

PROPRIETIES OF POLYURETHANE FOAM

Among a wide range of insulators available on the polish market, our company is pleased to offer you a little known, but excellent insulating material, that is, rigid polyurethane foam.

Thanks to its psychical proprieties and technical specifications, it is, in many cases irreplaceable as an insulation and sealing material. It has been successfully used for almost 30 year in industrial and general construction industry all over the world (Western Europe, Middle East, Australia, USA and Canada).

The Advantages of Polyurethane foam:

*The lowest heat conductivity = 0,020-0,024 W/mk thanks to which polyurethane foam insulation has the lowest thicknes

*Its chemical structure make is strongly resistant to aggressive environments, acid, alkaline, oils, fuels, biological pollution and most solvents

*It is vapor permeable

*Its insulating characteristics combine with good mechanical strength so that it can play a role of a construction element as well

*It maintains its dimensional stability during use

*Its high content of closed cells (over 90%) causes low moinsture absorption, a maximum of not more than 3 % of its volume

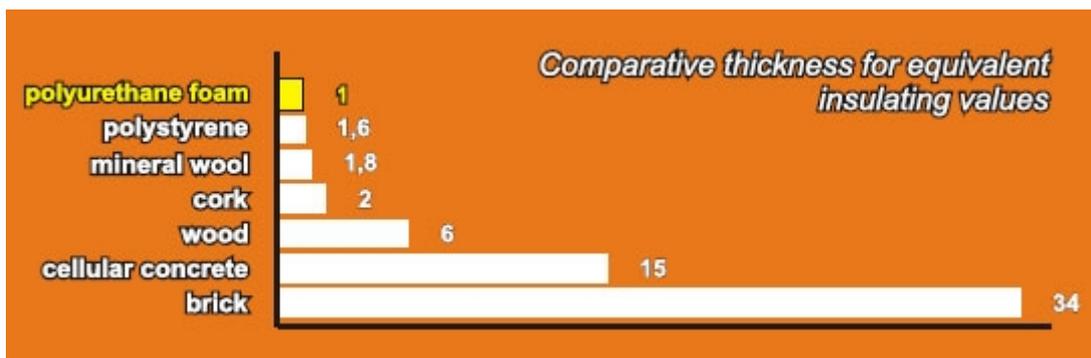
*It has very good insulation efficiency over a wide temperatures range (100 C to 120 C)

*It meets very tough fire resistance regulations in force (in construction industry with a B-2 combustibility degree according to DIN 4102 norm)

*Polyurethane foam can be easily used on any dry and clean surface: polystyrene, concrete, brick, panels OSB, eternit, tar-board, corrugated and flat metal sheets regardless the shape of the wal or roof (flat, dome, etc)

*Spray polyurethane foam is a modern and extremely efficient method of making solid and thermazl-and hydro-insulation for industrial and farming buildings

*Polyurethane foam can be molded and shaped in various forms in special molds



POLYURETHANE FOAM APPLICATIONS

Polyurethane foam is applied directly on site either by spraying or pouring. It is formed as a result of the reaction of the two liquid components (polyol and polyisocyanate) in strictly defined proportions depending on a particular application. The mixture of the two components foams, generating heat and, in the final stage, it starts to coagulate and, then, hardens. The whole takes only a few seconds. Then, the foam is so rigid that allows traffic.

In practice, the components are heated and transported to the place of application in special containers and is mixed there and sprayed under high pressure.

Examples of polyurethane foam applications produced by our company:

- *Thermal and hydro insulation of roof (instead of tar-board and other covering materials)
- *Indoor insulation of roof (i.e attic adaptations)

ROOF COATING

It had been a major problem, to carry out durable and efficient renovation of large roof surfaces, especially those of irregular shapes. The sprayed polyurethane foam offered by our company provides the opportunity to renovate as much as 400 square meters of roof surface a day. This translates into as much as an 80 % reduction in renovation time and a 50 % reduction.

Polyurethane foam can be used on any dry and clean surfaces (tar-board, corrugated and flat sheet, eternit etc.) The only limitation is imposed by the weather. This is why polyurethane foam roof coating must be applied strictly according to instructions and technical specifications.

Basic technical conditions that must be observed during work:

- the surface to which the polyurethane foam is to be applied must be a minimum of 12 C
- the surrounding air temperature must be a minimum of 15 C
- the relative air humidity must not exceed 70 %
- the surface must be clean and dry
- the wind speed must not exceed 25 km/h

Basic benefits of this technology:

- it combines a durable coating with thermal insulation
- guarantees minimal construction load (approx. 2kg/m²)
- the foam can be sprayed on the existing with no need to remove the old coating
- the polyurethane foam coating constitutes a monolithic, continuous and seamless layer with no joints and supportive hardware or materials
- the coating is resistant to acid rains, chemical and solvents
- eliminates thermal bonds and does not expand in heat or contract in cold
- allows for effective and durable insulation of elements installed in roofs such as chimneys, ventilators, or skylights
- it absorbs little moisture
- the foam is rigid and durable

INSULATION WITH POLYUREA

Material properties

High hardness and wear resistance after application, and a high stability and durability in wet conditions.

It is immune to temperature variations between -40 and 180 degrees Celsius and retains its elastic properties without undergoing rupture or weakening of resistance.

Polyurea's rapid response after application, is proportional to the time immediately following its stability can be guaranteed, guaranteeing sealing properties

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stability can be circulated, guaranteeing sealing properties in less than 3 hours. This insurance meets poliuree optimum properties after passage of 24hr after application.

The versatility of this material, drying 4secunde, gives the possibility to adapt to any surface making the product ideal for application in places with irregular, of any kind, either curved or with corners.

By applying poliureii, remove various components and systems needed now closing the final uniform surfaces, it becomes after applying the material, one piece, providing a surface very easy to clean and maintain.

Contact with fuels, fertilizers, animal excrement and urine, does not weaken or corrode the surface not protected by polyuree

Polyureii properties, allowing adherence to any surface such as cement, concrete, polyurethane, wood, metal, etc.. In addition, due to its resistance, may be circulated and antiskid

Polyurea is not considered a full floor antiphonally, but even if not designed for this purpose, however, has a good behavior in terms of sound.