# Fiberbinder® **User manual**

## APPLICATION

Fiberbinder® is an occupational health and safety product used to minimise the risk of inhaling and spreading harmful asbestos and mineral wool fibres and other historical dust. Fiberbinder® fixes harmful fibres and dust for at least 12 months, and the product significantly improves the working environment when used correctly.

Fiberbinder® can be used in the following situations:

- 1. As a wetting agent on asbestos-containing corrugated and slate roofs before dismantling.
- 2. As a wetting agent on mineral wool bats before they are manually removed or vacuumed away.
- 3. In attics following remediation where it has not been possible to remove all asbestos or mineral wool fibres by thorough vacuuming and extraction.
- 4. As a wetting agent on other asbestos-containing items before they are dismantled and disposed of, e.g. battens, rafters, etc.
- 5. On other historical dust and in areas where you want to minimise the impact of dust in general while working in the area.

1) When used as a wetting agent on asbestos-containing corrugated eternite panels and shale ternite cladding before dismantling, Fiberbinder® is used to limit the spread of fibres to the environment both during dismantling and during subsequent transport to landfill and handling during landfill. Fiberbinder® is applied to surfaces with a battery-powered backpack sprayer. On screw holes, between sheet overlaps and in the event of breakage along the way, Fiberbinder® can be applied with a hand-held atomiser. For corrugated eternite panels, the Fiberbinder® is applied row by row and also removed row by row. For slate cladding, the Fiberbinder® is applied square metre by square metre and removed square metre by square metre. This is to avoid walking on areas with Fiberbinder®, as this can cause a slippery surface in some cases. Then place the panels/cladding in suitable bags for asbestos waste and label them with stickers provided to document that the contents are fibre-bonded. Place a suitable collection tray at overhangs so that any excess Fiberbinder® that may drip off the roof covering is collected and can be disposed of as asbestos waste.

2) When used as a wetting agent on mineral wool bats prior to removal, Fiberbinder® is used to minimise the amount of fibres in the air, which subsequently makes cleaning even more difficult. Fiberbinder® is applied to the surface of the mineral wool, after which the mineral wool is folded and placed in suitable asbestos waste bags (in the case of asbestos-contaminated mineral wool or mineral wool from before 1997) and labelled with stickers provided to document that the contents are fibre-bound all the way to landfill. Fiberbinder® should only be applied up to approx. 10 cm from rafters, battens and other items that will subsequently be vacuumed. **It is important that Fiberbinder® is not used on items that will subsequently be vacuumed.** 

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3) When used in attics following asbestos removal, Fiberbinder® is used to fix the fibres that could not be removed by thorough vacuuming and extraction. Fiberbinder® can also be used as an extra precautionary measure if there is even the slightest doubt that asbestos fibres or other harmful fibres may still be present. It is important that Fiberbinder® is only used once the entire decontamination, cleaning and extraction process has been completed in accordance with the applicable asbestos regulations and associated guidelines. Fiberbinder® cannot be used as a substitute for thorough cleaning and extraction. Fiberbinder® should only be used on surfaces that do not require subsequent vacuuming, painting, cleaning or other surface treatment. However, rafter ends and battens in roof structures can be surface treated with wood preservative or similar in continuation of fibre bonding.

4) When used as a wetting agent on other asbestos-containing items prior to dismantling and disposal, Fiberbinder® is used to limit the spread of fibres to the environment both during dismantling and during subsequent transport to landfill and handling during landfill. Fiberbinder® is also used to minimise the amount of fibres in the air, which subsequently makes cleaning even more difficult. Fiberbinder® is applied to the selected items so that the surface is soaked. Allow Fiberbinder® to soak into the item for approximately one hour. Then dismantle and dispose of the items as asbestos waste in accordance with applicable regulations. Fiberbinder® should only be applied up to approx. 10 cm from areas that will subsequently be vacuumed. It is important that Fiberbinder® is not used on items and areas that will subsequently need to be vacuumed.

5) When used on other historic dust (where neither asbestos nor pre-1997 mineral wool is present), Fiberbinder® is applied to minimise the nuisance of dust in general while working on the area. Fiberbinder® is applied with a battery-operated backpack sprayer until the selected surfaces are soaked. If the volume of dust is so large that it is in piles or layers of several millimetres, it is recommended to vacuum the area before applying Fiberbinder®.

