

## INSTRUCTIONS HOW TO WORK WITH THE MATERIAL

### NEWTON METAL



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Insulating material is used for complex thermal insulation and corrosion protection of pipelines and elements of pipeline systems, industrial, boiler and tank equipment. Keeps heat and reflects heat flow, reduces heat loss. The finally formed coating can be freely operated at temperatures from -60 to + 170° C

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### Storage and transportation

Storage and transportation of a liquid-ceramic coating of the brand "NEWTON" should be carried out in a cool, but not cold room, in a tightly (hermetically) closed container, at an ambient temperature of + 5 ° C. To + 25 ° C.

### Preparation of "NEWTON" coating for application

- Open the bucket with thermal insulation "NEWTON". The consistency of the material is seemingly dense and thick.
- Before using "NEWTON" it is necessary to thoroughly and gently mix the material inside the bucket.
- Mixing of the coating "NEWTON" is recommended to be performed at a mixer rotation frequency of no more than 100 - 120 revolutions per minute (mixing at higher speeds will result in mechanical destruction of hollow ceramic spheres, and as a result, will result in damage to the product). It is necessary to change the angles of inclination of the mixer attachment, lowering the blade of the nozzle to the bottom of the bucket and again raising it to the upper layer (smooth movement up and down).

## Mixing methods:

- a) Mixing is performed manually by means of a stick or other available means and instruments for 2-3 minutes. It is necessary to mix the lower and upper layers of the material between them. In particular, the movements from the bottom up.
- b) Mixing is performed using a nozzle on a drill, perforator or a handheld construction mixer at a rotational speed not exceeding 100-120 revolutions / min. Continuing the vertical movement of the blade, you should perform circular movements along the inner radius of the bucket.

The product should be mixed to obtain a thick homogeneous mass.

If the entire volume of the product will not be used immediately: after mixing, distribute the required amount of "NEWTON" insulation into a clean container that you use for work. The remaining material in the bucket - close the lid to prevent drying and evaporation of moisture.

**Caution: It is not recommended to dilute the material "Newton" with water to prevent undesirable changes in the product. However, in case of thickening of the coating, formation of lumps and dense crust on the surface (due to improper or long shelf life), it is necessary to add water in small portions of 50-120 ml per 20 liters of the product, with thorough mixing, bringing it to a dense homogeneous mass.**

## Surface preparation

Surface temperature should be in the range of +5 to + 150 ° C

**Metal surface.** The surface to be coated must be cleaned from the old peeling coating, dirt (mechanically using metal brushes, scraper, roller cones, scrapers), degreased with petrol - solvent with an octane number of 52.

If large areas of deeply ingrained rust are present on the surface, the surface must be treated with a phosphating rust modifier, or similar, to remove corrosion residues, the layer thickness is 0.01-0.05 mm; after treatment with a phosphating compound, it is desirable to coat with a silicon-organic lacquer layer thickness of 0.01-0.05 mm.

## Application of the coating NEWTON

The covering of NEWTON is applied on a surface in several ways:

- **Paint brush application.**  
Before the first coating of NEWTON, the brush should be wetted with water and shaken off from excess water. With further work, the brush is wetted upon drying. It is recommended to wet the brush only for ease of coating, so that it lays flat, does not roll on a hot surface, because the coating is sufficiently thick in its consistency..
- **Airless paint sprayers GRACO:** ST MAX Graco-495, ST MAX Graco-595, Ultra Max Graco-695, Ultra Max Graco-795, Graco Mark-V, Graco 1095 or a combined-action machine, such as T-MAX 405. We recommend the following when airless spraying equipment requirements: paint nozzles HDA-527, 531, 427, 431 (without a spreader), hoses with a diameter of 1 inch or inch and no longer than 15 meters, gun type "TexSpray" (without internal filter), tubular filter in the installation - 30 holes, spray pressure not more than 40-50 bar. The working pressure in airless spraying machines must be set to the lowest possible levels, in order to prevent the destruction of the microspheres by excessive pressure.

When working with the T-MAX 405 and its like, using two principles of spraying simultaneously (air and airless) with an air compressor, a working pressure of 3-10 bar with a hose length of not more than 10 m is sufficient for applying the material. Irregularities (roughness) of the coating are equal in thickness then spatula.

Small areas (100-150 meters) can be closed using a Fubag décor G5000 texture pistol in conjunction with a conventional compressor at low pressure. Use nozzle diameter 4 mm.

After working with a brush or spray gun, rinse thoroughly with water.

The coating "NEWTON" is applied in from 2 to 6 layers depending on the task..

**NOTE: the actual thickness of the applied layers and their number depends on the chosen method of application, the technical parameters of the equipment used, the quality of the surface to be coated, as well as the qualifications of specialists.**

**ATTENTION: The thickness of one layer "NEWTON" should be in the range of approximately 0.3-0.5 mm. The application of a thick layer in one application is unacceptable! This operation will be a gross violation of the coating technology "NEWTON"**

**After the application of each layer, technological drying should take place for at least 24 hours between application of the layers. Otherwise, water will remain in the "NEWTON" coating layer, which will lead to a strong increase in heat transfer!**

**Observance of technological drying is mandatory; otherwise, the manufacturer does not guarantee the quality of the coating formation.**

Complete drying coating stamps "Newton" occurs at a temperature of not lower than + 20 ° C at a time, which varies depending on humidity:

- at a relative humidity of not more than 50%, the full drying time is 6 hours.
- at a relative humidity of more than 50% - 12 hours.

At ambient temperatures above + 40 ° C, the drying time for one coat can be reduced to 2.5 hours.

At temperatures below + 20 ° C, the recommended drying time is 24 hours.

**Tinting** Coloring of the finishing layer in pastel colors is allowed.

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