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ISO 9001:2008
ISO 14001:2004

LUKOFOB 39

silicone water-soluble hydrophobizing agent

Lukofob 39 is an aqueous solution of methylsilanolates designed for the final surface waterproof impregnation of porous silicate materials such as plasters, gas-silicates, lignite boards, concrete, light sandstone, brick, burnt roofing, artificial stone (cement binder), face bricks, floor tiles without glaze, concrete paving and roofing.
Lukofob 39 is supplied in concentrated form and has to be diluted with water before use. The solvent vehicle (water) facilitate efficient transportation of the silicone component deep into the porous structure of the treated material. The application is not intended to create a film of the preparation on the surface, but to make the preparation become impregnated as much as possible. When water evaporates, hydrophobization takes place inside the pores. Subsequently, the looks of the original material, as well as its vapor permeability, remain unchanged.

Effects of silicone hydrophobizing preparations
With regard to silicon's enhanced resistance against climatic conditions, sunshine, and temperature, the hydrophobic finish is featured with a remarkable service life. Hydrophobized porous silicate materials are characterized with these qualities:

- Reduced dirt collection: Rain washes off the surface, not allowing the dust to become soaked in the base.
- The absorption capacity of the surface is not enhanced; and the material's strength and service life are not reduced due to freezing during the winter season.
- Soluble parts are not washed away: Subsequently, the absorption capacity of the surface is not enhanced; and the material's strength and service life are not reduced due to freezing during the winter season.
- The original thermal insulation is retained, especially that of brickwork silicate materials, since it is mainly during the fall season that perpendicularly oriented rainfall brings about the imbibition of the brickwork resulting in the impairment of thermal insulation.

The service life of hydrophobic treatment depends on the quality of application, type of base, exposure (roof, cardinal points), and ranges from 5 to 10 years after which hydrophobization can be repeated.

Basic parameters

Color	yellowish to yellow-brown (invisible when dilute and dry)
Contents of non-volatile components (weight %)	36 - 43
Effective substance contents (weight %)	17 - 23
Density	1270 - 1300
pH	13
Solidification point (°C)	Under -10
Miscibility with water	Unlimited

Hydrophobizing treatment working procedure

Surface hydrophobization of silicate materials by spraying or painting
Recommended dilution of Lukofob 39with water for application on different porous bases:

Material	**Lukofob 39**
plasters, gas-silicates, lignite boards, concrete, light sandstone, brick, artificial stone (cement binder), floor tiles without glaze, concrete paving and roofing	1 : 10 - 15
all dark bases	minimal 1 : 15
face brick, burnt roofing	1 : 20 – 40

- The approximate consumption of **Lukofob 39** is 0.25 to 1.5 l per 1 m^2 of treated surface depending on the absorption capacity of the material (usual consumption is up to 0.5 l/m^2). Before application the preparation should be tested on a small area to see the final look of the treated base material and to identify the real consumption of the preparation.
- Applications is carried out at a base and ambient temperature of +5 up to + 30°C.

Apply on dry, clean surfaces that have not been heated by sunlight as a final construction treatment. The base must be carbonized, for instance with lime-cement plaster, or birch can be hydrophobized no sooner than one month after application. Blooms, old or peeling coatings and paints must be blasted, brushed off or otherwise removed. Dust and dirt must be washed with clean (pressure) water and the base material is let dry thoroughly. When the preparation is applied on a wet surface, the quality of the hydrophobizing treatment is compromised. Cracks, joints and incoherent areas must be repaired before the hydrophobizing preparation is applied.

Lukofob 39 is applied by spraying (low-pressure spray guns), paint roller or paint brush and only in an amount that is absorbed and does not run down vertical walls. The preparation must be applied evenly across the entire surface until the complete saturation of the base. The applied solution may never run down walls as this would present the risk of efflorescence! The area that has already absorbed the preparation can be retouched even before the preparation becomes fully dry. **The perfectly dry preparation is not recoated.** The areas that have not absorbed all preparation should be wiped as soon as possible.

- Spraying of the **Lukofob 39** solution can be done with a regular sprayer, applying an even cross-spread from a small distance in such amounts until the solution is well-absorbed.
- Brush application is less productive and requires careful procedure, ensuring that the applied spread is even all over the working area, as 'missed' points would become darker and darker after a certain time due to their proneness to become dirty more easily

The coated surface must be protected from rain for about 24 hours. The drying of the hydrophobized material depends on local conditions. The full hydrophobic effects develop in several days.
It is advised to close all windows and doors before spraying. Working aids and stained non-porous base materials must be washed with water as soon as possible.

Application by means of soaking

Application by means of soaking is mainly used when finishing burnt roofing and bricks.

- Dilution of **Lukofob 39** with water at a ratio from **1: 50 to 1 : 100**
- The time of application is 0.5 to 5 minutes. The necessary time period is complete at the moment when bubbles stop bursting on the surface of the soaked material.

Notification
Recommended concentrations of hydrophobizing solutions must be observed. Higher concentrations does not result in better hydrophobic effect, yet it can worsen vapor-permeability and the formation of efflorescence.
Avoid hydrophobization of non-porous materials such as asphalt bitumens, metals, plastic materials, and porous materials such as wood and chipboard.

Safety and hygiene
Lukofob 39 is classified as a dangerous preparation. Therefore, when you use this preparation always follow the instructions shown on the label and in the safety data sheet.

Packaging and storage
Lukofob 39 – 1.25 kg PE bottle, 30 kg PE can, 250 kg barrel, 1,000 kg container
Lukofob 39 - 24 months from the date of the filling of the original packaging at a temperature ranging from -10 to + 40 °C.

Liquidation of packaging and unused residues
Liquidate preparation residues as dangerous waste. Packaging units that are perfectly cleaned of preparation residues (dripping or water rinsing) can be liquidated as communal waste, or recycled. Preparation residues can be rinsed provided that the preparation is diluted. Observe the instructions shown on information labels and in safety data sheets.

This data sheet contains data that are not binding, and are provided for the customer's information. The information on the specified types of applications is not exhaustive. Should you have any doubts or questions contact the Department for Commercial and Technical Services of Lučební závody, a.s., Kolín, e-mail. ots@lucebni.cz

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