

LASTIC-GUARD

Two-component polyurea-based material for hot spray application

1. Product description:

LASTIC-GUARD is a two-component sprayed waterproofing system based on polyurea (polycarbamide), free from solvents, applied by hot spraying at the construction site. It has a long service life and minimal water absorption, and is not subject to the destructive action of aggressive chemical media.

2. Range of use:

Used to produce waterproofing coatings by spraying, intended for the waterproofing of steel, concrete and brick structures: internal and external surfaces of tanks, tunnels, swimming pools and viaducts, foundations and roofs, both newly built and reconstructed. The coating has highly stable characteristics and a long service life.

3. Material properties

Colour:	Comp. A: grey Comp. B: colourless
Consumption, kg/m²	2.2 kg per 2 mm DFT (theoretical)
Packaging:	Comp. A: 200 kg (steel drums) Comp. B: 220 kg (steel drums)
Supplied consistency:	Suitable for hot spray application
Shelf life:	12 months from the date of delivery, in unopened original packaging in a closed room

Cured coating

Parameter	Value
Appearance	Homogeneous material
Initial curing time, s (20 °C)	30
Tensile strength, MPa	21
Elongation at break, %	350-450
Adhesion to concrete substrate, MPa, min	2.5 (pull-off)
Curing time (foot traffic) at 20 °C, h	2

4. Technical data

Parameters	Value	Test method
Shore D hardness (7 days), units, min	40	GOST 24621
Taber abrasion resistance (CS10/1000 g/1000 cycles), mg, max	26	—
Membrane water tightness (DFT 2 mm, h 2 h), kgf/cm ²	2.0	GOST 2678
Density of the cured coating, kg/dm ³	1.10±0.1	GOST 15139

Mixing ratio

Comp. A: 100 parts by volume

Comp. B: 100 parts by volume

Preparation of components

Heat the drums with components A and B to 20-25 °C. After heating, stir component A with a paddle mixer at 500-1000 rpm for 30 minutes, or by another suitable method.

Substrate temperature:

Min +5 °C, max +40 °C. Spraying is not recommended at an ambient temperature above +40 °C.

Surface preparation

Steel:

Clean the surface from mechanical contamination, rust, mill scale and other contaminants to cleaning grade 2 according to GOST 9.402 (Sa 2½ according to ISO 8501-1, surface preparation according to ISO 12944-4). Cleaning grade 2 — visually the surface appears free from oil and grease stains and from dirt, and free from most of the mill scale, rust, paint and other foreign matter. Residual contamination is firmly adhering.

Grind down projections and irregularities. Abrasive-treat the surface to a bright metal finish using abrasive paper of grit 40-60, an angle grinder with a grinding attachment of grit 40-60, or abrasive blasting. Remove dust from the surface. Then degrease the surface by wiping it with a cloth moistened with an organic solvent. Dry it and remove dust again. Apply «LASTIC-GUARD» to the prepared surface within not more than 6 hours.

Concrete substrates:

Remove surface projections, fill craters and hollows, then remove mechanical contamination. The concrete must be dry; measure the moisture content with a moisture meter, it must not exceed 4 %. Remove dust from the surface. To minimise the risk of crater-type defects, the surface must first be treated with the polyurethane primer «Concrete Primer» or with the epoxy primer «Stacor EP» mixed with quartz sand of fraction 0.1-0.3 mm.

The choice of primer depends on the condition of the concrete substrate and is selected individually in each case.

If the concrete surface is in poor condition, with loosely bonded areas or an uneven substrate, abrasive blast cleaning, dust removal and repair of the concrete surface with fast-setting thixotropic repair compounds are required.

Application method:

When the components are mixed, the viscosity of the mixture starts to increase, so it cannot be applied to the substrate with a brush, roller, scraper, spray gun or other painting equipment.

Special equipment is used to mix and apply components A and B:

high-pressure units operating in the range of 150-250 bar.

Component temperature — 60-80 °C. Pressure in the supply hoses of components A and B to the mixing chamber 150-250 bar, hose temperature 60-80 °C.

Before spraying, check that the unit is in good order. If the mixing chamber and the nozzle of the spray gun are contaminated, clean them.

Before applying the main layer, it is recommended to apply a preliminary layer about 0.5 mm thick and wait 5 minutes. This protects the main layer from the defects that arise from the difference in polyurea temperature near the substrate and in other parts of the layer.

Recommended application thickness: 2 mm for waterproofing, 3 mm for coatings working under impact and abrasive loads.

When polyurea is applied in several successive layers, to maintain high interlayer adhesion the last layer must be applied not later than 12 hours after the first. When layers are applied at intervals of more than 12 hours, the previous layer must be treated with abrasive paper of grit 40-60 to obtain a rough surface and then dusted off, in order to improve interlayer adhesion.

Thinner:	Solvent xylene, R-4 (also used for cleaning the equipment)
Dilution:	Not required
Cleaning of equipment and tools:	Clean tools, equipment and contaminated surfaces with solvents (acetone, ethyl cellosolve).
Hygienic characteristics	The cured coating has no negative effect on the human body or on the environment.
Safety measures	When working with the components of the system in a closed room, provide ventilation and fire-extinguishing equipment. Use personal protective equipment: special clothing, gloves, footwear, safety goggles and a respirator. If polyurea components come into contact with exposed skin, remove them with a cotton swab or a cloth and wash with warm water; if skin reactions appear, consult a doctor. If the components get into the eyes, rinse them immediately with plenty of running water for 5-10 minutes, then consult a doctor.
Waste disposal requirements	Solid and liquid waste is disposed of in accordance with the requirements of the applicable legislation.

These data provide information on our product and its application according to the state of the art. However, they do not guarantee the properties of the product in every particular case.

Warnings on the label must be followed. Any existing industrial property rights must be observed.

We guarantee the high quality of our products within the framework of the general terms and conditions of sale for the domestic market or for export.

As our materials are regularly improved in line with market requirements, respective technical information changes as well. Please make sure that your version is up to date before application.