

For effective, daily cleansing of the skin from small particles.

powder-ex® is a special skin cleansing product for daily use in the workplace.

The product is optimised for cleaning the skin of very small particles: especially metal powders, plastic powders and ceramic powders.



Small particles in particular cannot reliably be removed from the skin using common methods. Both skin contact and the subsequent oral ingestion of the particles through contamination carry-over pose a health risk. The smaller the particle size, the less suitable ordinary agents are effective in washing off the particles. Skin cleansing products **should not contain soaps or other penetration enhancers** in order not to damage the natural skin barrier. Soap, surfactants and solvents open the pores of the skin, which can lead to an increased absorption of hazardous substances. powder-ex® was developed to meet the high requirements in these work areas and provides **reliable skin cleansing without impairing the skin barrier**.

Effectiveness study

powder-ex® was developed by specialists in the field of nanosciences at the Leibniz Institute of Polymer Research Dresden e.V. The product patent is pending (PCT20171117.3). Scientific studies on efficacy were carried out on a pig skin model based on Standard Operating Procedure SOP_SPH_04 (preparation of split skin with defined thickness for use in penetration tests). To ensure a wide range of applications, particles of different substance classes were used. Among them: Metal, metal oxide and polymer particles. For all these particle types, a decontamination performance of over 99% was found, which is up to 25 times better than conventional soaps in regard of particles remaining on the skin. The substances contained allow even hydrophobic and gelled particles to be removed.

Skin compatibility

The skin compatibility of powder-ex® has been certified as 'very good' by the independent dermatological institute dermatest®. Due to the pH skin-neutral formula, the natural acid mantle of the skin is not affected. This layer on the surface of the skin is essential to maintain the natural bacterial balance. The balanced formula with skin-compatible components is suitable for all skin types.

powder-ex® brings the skin protection plan up to the state of the art

powder-ex® provides **reliable skin cleansing without compromising the skin barrier**.

In many work areas, employees are exposed to metal powders, plastic powders and other fine powders. These can be work areas where powders are used specifically, such as in additive manufacturing, pigment production, compounding on in the cosmetics industry, as well as work areas where they are created in the process, such as polishing, milling, drilling, blasting or sintering. There work areas are confronted with special challenges in occupational safety and health.

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| | For daily use |
| | Removes all materials |
| | Removes particles larger 4 nm |
| | Soap free |
| | Prevents oral uptake of particles |
| | Prevents uptake through the skin |
| | Over 99% cleaning performance |
| | Applicable with cold water |
| | Dermatologically approved |

When and how to use



- Before every meal.
- End of the working day.
- After heavy contamination.
- As required. At least when leaving the premises where the powdery materials are stored, moved or processed.

For use after contamination of the skin by small particles in powder form. powder-ex® binds more than 99% of all particles. The product is designed for daily use as part of a skin protection or hygiene plan. Very small particles are often invisible to the naked eye, thus effective skin cleansing is important even when only minor contamination is apparently visible. We recommend the provision of powder-ex® in pump dispensers or tubes at all washing and hygiene stations at workplaces where powdered materials are stored, processed or prepared. **Before using the dispenser insert for the first time, pump several times until the gel comes out.**

- 1.)  Wash hands and wrists with water.
- 2.)  Rub in the gel until no more free skin is visible.
- 3.)  Wash off the gel thoroughly.

Information on ingredients

powder-ex® was developed on the basis of special cosmetic raw materials that are compatible with the skin. The formulation of powder-ex® deliberately avoids the use of surfactants and substances known as 'penetration enhancers'. The black colour of the gel is due to the addition of activated carbon. This consists of approx. 90 percent highly porous carbon, has a large inner surface area and is therefore a very good adsorption agent. Our activated carbon is obtained from natural coconut shells. In addition, it contains clay minerals. These are naturally derived minerals that are able to bind many substances. The clays kaolin and bentonite are used in powder-ex®.

Frequently asked questions

Are irritations or allergic reactions of the skin of concern?
Independent skin tests by dermatest® confirm very good skin tolerance. So far, no allergic reactions have occurred.

Is powder-ex® only intended for cleaning hands?
powder-ex® can be used to cleanse all areas of the skin on the body as required.

How many times a day can I use the product?
The product can be used as often as necessary, we recommend at least using it before each meal and before finishing work.

Can powder-ex® also be used to remove particles in solutions from the skin?

Yes, powder-ex® can also remove particles in solutions from the skin.

Available as:



- Insert for EURO pump dispenser (500ml, 1000ml)
- Tube with flip-top cap (100ml, 200ml)

Shelf life and storage

powder-ex® has a shelf life of at least 24 months in tube format and 12 months in EURO pump dispenser insert, unopened and at room temperature.

Service and support

We are happy to support you - contact us if you have any questions about the product or its implementation.

Contact

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