Technical Instruction Sheet

Characteristics: AKEMI® UV-Fillers are stone fillers based on unsaturated polyester resins dissolved in styrene, hardening by ultraviolet radiation. The products are distinguished by the following qualities:

- 1-component product for thin layers (< 5 mm)
- very rapid surface drying (already after 10-20 seconds of radiation)
- good penetration into small fissures, sandy and clayey areas
- variable application due to different consistencies and colours
- hardening is also possible by sunlight

Field of Application: UV-Fillers are mainly used for working natural stone slabs in polishing line plants for filling small holes, fissures and strengthening porous areas without having to add a hardener component. Due to various consistencies available (liquid, viscid) and different colours (colourless, umbra) everyone can choose the most suitable quality. UV-Fillers contain a special additive which allows thicker layers or cavernous holes to harden, by adding AKEMI® hardening powder. Yet, hardening time is still more than 8 hours when adding 0.5-1% of hardening powder.

Technical Conditions: Special UV light sources with a wavelength of 365-420 mm are necessary for the hardening process:

1. Fluorescent tubes
   - Philips TL/10R (40-100 W, different sizes)
   - Osram UVA (40-80 W, different sizes)
2. UV spots (combination of UV- and IR-radiation)
   - Philips MLU - 300 W
   - Osram Ultra-Vitalux - 300 W
3. Metal halide lamps
   - Hönle Uvaspot 400 T

The best light output is achieved when using metal halide lamps or UV-spots, their effect in depth and speed of hardening is better that that of fluorescent tubes.

Instructions for Use:

1. The surface to be treated must be clean, dry and free from dust.
2. To fill bigger holes or carvenous holes, 0.5-1% of AKEMI® hardening powder should be added.
3. Apply the required quantity of UV-filler with a spatula.
4. Expose the filled areas to UV-radiation:
   a) Fluorescent tubes : for at least 2.5 - 5 min
   b) UV spots or metal halide lamps : for at least 1 - 2.5 min
5. The filled slabs can then be grind and polished.
6. Tools can be cleaned with AKEMI® Nitro-Dilution.

Special Hints:

- Use AKEMI® Liquid Glove to protect your hands.
- When filling thicker layers (> 5 mm) without adding hardening powder, there will be no hardening at the bottom of the layer ==> permanent smell of styrene, poor adhesion, discolouring to green.
- Poor adhesion on humid surfaces
- Insufficient radiation time: ==> insufficient hardening ==> no stability ==> separation of the filler during grinding or polishing procedure ==> discolouring to green possible.
- Once hardened, solvents can no longer remove the filler. Removal is only possible mechanically or by higher temperatures (> 200°C).
- Being worked properly, the hardened filler is generally recognised as not injurious to health.

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Safety Measures: see EC Safety Data Sheet

Technical Data:

Colours:	UV-Filler Transparent:	transparent-yellowish
	UV-Filler Transp. L-Special:	transparent-yellowish
	UV-Filler Umbra:	transparent yellow-brownish
	UV-Filler Umbra L-Special:	transparent yellow-brownish
Density:	1.13 -1.51 g/cm³	
Working time / min.:		
a) without hardening powder at 20°C:		at room temperature unlimited (w/o radiation)
b) 0.5 - 1% hardening powder at 20°C:		approx. 8 hrs (w/o radiation)
Shelf life:	1 year approx. if stored in cool place free from frost in its tightly closed original container.	

Notice: The above information is based on the latest stage of technical progress. It is to be considered as a non-binding hint and does not release the user from a performance test, since application, processing and environmental influences are beyond our realm of control.

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