TERMION
Innovative coatings

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Instructions for the application and use of
ultra-thin thermal insulation coating TERMION STANDARD

TERMION STANDARD - a film-forming coating that is intended for thermal insulation of metal, plastic and other surfaces with operating temperatures from -60 ° C to +200 ° C (short-time peak up to +260 ° C). **TERMION STANDARD** fits well on all types of surfaces. Insulation works can be carried out on surfaces with a temperature of 7 ° C to +150 ° C. When working with liquid insulation coating **TERMION STANDARD** should pay special attention to:

1. Thermal insulation **TERMION STANDARD** can not be frozen
2. Before opening the packaging must ensure the integrity of the seals
3. In preparing the material can not be too stirred (see para. 2 of this manual)
4. In preparing the material can not be too diluted with water (see para. 2 of this manual)

1. Prepare the surface

Insulated surfaces must be cleaned of dirt, rust, dust, old paint, remove the sanding elements, etc. Particularly note that there was no metal on the "loose" rust as "fungus", which after application **TERMION STANDARD** peeled off together with the metal coating. Stripping the metal surface from rust performed using wire brushes or abrasive wheels with the removal of loose rust layer to a metallic luster. Stripped of rust surface is treated with rust converter, if necessary, maintained for 2 hours. New metal surfaces may require removal preservatives. The finished surface must be free of crumbling elements, must be dry (including non-condensing) should not contain oil or fatty elements, should not be too plastic and glossy. If **TERMION STANDARD** to be used on the surfaces of black metal, with operating temperature up to +150 ° C, the surface must be pre-de-dusted and degreased, to cover any modification Termion Antikor (preferred) or primed with VL-02 and VL-023 (1-2 layer in accordance with the instruction to the ground). If the coating is supposed to be applied to the surface of non-ferrous metals, it is necessary to treat the surface by mechanical means for removing gloss, dedusted, degreased, process adhesion primer VL-02 and VL-023 (1-2 layers).

If **TERMION STANDARD** is expected to apply to the elements of concrete, brick, wood and similar surfaces it is necessary to: remove loose areas, embroider cracks, remove oily inclusion, concrete clean of cement "milk", repair the surface, including between-brick seams to reduce consumption material and the deeper recesses of 5-7 mm, cement-plaster formulations. Scraping the surface run by sandblasting, wire brush or abrasive wheel to remove the gloss on the surface and remove the crumbling and falling off elements of the structure. After machining the surface must be conduct a thorough dusting with brushes or blowers. Once should be washed with water to remove dirt, dust, and so the rest. After drying must be primed with acrylic primer deep penetration. To be applied to part of the building envelopes and structures of the vapor-permeable materials (concrete, brick, etc.) must use the modification **Termion Facade.**

2. Preparation of insulation coating TERMION STANDARD

TERMION STANDARD is ready for use, it should be mixed, if necessary, adding a little distilled water immediately prior to application to a pre-prepared surface. The amount of water depends on the deposition substrate temperature, temperature and humidity of ambient air, followed by operation and other factors. When applied to the surface with a temperature of +7 ° C to +80 ° C the amount of water added to the material may be less than 5% when applied by brush and not more than 3% when applied by equipment (airless spraying). When applied to the surface with a temperature above +80 ° C must first bring down the temperature by applying several layers of primer material **TERMION STANDARD** 20-50% diluted with distilled water according to the scheme specified in Sec. 3, "Coating". For detailed advice contact your nearest dealer or manufacturer. With a long shelf life in the container is allowed lamination into factions. When using a drill with a paddle attachment, or blender (recommendations on the selection of equipment specify at **TERMION STANDARD** representative in your region) - the maximum permissible speed mixing - 150 rev / min. Excess speed will lead to the destruction of the microspheres and the radical reduction (or invalidate) the effectiveness of thermal insulation coating. Using the vertical movement of the blade so that the thickened part of the plunge in the liquid, turn the drill and slowly begin rotating blades, mixing with the liquid clots. Stir until the product is homogeneous dense mass. Estimated time of mixing - a mixer 3-8 minutes, stirring 7-10 minutes manually. If the task is to eliminate condensation, "coat" frost - the material is applied with a minimal addition of water, and the maximum drying period between coats.

