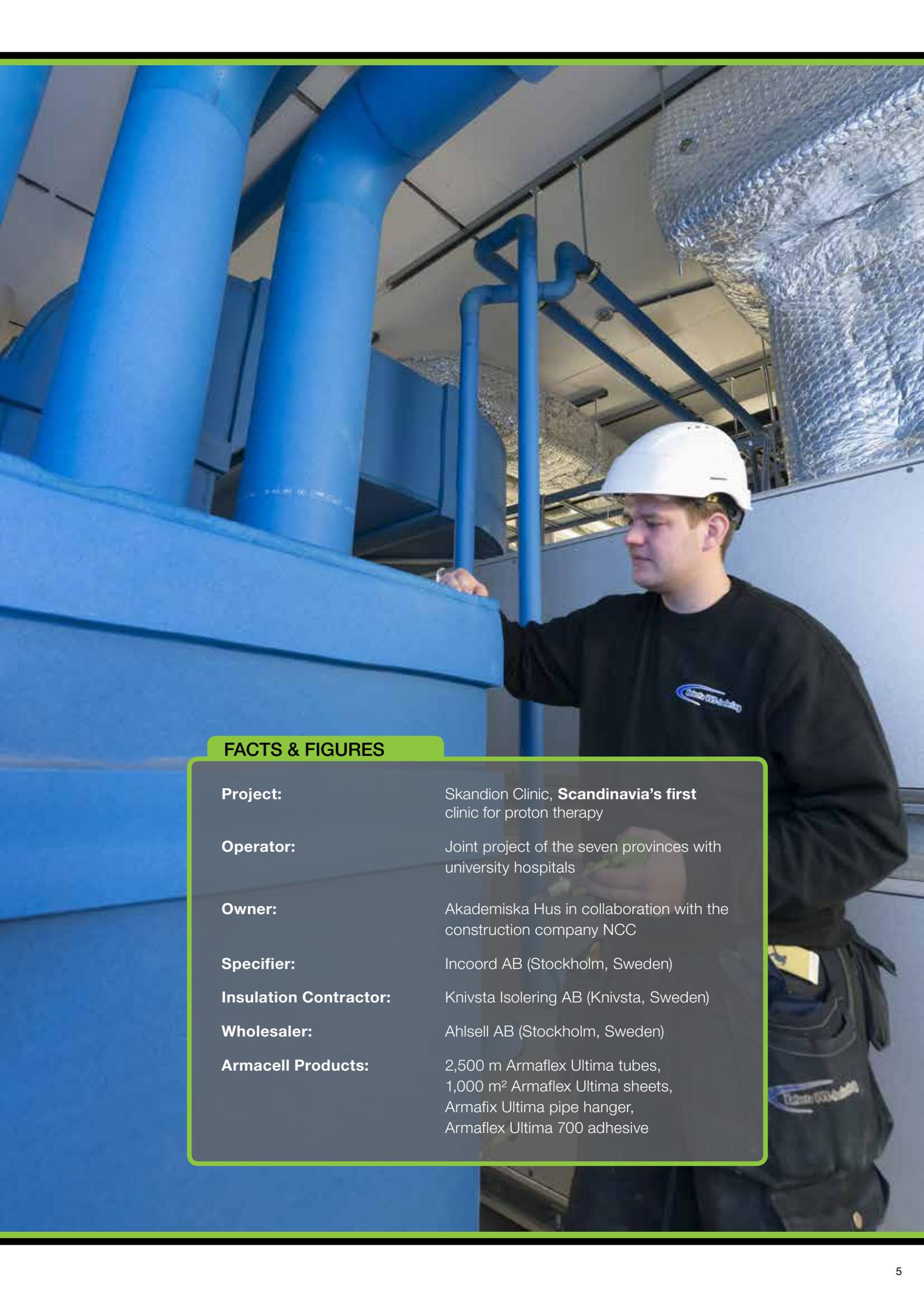
Legislators in many European countries have recognized that smoke poses a much greater hazard potential than the fire itself and have tightened the requirements regarding the smoke development of construction products in their building regulations. In Sweden, only technical insulation materials that achieve at least fire class B_L-s1, d0 may be used in so-called Br1 buildings – these are buildings requiring special fire protection such as hotels or hospitals.

Armaflex Ultima system provides installations with long-term condensation control

To protect the cooling water pipes and air ducts in the Skandion Clinic against condensation and energy losses, insulation contractor Knivsta Isolering AB (Knivsta) installed the new Armaflex Ultima. They applied approximately 2,500 m of Armaflex Ultima tubes and 1,000 m² of Armaflex Ultima sheets in insulation thicknesses of 13 and 19 mm. The use of the Armaflex Ultima pipe support ensures reliable condensation control in the critical area of the pipe bracket. Armaflex isolates the pipe and bracket from each other and thus prevents thermal bridges.

