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PVC flexible sheet for waterproofing RUVIMAT

Installation manual

1. **Description:**
   Plasticized polyvinyl chloride, optimally stabilized.

   Reinforcement scrim- high-strength, capillary-penetrating moisture resistant, micro-organism resistant.

2. **Application:** waterproofing coating/ membrane/ Ruvimat is suitable for both new and renovation of old roofs- any type of concrete, metal, wood based old roofs of flat, pitched or curved configuration. Each roofing system is individual and a specialist should be consulted for.

   NON-RESISTANT TO: bitumen, tar, oils, petroleum products, polystyrene.

3. **Characteristics:** Water tightness, possibility for installation in any weather conditions (UV stability), resistance to microorganisms, resistance to environmental influences, high strength characteristics and elasticity, dimensional stability, resistance to tearing and perforation, long operation life- more than 10 years, flexibility at low temperatures, excellent welding, upper layer is in light grey colour.

4. **Base preparation:** Minimal requirements for installation of Ruvimat:

   - Profile sheets of different metal should be of adequate thickness to meet the requirements of standard mechanical anchoring in accordance with relevant rules for static and dynamic wind loads.
   - The surface of the base must be firm and smooth, without sharp protrusions. In case of cracks, they should be properly filled. It is recommended before applying of membrane Ruvimat on a concrete base, a geotextile underlay to be placed with appropriated mechanical characteristics to protect the waterproofing coating from static and friction mechanical influences. Underlay to be placed with appropriated mechanical characteristics to protect the waterproofing coating from static and friction mechanical influences.
   - For wooden bases high quality waterproofing boards of appropriate thickness and strength should be used. The joints of the boards should be sealed with a tape. Any other wood must be sanded and with appropriate mechanical parameters.

5. **Basic requirements for installation of membrane Ruvimat:**

   - Overlap of the separation layers at least 10 cm.
   - Only puncture- resistant separation layers should be used.
   - If necessary, a separate layer of geotextile to be used to eliminate the mechanical effects of the basis or the contact with naphthenic resins or styrene emission sources.

Installation of PVC membranes Ruvimat on concrete

If the roofing insulation is applied on concrete slabs or concrete or aerated concrete elements, **ALWAYS** use a geotextile underlay with appropriate technical parameters.

Installation of PVC membranes Ruvimat on thermal insulation

If the insulating membrane is applied on thermal insulation source of styrene emissions (extruded or expanded polystyrene), **ALWAYS** use a separating layer of geotextile with appropriate structure and composition to prevent the effects of styrene emissions.
The only case when the use of a separating layer is not necessary is for a high density stone wool thermal insulating system.

In any case to clarify with a consultant of "Ruvitex Industry" the tolerance of the roofing insulations with thermal insulating materials.

Installation of PVC membranes Ruvimat on bituminous membranes

ALWAYS use a separating layer of geotextile with appropriate structure and composition when applying on old or new bituminous membranes.

Installation of Ruvimat PVC membranes on wooden constructions

To ensure protection against possible reaction between impregnating agent of the wooden construction and the PVC membranes Ruvimat, it is necessary to use geotextile with appropriate structure and composition.

Application of PVC membranes Ruvimat on other bases

Attention should be paid on the fact that certain bases require suitable for them separating layers. The consultant of "Ruvitex Industry "AD will help you in choosing the right separating layer.

6. Installation instructions:

- Clean the roof from solid waste, formwork residues, concrete residues. The sharp edges are smoothed to prevent tearing or breakage of the membrane.
- Cover the construction with nonwoven polyester textile (min 300 g/m²) with special attention to the edges, chimneys, roof-mounted fans, masts etc.
- Unroll the insulating membrane without tightening it.
- The membrane is mechanically fixed (lengthwise, on one side) to the roof by means of fixtures in accordance with the material of the construction and in strict accordance with construction documentation of the corresponding object (nail dowel, saw with dowel, self-tapping screws, nails, etc.). The working project for anchoring must be strictly followed made after calculating the static and dynamic wind load.
- The anchored end of the insulation is covered with the next sheet, providing an overlapping strip of 80-100 mm where the weld will be made.

- Welding of the membrane is performed by a special welding machine or manually. A strong homogeneous seam should be provided to ensures the watertightness of the roofing insulation and the required parameters for the mechanical strength of the weld seam.
- The settings of welding mode with conditionally accepted environmental parameters of 20ºC and air humidity up to 70%, the recommended temperature is set between 470ºC and 500ºC, with hot air consumption 70% of the flow rate of the corresponding machine, speed from 1.6 to 1.5 m/min with constant pressure on the membrane. A test on the spot is made just before starting of welding activities. The exact parameters are determined experimentally according to the atmospheric conditions and welding equipment after a positive result of the sample.
- The completion of the horizontal elements of the roof, continues with the installation of insulation on the vertical parts of the boards (from the "hat" to the flat part of the roof).
- Various accessories are used to shape the drainage system of the roofing structure and the specific so-called "weak points" (corners, vents, masts, antennas, fans, etc.): funnels, barbells, etc.

7. **Usage:** During the usage the membranes Ruvimat does not require any maintenance operations. The normal temperature range for its operational purpose is from -30 °C to +70°C.

Ruvimat withstands the aggressive effects of the atmosphere, the acid rain, the industrial emissions, the UV rays.

8. **Safety:** Local safety precautions must be observed when applying the membranes Ruvimat.