



**ARENA**  
FORCE

Waterproofing,  
protection  
and concrete repair

## WATERPROOFING REPAIR MIXTURES FOR CONCRETE



[www.arenaforce.ru](http://www.arenaforce.ru)



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## WAYS OF USING MIXES «ARENA»

- WATERPROOFING AND PROTECTION
- REPAIRING AND STRENGTHENING CONCRETE
- INSTALLING INDUSTRIAL AND CIVIL FLOORS
- CIVIL CONSTRUCTION

## ABOUT THE COMPANY

Production of a wide range of high-quality construction mixtures by the brand **“ARENA FORCE”** is a basic way of working for multidisciplinary company LLC under the laws of Russian Federation “Factory of waterproofing “ARENA”. Starting with mining, processing and delivering construction complex of quartz sand 7 years ago, the company succeeded in the market and improved productive work with huge companies in Russian's constructive field. As the material base is improved and additional production capacity is put into operation, we step into a new level suggesting construction mixtures “ARENA” for our partners. Cement-based waterproofing and outstanding additive for concrete “ARENA BiMix NS/PC”, strong and frost-resistant compositions for concrete, floor mixtures, a line of high-tech adhesives for tiles and porcelain stoneware, different kinds of plaster – all our products succeeded testing and approved by specialists.

In present time construction mixtures “ARENA” is used by building companies in lots of Russian districts. Engineering services of our company continue to improve range, developing new brands of structure compositions and technical conditions of production. According to technical control department, developers carry out technological support of the production process and be responsible for conformity of products to applicable standards.

We develop a dealer network and value long-term cooperation.

Each our trading and manufacturing partner can count on high-quality products and maximum attention to the processing and completion of their orders. Perfect storage facilities and cooperation with the best transport companies allow us to ship even the largest quantities of products as soon as possible. We guarantee the impeccable quality, efficiency and competitive cost of all construction mixtures “ARENA”. We look forward to a long-term and mutually beneficial cooperation.

## MANUFACTURE'S WARRANTY AND STORAGE CONDITIONS

Storage is allowed at any humidity and temperature from -60°C to + 50°C. The manufacturer guarantees the compliance of the mixture with the requirements of the technical specifications if the customer complies with the requirements storage rules and instructions of this manual.

The warranty period of storage in the manufacturer's packaging is 12 months from the date of manufacture, provided that tightness of the factory packaging.

Avoid contact with eyes and skin. The mixture contains cement and, upon interaction with water, gives alkaline reaction, therefore, rubber gloves and goggles must be worn when working. When If the mixture gets into the eyes, rinse them with water and seek medical advice.



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# ARENA BiMix NS ARENA BiMix PC

# UNIVERSAL COMPLEX ADDITIVE FOR CONCRETE



- ✓ Production of high strength and durability concrete.
- ✓ Accelerated hardening of concrete.
- ✓ Increased convenience in laying, the plasticity of the concrete mixture (Independently fills the formwork, does not require long vibrations during laying).
- ✓ Increased water resistance, frost resistance, the corrosion resistance of concrete.

## DESCRIPTION

Universal complex additive for concrete **ARENA BiMix NS / ARENA BiMix PC** is intended for increasing strength, mobility and water resistance of concrete. It represents the mix of micro cement, active mineral fillers and modifying additives.

Recommended dosage: 3-6% of cement weight. The exact amount of the additive must be selected by trial batching.

## PURPOSE

- For getting concrete with increased strength and durability;
- For acceleration of the process of hardening of concrete;
- For the production of cast self-compacting mixtures;
- For increasing water resistance, crack resistance, frost resistance and corrosion resistance.

## ADVANTAGES

- Allows to save 40% cement in concrete without losing its' technical properties;
- Allows to get concrete with increased strength and crack resistance;
- Allows to get concrete for hydraulic engineering, with a mark of water resistance at W20;
- Allows to receive concrete with declared brand strength for 3-7 days;
- Provides high frost resistance not less than F600;
- Allows to create a self-compacting concrete mix with an optimum viscosity for laying and the absence of a stratification effect;
- The additive is absolutely safe and allowed to use in domestic drinking water supply.

## TECHNICAL CHARACTERISTICS

Appearance:	dark-grey colored powder
Bulk density:	300-400 kg/m <sup>3</sup>
Moisture by weight:	up to 0,5%
Consumption of additive to the weight of cement in solution:	3-6%
Packing:	6kg sacks
Expiration date:	12 months

### Changes in the characteristics of concrete after adding the additive. Compared with standard concrete.

Increase of concrete strength on compression:	not less than 30%
Increase of mobility of concrete mixture:	up to P5
Increase of water resistance on concrete:	not less than 4 steps
Increase of frost resistance (air resistance) of concrete F:	>300 cycles
Time of formwork removal:	the next day
Possibility for use in drinking tanks:	yes
Increased air resistance with a value of:	5 steps

## USING

**Attention: When dosing the additive ARENA BiMix NS/PC in a smaller quantity than in the package, the entire volume of the additive in the package must be thoroughly mixed before use!**

The dosage of the universal complex additive is from 3 to 6% of the mass of the cement in the solution. Increasing the dosage of more than 6% of the mass of cement does not bring additional benefits from the additive.

