



ARMATEX[®] RSR, RSM, RS

APPLICATIONS

The **ARMATEX[®] RSR (RSM or RS)** geocomposite require a correct usage and respect of basic procedures, so that there is no damage or destruction to the material before it begins to do its job on a construction site. The geocomposite and its function is most frequently damaged during installation and this is why it is necessary that there is no traffic rolling over the newly installed netting and the following recommendations are respected:

STORAGE AND HANDLING:

- the rolls of the geocomposite must be stored in a dry, clean and on even surface
- the stack of geocomposite should not be more than five rolls high
- the rolls should not be stored in crisscross fashion
- the package is open only before the geocomposite immediate use

All networks (gas, sewer, water etc.) must be built and finished before the geocomposite is laid, so that there is no damage to the geocomposite layers.

APPLICATIONS

Bedding preparation – technique and policy
Reinforcing geocomposite **ARMATEX[®] RSR (RSM or RS)** is possible laid on the existing surface of pavements old concrete panels, etc.
Reinforcing geocomposite ARMATEx[®] RSR (RSM or RS) is laid:

- in new structures on levelled surface bitumen gravelled mix (under load-bearing layers of mixture) with sprinkled emulsion
- in the whole-area repairs between two bitumen layers, the balancing bitumen tier should be laid as first, the surface must be dry, clean and levelled
- in crack's repairs the pavement's strata is milled

Reinforcing geocomposite has to be laid onto even, smooth and profiled surface. Roughness measured in both longitudinal and transversal directions, as measured with a 4-meters measuring lath, must not exceed 5 mm.

Any higher roughness must be evened and milled accordingly.

After-milling channels must not be deeper than 3-4 mm and have to be purified from impurities arising during the milling. Any bedding's ruptures must be filled in properly. Channels deeper than 3-4mm has to be covered by levelling layer.

The ruptures narrower than 3 mm may be cleaned only.

The ruptures larger than 3 mm should be, after cleaning or milling, filled with the corresponding sealing compound (sealing compound, small-grained mineral-bitumen mixture). This is for sealing the surface, jointing of the rupturing edges and delivery of sufficient binder amount to the places with a post-tension.

To the surface prepared this way, there is

deposited an equal joining layer made of the modified, cationic, quickly disintegrating emulsion or hot bitumen.

The features of bitumen emulsion and it's amount have to be suit to conditions which are actually on the site (sort and porosity of surface, way of application, temperature of surrounds, humidity). Surface under the layer has to be sprinkled with emulsion in amount to fit soak through the textile material (geocomposite should be black in all surface but there must not be any pool (puddle) of emulsion on surface). Actually needed amount of emulsion is necessary verify on trial (experimental) sector before making the whole area. Recommended amount of emulsion is about 0,4 to 0,9 kg/m², depending on applied non-woven and surface structure.

The laying down the next layer (bitumen mixture) onto sprinkled surface with laid **ARMATEX[®] RSR (RSM or RS)** may follow after evaporation of solvent or breakup emulsion and evaporation of water.

(Using of mastic asphalt (modified by polymers) is better in compare with sprinkled emulsion. There is no need to wait for evaporation).

The use of binder modified by a polymer provides efficiency of jointing geosynthetics layers action at low temperatures, when the binder layer solidifies and there may appear ruptures. Hot bitumen's use (modified with polymers, i.e. D 70) for geo-grid impregnation or gluing is, compared to the emulsion sprinkling, more advantageous. There exists a smaller danger of flowing-off. After the bitumen sprinkling we may immediately lay the geocomposite, without any waiting for disintegration as in the case of cationic emulsion. After the solvent evaporation or emulsion disintegration and water evaporating we may immediately accede to the laying of **ARMATEX[®] RSR (RSM or RS)** reinforcing geocomposite.

APPLICATION OF GEOCOMPOSITE

After unpacking, unwind the geocomposite manually considering that a maximum unwinding length must not exceed 10 m.

The geocomposite may be easily longitudinally pulled for the purpose of folds, faults, bends and roughness removal. Minimum contraction has no influence on reinforcing effect of the grid.

Slightly resilient geocomposite attach onto jointing layer.

This way gradually lay geocomposite from whole the roll.

The geocomposite must be constantly strained about 10 cm per 5 m of the road stage (2%). The straining should be carried out using lath with hangers. The geocomposite straps must be properly shortened and cut to segments, which should be done during laying in turns, proportionally to their diameter. If there is such a necessity, it is needed to excavate openings for street inlets, channels, channel covers or any other engineering networks holes to the geocomposite, after its straightening and fixing.

Laid **ARMATEX[®] RSR (RSM or RS)** we

recommend carefully press-down into the surface by rubber hand roller or by brush.

The geocomposite is cut to the required dimension in manner placing cut geo-grid ribs close to nodes. For the purpose of prevention of humidity capillary absorption by the fibres of geo-grid and geotextile (beyond the road limits), it is needed to use 10 cm distances from the road border. Similarly it is indispensable to act during carving holes into the geocomposite.

On the laid geocomposite, there may be presented only vehicles used for the road repairing works, taking into account that no undue acceleration, braking or cornering is allowed.

Laying of the **ARMATEX[®] RSR (RSM or RS)** as a side layer depends on a good weather, with no rain and with corresponding surrounding temperature (at least 10° C). It is not allowed to lay the geocomposite onto a wet (water) surface. It is needed to lay only such amount of geocomposite that we are capable to cover with mineral-bitumen mixture within one shift.

During the geocomposite laying there must be checked the following:

indication of the individual geocomposite rolls with data given in technical specifications
laid tier flatness (with no waviness, folds etc.)
overlapping size of adjoining straps
the layer uninterrupted, including control of mechanical damages occurrence

Laying of mineral-bitumen mixture

The resistance of **ARMATEX[®] RSR (RSM or RS)** against high temperatures makes possible to use bitumen mixtures with a high application temperature, which provides very good thickening and their very good tightness. The bitumen mixture tier may be laid immediately after the laying of **ARMATEX[®] RSR (RSM or RS)**. Additional geocomposite sprinkling is not necessary.

Into the laid geocomposite we run with a spreading machine and pour the mineral-bitumen mixture from a front direction. The mixture laying should be carried out in accordance with technological specifications and recommendations from standards. Minimum layer covering geocomposite must not be thinner than 40 mm.

In the case of bitumen mixture laying onto solid bedding it is necessary to use aggregate with a low thermal conductivity coefficient. The laid surface tiers must have the same thickness which should be in allowed tolerances. Every layer, both abraded and binding, must be laid at one dash, i.e. without dividing its thickness into two or more separately laid tiers.

During the laying, both laying machines and vehicles working with a bitumen mixture must move slowly, without rapid acceleration and change of drive direction.

On the geocomposite not covered, there is prohibited rapid acceleration and braking.

Both longitudinal and transversal construction connections, as well as bitumen mass jointing must not be identical with overlapping.



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