FSDE
Forum for Safe Insulation with EPS

In brief: EPS protects the environment and resources

As an insulation material, EPS delivers considerable resource savings while also making homes cosy and warm. To find out how environmentally friendly EPS really is, however, its production and recovery must be taken into account as well as its use.

➡ EPS has a very positive environmental balance as well as a short environmental payback period.

Production phase: efficient use of resources *

Most of the environmental impacts of EPS arise during its production; during the use phase, little or no harm is done to the environment.

However, EPS also boasts three major advantages in the production phase:

- **Low energy demand** | Only a small amount of energy ("grey energy") is used to produce EPS compared with other insulation materials.
- **Short transport distances** | Because EPS is produced at several locations in a specific country, the distances between plants and construction sites are extremely short.
- **Alternative raw materials** | Recycled polystyrene and renewable raw materials can be used in production, which has a positive effect on the environmental balance.

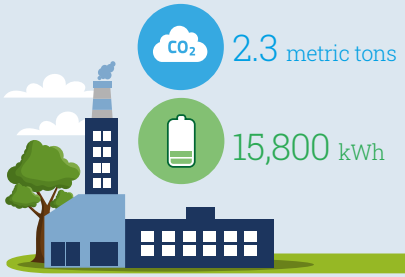
➡ Targeted measures keep the environmental impact of production to a minimum.

Use phase: large CO_2 and energy savings *

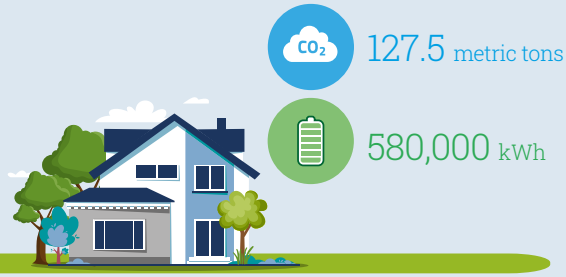
As EPS is durable and provides excellent insulation even in the long term, it has a long lifespan of 60 plus years. During this time, it prevents unwanted heat loss, thereby reducing heating demand.
A sample calculation based on a standard house illustrates the savings achieved:

For more information and explanations, visit
* mit-sicherheit-eps.de/graues-eps

CO_2 emitted and energy consumed
to produce the EPS used:



CO_2 and energy saved
by insulating with grey EPS over 40 years:



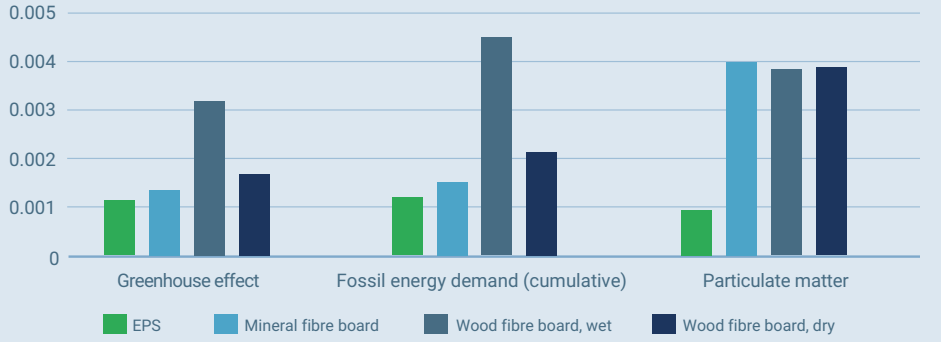
➡ Within a few years, EPS insulation pays for itself in terms of energy and the environment.

Recovery phase: relatively low environmental impact *

A study by the ifeu Institute and natureplus assessed the life cycle (including existing and future recovery options) of various insulation materials from an environmental perspective.
EPS was found to have a low environmental impact:

For more information and explanations, visit
* mit-sicherheit-eps.de/oekologische-bewertung

Annual impact per 1 m² of insulation (normalised to average per inhabitant based on the example of an exterior wall and the best recovery option)



Source: ifeu & natureplus (2019)

➡ According to the study, EPS is the best material for insulation boards (in terms of material recovery).

* Only available in German