To ensure that the new elastomeric insulation materials is glued securely, Armacell offers adhesives which are specially designed for Armaflex Ultima and other insulation materials based on the new Armaprene® technology. In the Skandion Clinic the insulation contractor used Armaflex Ultima 700, the reliable special adhesive for a wide temperature range. From January to May 2013, between four and six employees of Knivsta Isolering AB installed the insulation materials that were supplied by Ahlsell AB, Stockholm.





FACTS & FIGURES

Project:	Skandion Clinic, Scandinavia's first clinic for proton therapy
Operator:	Joint project of the seven provinces with university hospitals
Owner:	Akademiska Hus in collaboration with the construction company NCC
Specifier:	Incoord AB (Stockholm, Sweden)
Insulation Contractor:	Knivsta Isolering AB (Knivsta, Sweden)
Wholesaler:	Ahlsell AB (Stockholm, Sweden)
Armacell Products:	2,500 m Armaflex Ultima tubes, 1,000 m ² Armaflex Ultima sheets, Armafix Ultima pipe hanger, Armaflex Ultima 700 adhesive

Innovation

A new safety standard for flexible technical insulation materials

Every year 6,000 to 10,000 people die as a result of fires in Europe. But only a few of these are killed by the flames; the majority – 95 % of fire fatalities! – die as a consequence of smoke inhalation. In the event of a fire it is vital for those trapped that rescue routes are found quickly – and that is only possible with minimal smoke development.

The new European fire classification takes this fact into account and when assessing the fire behaviour of building products not only tests the flammability, but also the smoke density and the production of burning droplets. The new Euroclasses allow a much more realistic evaluation of the fire behaviour of the various products.

With the completely new foam Armaflex Ultima, Armacell is the first manufacturer of flexible technical insulation materials to succeed in combining extremely high flame resistance with minimal smoke development. Due to the development of completely new, intrinsically flame-resistant polymers and the use of ablative protective additives it is no longer necessary to add any brominated flame retardants. The innovative Armaprene® technology has been patented both in the USA (US Patent No. 8,163,811) and in Europe (European Patent No. 2 261 305).

Compared to a standard elastomeric product, Armaflex Ultima develops 10 times less smoke. With the fire classification B₁-s1, d0, Armacell's Armaflex Ultima has set a new safety standard in technical insulation.

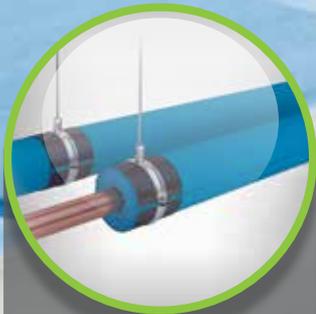
Tip: The superior fire behaviour of Armaflex Ultima is also demonstrated in a video, which can be found at www.armacell.com/ArmaflexUltima.





ARMAFLEX ULTIMA

The first flexible technical insulation material with extremely low smoke density (Euroclass B₁-s1, d0) – greater safety in a fire; an important contribution to the level of fire safety in buildings.



ARMAFIX ULTIMA

The pipe supports to match the Armaflex Ultima range prevent thermal bridges in the sensitive area of the pipe bracket – a professional system solution for greater reliability.



ARMAFLEX ULTIMA ADHESIVES

Specially developed adhesives for Armaprene® synthetic rubber – including the first solvent- and emission-free adhesive for the stricter demands of green building.



TOOLS AND SERVICES

Supporting the trade with installation guides, videos and special application training for Armaflex Ultima and the new generation of adhesives; supporting consultant engineers with personal advice and specification clauses.

The Expert

Jan Andersson, Project Manager at consultant engineering firm Incoord AB (Danderyd):

'We specified Armaflex Ultima for insulating technical installations in the Skandion Clinic because it is the only material that provides the cooling water pipes with reliable protection against condensation and achieves the required fire class. In addition, Armaflex Ultima is listed as non-hazardous by Byggvarubedömningen (BVB), the Swedish institute that assesses the sustainability of building materials - an important selection criterion for this demanding project.'



MERCEDES BENZ

Commercial Vehicle Centre Weser Ems, Germany

The state-of-the-art centre for commercial vehicles, which was opened in Bremen-Hemelingen in summer 2013, is one of the first major projects in Germany where the consultant engineers specified Armaflex Ultima for technical insulation.



POLICE HEADQUARTERS

De Witte Toren in Rotterdam, the Netherlands

Armaflex Ultima was also selected for the newly renovated police headquarters in Rotterdam. To further increase fire safety in the building, the consultant engineers replaced the classic Armaflex with the new Armaflex Ultima at a relatively late stage in the project.



HOSPITAL

Zevenaar, the Netherlands

Fire protection is the top priority in the care sector. The hospital in Zevenaar is just one of many medical facilities in which Armaflex Ultima was specified for insulating technical installations because of its low smoke density.

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