



# Breathing Walls

styronit®

Green Insulation

## STY HRSN Renovation/Restoration/Reconstruction of Historical Buildings

### Product Description

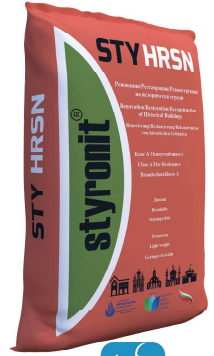
Sty HRSN is a natural plaster for renovation, restoration of historical buildings, castles, domed mosques, churches and also grouting plaster to fill the gaps and used for acoustic and thermal insulation. Sty HRSN has technical report from Istanbul Metropolitan Municipality Directorate for the Conservation, Implementation and Supervision of Cultural Assets. STY HRSN is for professional use.

### Application Fields

Suitable for historical buildings interior and exterior walls, ceilings, wooden and stone surfaces.

### Advantages

- √ Thermal insulation
- √ Excellent adhesion
- √ Breathable
- √ Environmentally friendly products
- √ Flexible
- √ Light weight on the structure
- √ Class A fire resistance
- √ Easy to prepare and apply
- √ Long lasting
- √ Economic



### Surface Preparation

The application surface should be clean, dry and free from dust, grease, soot, lubricants, anti-adhesive agents. Symptoms of biological aggression (fungi, mildew) must be removed using a suitable material. Check the masonry, restore damaged or not fixed bricks and stones. In case of damaged or crumbly concrete, it must be restored with suitable cement mortar. If the application would be on old plasters, make sure that the plaster is compact and well bonded to the surface. If not, it is recommended to remove it completely. Old, destroyed plasters with moisture signs, efflorescence must be removed up to the height of 1m above the damaged area. All potential efflorescence on an uncovered wall must preliminarily be removed mechanically. Loose particles, all grouts that might fall must be removed to the depth of at least 2 cm. To ensure adhesion to smoother surface such as ones previously painted or concrete, timber, etc. it needs to be coated first with Styronit Compact Primer. 100% of the surface should be coated when Styronit Compact Primer is applied. Wait until primer is dried. STY HRSN can be applied directly (without primer) to the surfaces such as brick, aerated concrete, pumice walls.

### The Preparation of Mixture

Carefully empty the full content of an 9,0 kg bag of STY HRSN into a flat bottom container. Add 10-12 lt. water into the dry mixture and begin mixing for around 5 minutes with a mechanical mixer until desired consistency is achieved. Do not add anything else to the mixture. Use entire content at once.

### Application

Before the application it is recommended to cover window sills, doorsteps, window and door fixtures and any element that will not be covered by the plaster. STY HRSN can be applied by machine spraying the material onto the wall or by hand. If applied on the ceiling, STY HRSN must be applied with plastering machine, we do not recommend hand application. It is fundamental to wet the surface, in particular during summer season and in case of walls exposed to sun. If the surface was treated with a primer, it is not necessary to wet the substrate. During summer season, apply the product in the cooler hours of the day, away from sun. Do not apply with imminent threat of rain or ice, in conditions of strong fog or with relative humidity higher than 70%. If applied internally, it is necessary that the external surface does not absorb water. Otherwise, treat the surface with a breathable water repellent product. In presence of exposed walls do the same application. STY HRSN should be applied in an equal amount to the entire surface. The first layer must be applied by spraying as a thin layer. After it dries the material can be applied in layers. Use wooden or aluminium plastering lath as thickness guide to obtain the required thickness. These have to be removed immediately after the application of the last layer. To protect against cracking, galvanized mesh wire or 10x10 mm plaster net(mesh) should be used at junctions between concrete and wall construction elements. Galvanized wire mesh or 10x10 mm plaster net(mesh) should be used after 3 cm thickness. The net must be dipped into the plaster at about half of the total thickness and, if necessary, it must be used irrespective of the thickness even in case of application on panels, wood, plasterboards or to unstable substrates. To secure corner and angles, in multi floor application, use steel corner beads. After application the surface should be levelled, in case of gaps it can be adjusted by a trowel or sponge. When smoothing the plaster, do not push STY HRSN that much against the wall. This is required to preserve the porosity of the plaster. To smooth, use a strike off bar, in horizontal and vertical way, to obtain a regular surface. Be sure that STY HRSN is completely dried before final coatings applications (paints, every kinds of other coating materials). Only water based primer and paints should be used if the surface will be painted. If the surface will not be painted or will be painted later, until that time a water based transparent primer should be applied to the surface to protect the surface from external weather conditions. All works carried out outside must be performed in rainless weather, when insulation is not too high and wind is weak. If it is necessary to carry out works in unfavourable conditions, use appropriate shields, reducing the impact of weather factors. Plastered rooms must be ventilated, however it is necessary to prevent draughts and prevent the mortar from drying up to quickly as a result of sunlight or heating.





