Technical Data Sheet

Properties:

AKEMI® Stain Repellent Nano-Effect is a ready-to-use, weather-resistant and non-yellowing impregnation based on high-quality organic active substances. The product is absorbed by the stone due to the capillary forces, however, without closing the pores, therefore the product is very effective and durable.

The product is characterised by the following properties:

- very fast development of protective effect
- distinctive pearl effect
- no or only low colour enhancement
- outstanding water, dirt, oil and grease repellent effect (tested on natural and artificial stone in accordance with DIN EN ISO 10545-14 and CTIOA T-72)
- fast liberation of humidity during dry periods due to high vapour permeability
- evidently low adhesion of paints on treated stone surfaces - anti-graffiti effect
- maintenance of breathing properties because there is no surface layer
- tack-free hardening
- non-yellowing
- resistance to UV radiation
- no release of methanol during hardening
- emission class A+ (confirmed by an external testing institute)
- after hardening the product is harmless to health upon contact with food products (certified by an external German testing institute)

Application Area:

AKEMI® Stain Repellent Nano-Effect is used for water-, grease- and oil repellent treatment of mineral building material, e.g. natural and artificial stone (polished ground or rough surfaces of marble, lime stone, granite, gneiss, porphyry, sandstone, cotto, terrazzo, quartz, fine stoneware, concrete, cement tiles, unglazed ceramic tiles etc.). The product is especially used in kitchens (coatings, countertops), bathrooms (wash tables, marble tiles), for tables, window sills, tile joints, facades (anti-graffiti).

Instructions for Use:

Disregarding the processing guidelines can lead to irreparable damage!

1. **Cleaning**:
   The surface must be clean, completely dry and free from all layers. In outdoor areas it has to be taken care that the stone does not contain any harmful salts since these reduce the absorptive capacity of the stone. Depending on the type of stone and the degree of soiling, the following AKEMI® products are recommended: Stone Cleaner, Concrete Film Remover, Rust Remover, Wax Stripper, Algae and Moss Remover, Oil and Grease Remover Paste, Graffiti-Remover. Please observe the respective Stone Care Recommendations and Technical Data Sheets. In any case, after cleaning rinse well with water. Before the stone is given its protective treatment, it must be totally dry. As a rule, this is the case after 1 - 2 days at the earliest.

2. **Preparation of a sample area**:
   Before starting we recommend to prepare a sample area of 1 - 2 m² in order to examine the efficiency of the impregnation, to evaluate the appearance of the treated object (colour enhancement) and to ascertain the material consumption as exactly as possible.

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3. **Impregnation procedure**:

a) Shake well before use. The best conditions for impregnating is a temperature of 10 - 30°C and protection from humidity for approx. 2 - 3 hours. The stone must not be warmed up by an underfloor heating or direct sunlight.
b) The impregnating effect is sufficient for fissures which are smaller than 0.3 mm.
c) In general, one to two appliances wet-in-wet are sufficient. In case of less absorbent surfaces, we recommend to dilute with AKEMI® Nitro-Dilution in the ratio of 1:1.
d) Apply the product with a brush or a mop. Airless spraying equipment with low pressure (max. 1 bar over pressure) is suitable for treating cades using the flooding (multiple-coat) method and a jet distance of 5 - 10 cm (condition: tubes and seals must be resistant to solvents). The impregnation is applied until it runs down 40 - 50 cm.
e) Approx. 20 minutes after application, respectively before drying of the impregnation on the surface, any excess which has not been absorbed by the stone has to be completely removed with a suitable cloth. Polished surfaces must additionally be polished again until any blooming on the surface is removed.
f) If the desired effect is not achieved or if the impregnation has been applied unevenly, it is possible to apply the impregnation once again. The water-repellent effect develops after a few minutes, full protection after 2 - 3 hours.
g) Sufficient ventilation (approx. 2 - 3 days) is necessary when using the product in food areas.
h) Tools can be cleaned with AKEMI® Nitro Thinner.

Special Notes:

- For professional use only.
- Special protective measure in case of spray application: avoid formation of aerosols and risk to third parties. Do not breathe vapours (protective mask).
- Ensure sealing of the reverse side and lateral surfaces of the stone, so that rising moisture cannot penetrate into the stone. In this context we recommend the use of AKEMI® Anti-Stain Coating 2015 to seal the reverse side and the lateral surfaces.
- If stored at temperatures below 15°C the product tends to thicken. By warming to approx. 20°C it becomes fully liquid and homogenous.
- If the treated area is cleaned, a drying time of 1 - 2 days (depending on the temperature) is necessary.
- An impregnation with AKEMI® Stain Repellent Nano-Effect prevents the stone from staining respectively the development of these spots will be delayed considerably. Should they nevertheless appear, the surface can be cleaned much more easily.
- Unsuited or aggressive cleaning agents as well as pressure washers may destroy the impregnation and the stone. We recommend to use AKEMI® Mild Stone Soap or AKEMI® Crystal Clean for regular cleaning.
- The product should be re-applied once a year on surfaces which are heavily used (e.g. floors).
- Even on stone surfaces impregnated with AKEMI® Stain Repellent Nano-Effect, it is possible that spots are forming after a long time of exposure to aggressive products (e.g. juice, vinegar, alcohol or cosmetics). Yet, this formation is by far lower as on surfaces not

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being treated with AKEMI® Stain Repellent Nano-Effect. Spots can be avoided by immediately removing these aggressive products.
- Product which has been inaccurately applied, can possibly be removed with AKEMI® Impregnation Remover.
- Existing joints must be tested in view of their resistance to solvents. In case wetting agents had been used to smoothen joint fillers, they must be removed prior to application of the impregnation.
- AKEMI® Stain Repellent Nano-Effect is not suited for glazed and non-absorbent surfaces or plaster.
- A surplus of the product causes blooming and spotting.
- Use AKEMI® Liquid Glove to protect your hands.
- Surfaces to be treated must be protected against direct solar radiation.
- Protect synthetic materials which are not resistant to solvents, e.g. window screens, parts to be varnished or objects in the area of working (cars, gardens).
- On some natural stones like e.g. Nero Assoluto or Nero Impala the stone-imminent structures may be stronger intensified than the residual stone surface if treated with Stain Repellent Nano-Effect. This might be seen as staining, however, the colour intensification is not a product defect but is attributed to the characteristics of the stone.
- When applying the product correctly it is not hazardous to health.
- For proper waste disposal, the container must be completely emptied.
- Recycling in accordance with the guidelines of EU Decision 97/129 EC on the Packaging Directive 94/62/EC.

Technical Data:

Coverage:	up to 25 m²/liter; depending on absorbency of the stone
Colour:	transparent colourless
Density:	approx. 0.78 g/cm³

Storage:

If stored in dry and cool condition (5-25°C/41-77°F) in its closed original container at least 24 months from production.

Health & Safety:

Read Safety Data Sheet before handling or using this product.

Important Notice:

The above information is based on the latest stage of development and application technology. Due to a multiplicity of different influencing factors, this information – as well as other oral or written technical advises – must be considered as non-binding hints. The user is obliged in each particular case to conduct performance tests, including but not limited to trails of the product, in an inconspicuous area or fabrication of a sample piece.

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