CRACK FILLER

WITH EXPANDABLE MICROSPHERES

Make crack fillers lighter and easy to handle, with good filling capicity

OVERVIEW

Product Type
Expanded microspheres

Main Benefits
Buttery & creamy texture
Exceptional sanding properties
Reduced cracking & shrinkage

Applications
Filling and minor repairs
Interior structures
Horizontal applications
Vertical applications

Expandable Microspheres

Low density crack fillers are popular because of their workability and good filling capability. The **unique properties** of **expandable microspheres** makes them particularly suitable in crack fillers for repairing small holes or cracks, and for shallow fillings over large areas.

Dry expanded microspheres have a **very low density**, as low as **0.025 g/cm³**. The spheres are available in **different particle sizes**. 40 µm is the most popular choice for a fine-grained crack filler. A larger particle size, such as 80 µm, is used to create more structure.

Crack fillers containing expanded microspheres have **exceptional sanding** properties, with **less irritating dust** than glass microspheres, resulting in a **smooth surface** finish. Increased product volume means **reduced** volume **cost**.

Boud Minerals produce **dry expanded microspheres** in the **United Kingdom** to bring down costs, make production more environmentally friendly and improve product availability. This gives our **customers** more freedom in the choice of densities and packaging.

Improving Properties

Two of the most **noticeable properties** of a crack filler containing expanded microspheres, are the **weight**, or rather lack of it, and the **ease of application**.

A small addition of the microspheres **reduces weight** and gives a **large** increase in **volume**, resulting in **lower** product volume **cost**. Work has shown using ~6% w/w of expanded microspheres in a crack filler can give a density of <1.5 g/cm³.

Crack fillers with expanded microspheres have a **creamy** butter-like **consistency**. They are easy to spread out, and can even be **spray** applied, with the resulting **smooth** surface finish being **free** of **pinholes**.

Resilient and able to **withstand** repeated loads of **pressure** without being damaged, expandable spheres **regain** their **volume** after **spraying**, unlike rigid lightweight microspheres which usually fracture and lose volume.

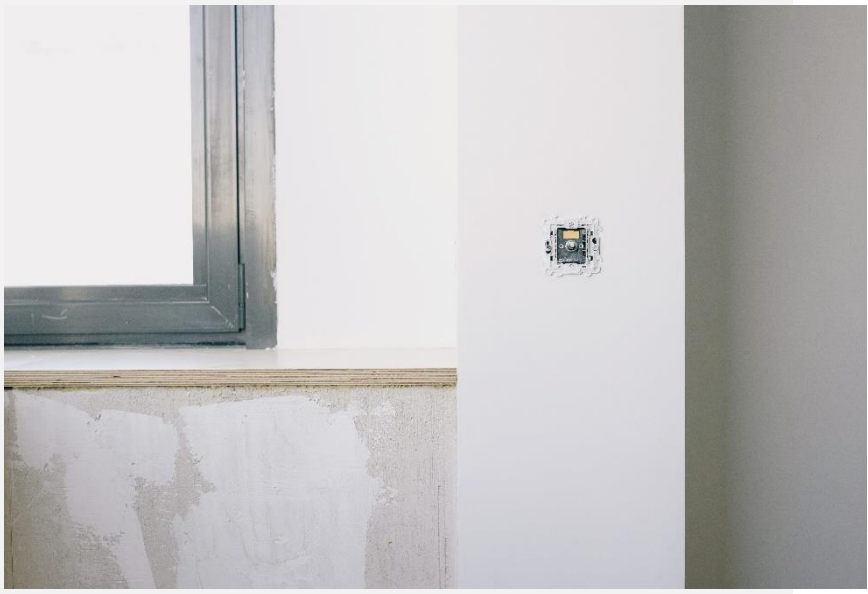
The microspheress' elasticity also means **mixing** can be carried out **without sinkers** with lost volume.

In comparison to inorganic fillers, expanded microspheres **offer superior sandability** and **less wear on tools** during sanding, with **dust** not containing broken microspheres with sharp edges causes **less irritation** to eyes and skin.

Cracking and **shrinkage** are eliminated, or reduced.

Application Ideas

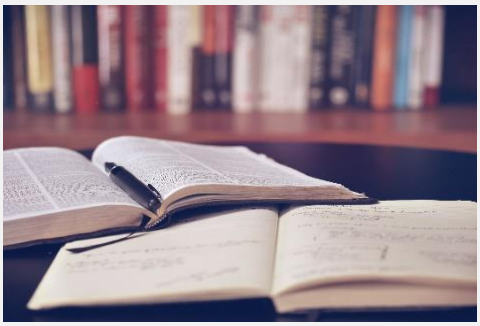
Not only for filling cracks



Expanded microspheres are chosen when the formulator is looking for technology to develop an ultra-lightweight crack filler which will **out perform traditional products**.

Ultra-lightweight crack fillers containing expanded microspheres are **simple to use**, and ideal for using in a **variety of tasks** around the home, in the workplace or for hobbies:

- Automotive bodyfillers
- Boat repairs
- Filling depressions, dents
- Gap repair
- Hairline cracks
- Nail holes
- Tape joints
- Shallow fillings over a large surface area
- Smoothing a moderately rough surface
- Surfboard repairs
- Windsurf board repairs



What's Next?

Further Reading

Our **Technical Guide – Properties of Expandable Microspheres** takes an in depth look at the properties of expandable microspheres. A great introduction if you are new to the world of expandable microspheres.

Lightweight fillers have a multitude of uses including automotive bodyfillers and fairing compouds. Find out how we worked with a customer to develop a filler suitable for use in a challenging climate in our **Case Study – Automotive Bodyfiller with Expandable Microspheres**.

To learn about making a filler for boat and surfboard repairs, and read the thoughts of surfboard shapers who use expandable microspheres to repair surfboard dings check out our **Case Study – Fairing Compounds with Expandable Microspheres**.

Do you need help **choosing the right grade** for your application, **more information** or a **sample** to try?

We are always happy to help and answer any questions you may have. Please do not hesitate to contact us:

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