### Comparative characteristics of the rate of strength and water resistance W and frost resistance F for concrete M300

Compositions of concrete M300	1 day	3 day	7 day	28 day	Water resistance	Frost resistance
Compressive strength without additive	17,64 MPa	20,72 MPa	23,54 MPa	28,69 MPa	W-4	F-300
Compressive strength with additive BiMix	25,34 MPa	29,25 MPa	32,95 MPa	39,60 MPa	W-16	F-600

### Additive consumption ARENA BiMix NS/PC per 1 m<sup>3</sup> of concrete

Mark of concrete	Mark of cement	Quantity of BiMix NS/PC, kg	Mark of cement	Quantity of BiMix NS/PC, kg
M200	M400	15	M500	14
M250	M400	18	M500	15
M300	M400	20	M500	18





# WATERPROOFING ADDITIVE IN CONCRETE

## ARENA EcoMix

- ✓ Significantly increases the water tightness and frost resistance of monolithic and prefabricated concrete and reinforced concrete structures with pores, cracks with a width of opening no more than 0.4 mm.
- ✓ The material is compatible with other additives used in the production of concrete.
- ✓ The additive is an ecologically clean, radioactive safe.
- ✓ Does not contain chlorides and sulfates, which can provoke corrosion of reinforcement and concrete.



### DESCRIPTION

Dry waterproofing additive in concrete consists of cement, and special additives of property modifiers.

### PURPOSE

The dry mix is intended for the additive in concrete at the stage of its preparation for the production of hydraulic concrete. Significantly increases the water tightness of concrete and reinforced concrete structures at the stage of concreting and production. Increases the frost resistance of concrete. Provides protection of structures from the influence of corrosive media: acids, alkalis, sewage and groundwater, sea water.

### TECHNICAL CHARACTERISTICS

Appearance:	loose powder gray
Humidity by weight:	not more than 0,6%
Bulk density in the standard non-compacted state:	1100±100 kg/m <sup>3</sup>
The increase of air resistance:	on 3 steps
Dosage of the additive from the mass of cement in Concrete mixture:	1%
Increasing the brand of concrete by water resistance:	not less than 3 steps
Increase in frost resistance of concrete after processing:	no less than 100 cycles
Guarantee period of storage:	not less than 18 months

\* All the stated quality indicators and recommendations are correct for an ambient temperature of 20°C and a relative humidity of 90%. In other conditions, the technical characteristics of the material may differ from those

### PREPARATION OF SOLVENT MIXTURE

The dosage of the additive should be 1% of the mass of cement in the concrete mix. In the concrete mixer add **ARENA EcoMix** add in the form of a mortar mixture in the proportion of 0.6 - 0.7 litres of water per 1 kg of dry additive or 1 part of water for 1.5 parts of the dry additive by volume. The prepared solution mixture of the additive should be used within 10 minutes. Stir the mortar in the mixer truck for at least 10 minutes with increased mixer speed.

**Do not add ARENA EcoMix additive to the concrete mix in dry form!** It is possible to introduce **ARENA EcoMix** in dry form through the dry additives dispensers of the RBU production line, as well as together with inert materials.



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- ✓ Significantly increases water resistance and durability of concrete;
- ✓ Increases the frost resistance of concrete at least 100 cycles;
- ✓ The concrete foundation does not require drying;
- ✓ Efficiently works with both direct and reverse water pressure;
- ✓ Significantly increases the corrosion resistance of concrete;
- ✓ After processing, the concrete itself is able to resist water penetration and becomes a water resister;
- ✓ Does not contain chlorides and sulfates, capable of provoking corrosion of reinforcement and concrete.

## DESCRIPTION

Dry waterproofing permeating mixture consists Portland cement, quartz sand and a complex ionic soluble additive capable of penetrating into the pores and concrete drenches and getting into chemical interaction with the products of Portland cement hydration in concrete.

## PURPOSE

The dry mix is intended for waterproofing concrete and reinforced concrete surfaces, cutting off capillary suction of moisture and increasing the corrosion resistance of concrete due to the filling of pores and capillaries with hardly-soluble compounds.

## TECHNICAL CHARACTERISTICS

Appearance:	grey powder
V/T:	0,35 - 0,45
Moisture by weight:	not more than 0,3%
Bulk density in standard condition:	1200±100 kg/m <sup>3</sup>
Start of setting:	not less than 20 minutes
End of setting:	not longer than 150 minutes
Density:	1750±100 m/kg <sup>3</sup>
Increased brands of concrete, waterproofing:	at least 3 steps
Increased frost resistance of concrete:	at least 100 cycles

\* All the stated quality indicators and recommendations are correct for an ambient temperature of 20°C and a relative humidity of 90%. In other conditions, the technical characteristics of the material may differ from those.

## PREPARATION OF FOUNDATION

The base for the application of waterproofing mixtures should be clean and fully moistened. The cleaning of concrete surfaces should be carried out using a high-pressure water jet or other suitable mechanical ways.

**Attention! Hydration of concrete is carried out to its maximum possible saturation.**

Work must be performed at a temperature not below +5°C.