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## **REQUIREMENTS FOR PRE-CLEANING ETC.**

Fiberbinder® is not a replacement for, but a supplement to, the usual thorough cleaning in connection with asbestos removal. Fiberbinder® is used **after** completion of the usual cleaning process, including extraction and air purification processes in accordance with the applicable asbestos regulations and associated guidelines.

### **PREPARATION:**

When used in asbestos-remediated attics, all asbestos removal must be completed and all surfaces must be cleaned, and extraction and air purification processes must be carried out in accordance with applicable regulations and guidelines. Any technical installations, cables and other items that are not to be fibre-bonded and/or that do not tolerate pigment must be thoroughly covered before the area is fibre-bonded.

When used in connection with asbestos and mineral wool from before 1997, the advisor/supervisor on the project must release the area for Fibre Bonding and advise which areas are to be Fibre Bonded. In the case of long-term projects where Fiberbinder® is continuously used in different areas, a plan for ongoing self-monitoring of correct application should be drawn up in advance.

## PROTECTIVE EQUIPMENT AND OTHER REQUIREMENTS

Always use appropriate and legally required protective equipment for the task at hand. As Fiberbinder® is atomised, always wear at least a suitable dust mask to protect against aerosols, as well as gloves and safety glasses. If application takes place as part of asbestos removal, e.g. when applying to asbestos-contaminated mineral wool bats before they are removed, the same protective equipment must be used as is used for asbestos removal tasks. All other safety regulations and guidelines that apply in connection with asbestos and mineral wool remediation also apply when applying Fiberbinder®.

This applies, for example, to education, training and instruction, shielding of the workplace, negative pressure and air purification, access to the decontamination area, ongoing inspections, final inspections and sampling. After application of Fiberbinder®, the fibre bonded surfaces will be slightly tacky. Fibre bonded surfaces may appear smoother to walk on depending on the nature of the surface. Fiberbinder® should not be applied to plastic surfaces or other similar smooth surfaces that will subsequently be walked on.

## TRACE ELEMENTS AND QUALITY DOCUMENTATION

Fiberbinder® contains pigment (dye) and fluorescence for use

in tracking, documentation and preparation of quality assurance material. The effect of the tracers varies depending on the nature of the surface. Fiberbinder® should not be used on surfaces where pigmentation/fluorescence is undesirable. In these situations, Fiberbinder® is also available in a clear version.

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For quality assurance documentation, use the free Fiberbinder app, which can be accessed via www.fiberbinder.dk. Photo documentation is made via the app immediately after the application of Fiberbinder®. Photos are taken while the surface is still wet, as this is when the pigment is most visible.

### **MIXING RATIO AND REACH**

Fiberbinder® is delivered ready to use. Before application, shake the liquid for at least two minutes. Coverage is approx. 10  $m^2/L$  depending on the nature of the substrate and the nature of the job. In special situations, the surface may be so porous or absorbent that the coverage is 5-10  $m^2/L$ .

### **APPLICATION PROCEDURE**

Apply the shaken Fibre Binder Liquid to the selected surfaces in an even layer with a battery-powered backpack sprayer until the surface is soaked. After application to wooden structures, the area should be left untouched and undisturbed for at least 2 hours before starting subsequent work. When used on roof cladding, mineral wool bats and other items that need to be dismantled, dismantling can take place immediately after applying Fiberbinder®.

### **DURABILITY AND DURATION OF EFFECT**

Store the product in a dark place. Unopened Fiberbinder® must be used within 24 months of the production date. Opened Fiberbinder® must be used within 14 days after opening. The fibre binding capacity of Fiberbinder® remains for at least 12 months after application. If, after this period has expired, work is to be carried out in areas where surfaces have been treated with Fiberbinder®, or if access to the fibre-bonded areas is gained in any other way, e.g. in connection with inspections of the areas, etc.

### **FURTHER INFORMATION**

For further information, please refer to the product's safety data sheet, technical data sheet and product data sheet. For further information on the effectiveness of Fiberbinder, please refer to the report of 22 May 2022 from Danish Environmental Analysis, available at www.fiberbinder.dk.