3. Coating

It is recommended to work with a soft brush with long natural bristles or airless spray (recommended brand and model of the airless spray and recommendations for setting up - check with a representative in your area). Apply a coating on the surface or small areas with a complex configuration, you can use a soft brush. A surface area of 100 m2 can be processed by airless sprayer with a working pressure of not more than 60-80 bar (**IMPORTANT !!! Not all airless sprayers are suitable for use with TERMION STANDARD !!!** Recommendations for selection, configuration and operation airless sprayer specify at the manufacturer or the nearest representative **TERMION STANDARD**. Also see. additional technical card how to work with airless sprayer). The insulation coating can be applied on the surface with a temperature of + 7 ° C up to + 150ºC and relative humidity above 80%. For better adhesion of the material to the treated surface is recommended to the prepared surface, apply a primer layer, a liquid (such as milk) material composition, diluted 20-50% distilled water. The term of complete drying of the coating layer 0.4-0.5 mm thick - no less than 24 hours at ambient temperatures above +7 ° C and a humidity of 80% throughout the drying time, i.e. within 24 hours. The next layer is applied only after the complete drying of the previous layer - after 24 hours at the specified conditions. A layer of about 0,4-0,5mm (thickness of optical density) obtained by the three "passes" sprayer, brush. Applying a thicker layer of material is unacceptable since it results in the formation on its surface, a moisture-proof film, which in turnprevents the complete evaporation of moisture, which will invalidate the thermophysical properties and deformation of the coating. When applying the material to the surface with a temperature of 80 ° C to +150 ° C, the material begins to boil very quickly and "grasped", so the material should be diluted with water. Recommended pre-primed surface 20-50% aqueous solution of the material. **IMPORTANT!** When applied on the surface **TERMION STANDARD** temperatures above +80 ° C maximum layer thickness for 24 hours does not exceed 0.5 mm. The hotter the surface of the coating is, the more the material is diluted. The diluted material is applied in quick movements, with this application layer is very thin. The drying time of each such layer is not less than 1 hour. Such layers are applied until the coating material is no longer boiling on the surface, but not thicker than 0.5 mm. Then allow to dry for 24 hours. The material was then applied in the usual manner - with the addition of 3% to 5% with distilled water

to 0.5 mm layers with interlayer drying 24 hours. The layer thickness of 0.5 mm can determined by thickness gauge the type of "paint comb" material consumption of 0.55 liters per 1 m2 (approximate consumption by coating with a brush on a flat surface) or thickness "optical density" of the material (that shone through the material does not subbase) . In the flow of the material affects the type of surface and application method. The total thickness of the coating and the number of layers is determined by thermal calculations or recommendations of certified regional representative of production.

4. Safety at work with TERMION STANDARD

4.1 Personal protection. Under normal conditions, the product is safe. If the room is well ventilated, or work is carried out outdoors - respirators are not required. In the room without ventilation - use standard respirators. For eye protection use chemical safety goggles. Eyewash should have access to running water. For skin protection use chemical gloves and protective clothing.

4.2 Critical situations. In case of contact with eyes - immediately flush eyes with running water for 15 minutes. If irritation persists - consult a doctor. Skin contact - wash with soap and water. Wash contaminated clothing with repeated use. When inhalation to fresh air. The product in the liquid state is not flammable. When ignited designs or structures which are coated to extinguish use water, foam, dry chemicals, and carbon dioxide. In case of spillage of product use any absorbent material such as sand, soil, etc. or rinse with plenty of water.

5. Storage and transport conditions TERMION STANDARD

Storage material **TERMION STANDARD** carried in a sealed container at a temperature between +5 ° C and +30 ° C, humidity of 80%, away from direct sunlight. Transportation is carried out by any mode of transport at temperatures above +5 ° C away from direct sunlight. Packaging for transporting cargo must ensure correct installation and integrity of packaging containers. Do not install when transporting more than 3 cans of 20 liter bottles or 5-buckets 10 liter containers in height to each other without additional packaging! Violation of the integrity of the packaging leads to damage of the material.

In the case of non-compliance with the instructions of application and storage of the material manufacturer for the quality of the coating is not responsible.

* If you have any questions about these instructions, contact your nearest dealer or manufacturer.