Whitepaper on Sealing Profiles

FIVE REASONS TO THINK FUNCTION BEFORE MATERIAL

WHITEPAPER

How to design sealing profiles for best functionality

What are you looking for in a sealing profile? Good thermal insulation? Extended service life? Easy integration in your production line? A sustainable choice? Regardless of your demands, there are a few good reasons why you should consider function before material when prospecting sealing profiles.

Whether your business is doors and windows, facades or construction elements, it's generally a good idea not to stress the choice of material. Since different compounds offer different benefits, the recommended procedure is instead to start by reviewing the application's requirements, including the sealing profile. Carefully define the desired functionality while considering external factors such as climate conditions and local building regulations.

After this initial review, all the necessary information to start the design work should be in place. When outlining the structure and build of the sealing profile in an applicational context, the material can be selected with the right information at hand. This is to provide you with sealing profiles that meet your application's unique demands.

Reason 1
to think function before material

Achieve optimal performance

What is performance? For a sealing profile it's predominantly how well it lives up to a number of defined characteristics. How effective is the thermal insulation? How much noise is blocked out? The list can be made long, depending on your requirements. The demands also differ from case to case, and an optimal performance level can therefore only be achieved with an applicational focus.

Beyond the momentary performance, another factor to consider in the design process is the desired life cycle of the sealing profile. It should always be at least on par with the service life of the surrounding application to avoid costly replacements. Different compounds offer different longevity, depending on their ability to withstand strains like mechanical pressure, temperature variations and chemicals exposure.

For optimal performance, make sure that you have checked all your applicational requirements before deciding on material.

Avoid limitations due to early material choice

A sealing profile with limited or insufficient properties is an unnecessary compromise. There are many compounds to choose from, and the material decision is preferably taken further down the design process when the application has been thoroughly specified.

Limitations can occur regarding to the actual performance of the sealing profile, but also in the production process. Different compounds offer different properties, which can positively contribute to both the industrial production process and the end-functionality. When you have decided what you want to achieve, it's time to find the material that delivers on specification.

For unlimited functionality, be sure to choose the material that is best suited for your application and production process.

Reason 2
to think function before material

Meet relevant building regulations

For manufacturers connected to the building industry it's important to be updated to relevant building regulations and norms. These sometimes change, affected by technical development or as a result of political decisions. The norms can also vary greatly depending on the region in which the building is located. Lastly, there are often variations between standards in private homes and public buildings regarding safety and performance.

