LIOSIL® HC 621 E: A WATER-BASED, FLUORINE-FREE IMPREGNATION AGENT BASED ON SILICONES

Water repellency for modern textiles requires specific fabric care products.

Water repellency is a characteristic of modern textiles such as outdoor clothing. For these high-performance textiles, consumers need a high-performance fabric care product in their laundry to achieve specific and perceptible benefits such as water repellency through wash impregnation.

Unique Features of LIOSIL® HC 621 E

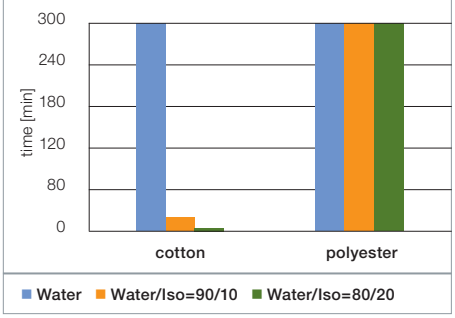
- Water-based formulation
- Does not contain components based on perfluoralkylated resins
- Emulsifier/surfactant free formulations
- No drawback of a lower impregnation effect than solvent-based products

Fabric treated with LIOSIL® HC 621 E

LIOSIL® HC 621 E is a finely dispersed water-based silicone emulsion.

The particle size is in the nanometer range.
The emulsion can be easily diluted with water or readily incorporated into cold stirred formulations.
LIOSIL® HC 621 E is manufactured to have a low content of low molecular weight cyclic siloxanes.

Table 1: Measurement of the penetration time of a 0.04 ml water droplet on with-LIOSIL® HC 621 E impregnated fabrics



LIOSIL® HC 621 E

Application

LIOSIL® HC 621 E is used primarily as polish in the home care sector.
LIOSIL® HC 621 E is ideal for impregnating natural or synthetic textiles in a washing machine.

It is recommended to apply the product containing LIOSIL® HC 621 E during the rinse cycle. The impregnation effect is reached without loss of fabric breathability.

LIOSIL® HC 621 E significantly improves many surface substrates.

LIOSIL® HC 621 E offers:

- Protection against humidity and moisture
- Protection against soil and stains
- Surface enhancement
- Surface renewal

LIOSIL® HC 621 E also offers:

- Increased durability
- Decreased dirt pick-up
- Breathability

Application examples:

Table 2: Measurement of the contact angle of a water droplet on marble (impregnated with LIOSIL® HC 621 E by cloth)

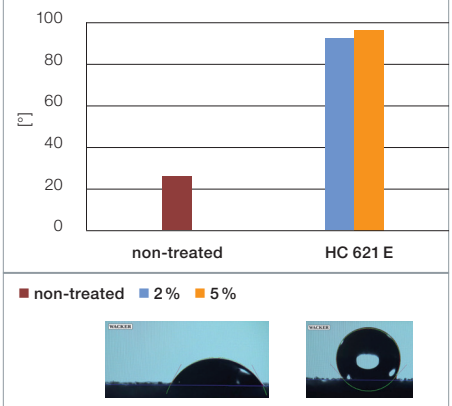


Table 3: Determination of soil repellency on marble (impregnated with LIOSIL® HC 621 E by cloth)

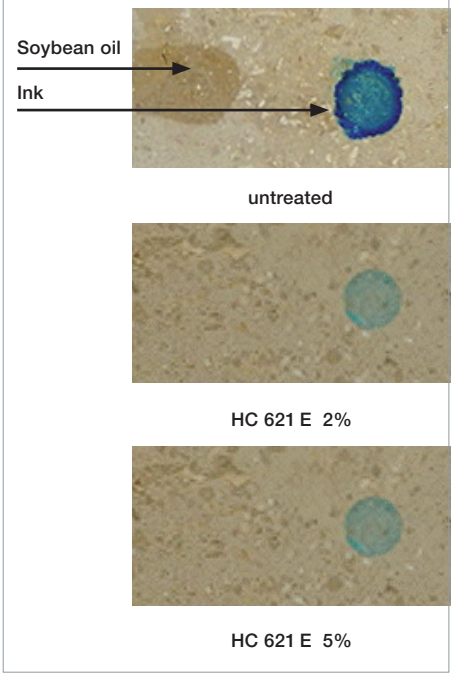
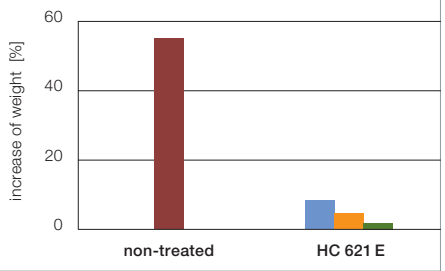


Table 4: Measurement of the water absorption of treated wood cube after 1 hour in 0.5 cm deep water (impregnated with LIOSIL® HC 621 E by dipping methodology)



non-treated 2 % 5 %

10 % of an aqueous solution of LIOSIL® HC 621 E
Dipping methodology: dipping into the test solution for 5 seconds and drying for 3 days at room temperature.

LIOSIL® HC 621 E is suitable for the following porous substrates:

- Shoes and leather
- Flooring like wood, laminate, cork, stone, tiles, etc.
- Textiles of natural and synthetic fibers, and functional materials

Application Recommendations and Treatment Methods:

- Wash impregnation agent
- Trigger spray1):
  droplet size when sprayed:
  - average aerodynamic diameter must be ≥ 30 µm
  - particles with diameter < 10 µm must represent ≤ 1% of the total amount of sprayed droplets
- Coating (e.g. with a sponge)
- Dipping

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