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## Technical Specifications

Structure of the material	: Perlite, pumice base, Natural Hydraulic Lime, tiles powder, natural compounds, organic&inorganic fibers, binders.	
Color	: pink	
Application thickness	: 2,0-5,0 cm	
Consumption	: 3-4 kg/m <sup>2</sup> (@1 cm thickness. The consumption data are approximate for flat and smooth surfaces. The consumption may change depending on factors such as the condition of the surface to be applied, the application environment.)	
Surface temperature	: Between +5°C and 35°C. (Do not apply with imminent threat of rain or ice, in conditions of rainy, strong fog or with relative humidity higher than 70%)	
Operating time	: max. 2 hours (depending on the ambient temperature and humidity)	
Drying time	: Between layers; 12 hours ( Particularly in the cool season and in high humidity, there is a delay in drying. Drying time is influenced by humidity level and by the ambient temperature and may significantly change.) It completes full drying time in 28 days under normal weather conditions. In addition, regardless of temperature and humidity, the drying time will be longer as the application thickness increases.	
Packaging	: 9,0 ± 0,5 Kg Kraft bag	
Dry unit density(on wall)	: ≤ 450 kg/m <sup>3</sup>	EN 1015-10
Compressive strength	: CS1 / CSII	EN 1015-11
Capillary water absorption	: Wc1	EN 1015-18
Water vapor permeability,μ	: ≤15	EN 1015-19
Adhesive strength	: FP:B	EN 1015-12
Fire Classification	: A2	EN 13501-1
Thermal Conductivity, λ	: ≤ 0,048W/(m.K)	EN 12664 / EN 1745



### Storage / Handling / Shelf Life

The product should be stored in its original packaging in dry and sheltered place. Do not store near food, drinks, medicines, cosmetics or fertilizers. Keep away from children. Prevent mixing into sewer / surface water / groundwater. Notify authorities and inform authorities if water or sewerage is involved. To prevent the quality of the product, it must not come into contact with the ground. It must be protected from frost and direct sunlight. It should be stacked to a maximum of 15 rows. The humidity may cause the formation of lumps. This may cause deterioration product quality. The shelf life is 12 months if the conditions mentioned in this article is provided.

### Warnings / Precautions / Notices

This technical information has been compiled on the basis of the latest state of the art and our experience. The data listed has been gathered from laboratory tests and it hence follows that in practical applications on building sites the final characteristics of the products and results may vary subject to substantial variations depending on the meteorological conditions and the application. They should be considered as indicative only and should be confirmed by comprehensive practical applications. Our company does not know the conditions of the surfaces to be applied and/or environmental conditions. Also our company does not know whether our products are applied in the manner and under the conditions specified in here. The user is responsible for whether the product is used in accordance with its purpose, as well as the validity of application conditions and forms. The above mentioned information in no way constitutes a warranty relative to the use of the products. Therefore the applicator should carry out preliminary tests, to verify the suitability to the foreseen application, and in any case he will take the responsibility of the intended use. In case of uncertainties or doubts, please contact our company before the start of the work. It must be understood that this is only a simple assistance for the applicator. This is general information only which shall not obligate the manufacturer to take any responsibility either for workmanship or for the manner of use. Our general terms and conditions of sale shall prevail, in any event, on the information provided in this document. We guarantee the quality of all our products, on the basis of their technical specifications, as described in the Declaration of Performance (DOP). Our company does not accept and indemnity claim concerning the results, work accidents, direct or indirect damages and/or losses due to the misapplication of the product. Our company reserves the right to make any changes to the information and technical data provided at any time and without notice. July 2023