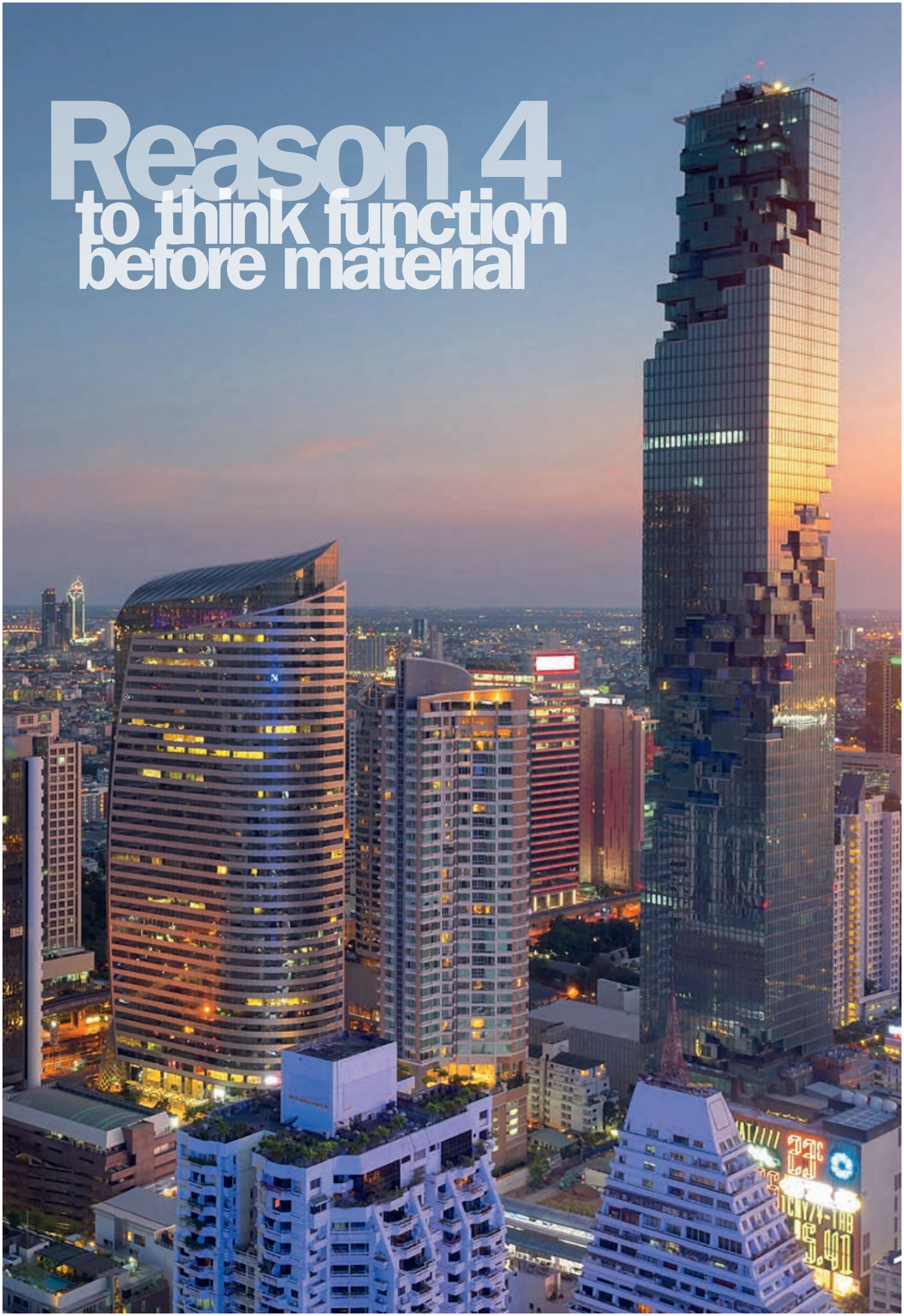
Meeting the criteria of the building regulations is key to qualify for the tests your products must pass to be considered. Naturally, this also applies to the sealing profiles that are vital parts of many doors and windows, facades and construction elements.

To make certain that you have met all relevant building norms, carefully analyze the building requirements for your application before deciding on material for your sealing profiles.

Reason 3
to think function before material

Reason 4

to think function before material



Meet the climate conditions

A building located in Bangkok, Thailand, faces different strains than if it were situated in Stockholm, Sweden. Local climate and weather conditions such as heat, cold, humidity and wind affect the building in different ways. And if the building risks exposure to extreme conditions like hurricanes or earthquakes the demands on the building components further increase.

Sealing profiles can be made from several hundreds of compounds, all with their different characteristics and benefits. With regard to the specific climate conditions at the site, a sealing profile needs to be adapted accordingly for optimal functionality. Let the design process be in control, making sure that whatever climate conditions your seals are up against, they will do their job.

To be able to handle the climate conditions, carefully analyze the regional circumstances before deciding on material for your sealing profiles.

Reason 5
to think function before material

Better integration in your production process

How is your production process structured? Are you working on a small scale with mostly manual labor? Do you run a modern production line with a high level of automation? Or something in between? Every production process is unique, and to achieve smooth performance the components have to be chosen wisely. No one wants costly down time due to a malfunctioning production line.

When it comes to automatic insertion of sealing profiles in the production process, it's important to specify a compound with the right properties. Some materials are better suited than others for machine mounting, due to surface properties, fit, bendability and so on.

For better integration of sealing profiles in your production process, carefully analyze your equipment requirements before deciding on material.

Unique design for your application

The demands on a building can vary greatly and consequently the specifications of the sealing profiles that are integral parts of many building elements. To meet the requirements at all points, custom design of sealing profiles is often the optimal way to go.

Experienced design centers
Our designers at Trelleborg excel in polymer technology and have experience from a long line of applications and industries. This ensures that we start every project at the right end, by analyzing the desired properties in the context of the building, its geographic location and relevant building norms. After the initial review, we can start designing your sealing profile with the one of our more than 400 compounds that best meets the specifications that your application requires. Our design centers will safely take you from brief to manufactured profile in one structured process.

With all necessary competence and production capabilities in-house, Trelleborg is pushing the boundaries of sealing profiles design within doors and windows, facades and construction elements.

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