## PREPARATION OF SOLVENT MIXTURE

To prepare such volume of a mortar mix which can be developed within 20 minutes from the moment of addition of water in a dry mix. Mix the dry mixture with water in the proportion: 0,35 - 0,45 l of water per 1 kg of dry mixture or 1 part of water to 2 parts of the dry mixture by volume. Mix the mixture for 1 to 2 minutes with a rancid or with a low-speed drill.

The mortar mixture should be mixed regularly during use to maintain the original consistency.

## APPLICATION

The mortar mixture should be applied by brush or spray for mortar mixtures evenly over the entire surface into 2 layers. The first layer should be applied to wet concrete, the second layer should be applied to the fresh, but already grasped the first layer. Before applying the second layer, the surface must be moistened.

**Attention! All cracks, joints, seams, connections and the input connections necessary to isolate the material for the sealing of joints SeamMaster ARENA PT. Place for the active filtration of water must be eliminated by means of a material ARENA PlugMix PW "Hydraulic plug".**

## CONSUMPTION

The consumption of the dry mixture is 0.8-1.0 kg/m<sup>2</sup> of the concrete surface (2 layers).

## CARE OF PROCESSED SURFACE

It is necessary to ensure that the treated surfaces remain moist for 3 days. For what you need to moisturize the surface 2-3 times a day.



# DRY MIXTURE FOR WATERPROOFING SEAMS

## ARENA SeamMaster PT

- ✓ Increased crack resistance and water resistance.
- ✓ It is characterized by rapid setting.
- ✓ The solution is non-shrinkable.
- ✓ Does not contain chlorides and sulfates, capable of provoking corrosion of reinforcement and concrete.



### DESCRIPTION

Dry waterproofing permeating mixture consists Portland cement, quartz sand and a complex ionic soluble additive capable of penetrating into the pores and concrete drenches and getting into chemical interaction with the products of Portland cement hydration in concrete.

### PURPOSE

Mortar is intended for sealing cracks, seams, input connections, junctions, due to the high water and lack of shrinkage. Possesses high adhesion to concrete.

### PREPARATION OF FOUNDATION

With a groovemaker and jackhammer must perform indent U-shaped configuration section of at least 25x25 mm over the entire length of the cracks, seams, joints, junctions and communications inputs. Indent and adjacent surfaces should be cleaned of debris and structurally weak concrete, and then abundantly moistened and primed penetrating waterproofing material **ARENA InMix PN** in layer 1 (flow rate 0.4 -0.5 kg/m<sup>2</sup>). The locations of the active filter water break indent on a minimum width of 25 mm and a depth of not less than 60 mm deep with an extension (possibly in the form of a cone) and apply a material **ARENA PlugMix PW «Hydraulic plug»**.

**Attention! Before applying the material ARENA InMix PN the base moisten plentifully to the maximum possible saturation.**

### PREPARATION OF SOLVENT MIXTURE

Work must be performed at a temperature not below +5°C.

**Attention! In preparing the solution mixture is used only pure water and packagings.** To prepare a volume of solution mixture, which can develop within 30 minutes after the addition of water to the dry mix.

Optimal temperature of the water mixing 20°C. Mix the dry mixture with water in the proportion of 0.16-0.17 litres per 1 kg of dry mixture or by volume - 1 part of water by about 4 to 4.5 parts of the dry mixture. Dissolve the mortar mixture for 1-2 minutes by hand or with the aid of a low-speed drill until a thick consistency plate is obtained.

### TECHNICAL CHARACTERISTICS

Appearance:	grey powder
Moisture by weight:	not more than 0,3%
Bulk density in standard condition:	1300±100 kg/m <sup>3</sup>
V/T:	0,16 - 0,17
Start of setting:	not less than 25 minutes
End of setting:	not longer than 150 minutes
Density:	2200±100 kg/m <sup>3</sup>
Strength of adhesion to concrete:	not less than 2 MPa
Compressive strength 1/28 days:	not less than 23/40 MPa
Water resistance mark:	not less than W14
Mark for frost resistance:	not less than F400

### APPLICATION

The prepared indenting should be treated with **ARENA InMix PN** material, and then densely filled with the prepared mortar mixture, and the thickness of the layer deposited at one time should not exceed 30 mm. Filled and adjacent areas of concrete must be moistened and treated with **ARENA InMix PN** on to two layers.

### CARE OF PROCESSED SURFACE

It is necessary to ensure that the treated surfaces remain moist for 3 days. For what you need to moisturize the surface 2-3 times a day.

### CONSUMPTION

The consumption of dry mix with a penalty of 25x25 mm is 1.4 - 1.6 kg/m. Taking into account process losses when laying the mixture. When the cross section of fines increases, the consumption of the mixture increases proportionally. During the application, the mortar should be mixed regularly.



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- ✓ Quick stop of leaks, including under-water.
- ✓ No equipment required.
- ✓ High degree of setting with a repaired surface.
- ✓ High resistance to aggressive environment.
- ✓ Can be applied to any surface (concrete, mortar, brick, blocks).
- ✓ Hardens in damp enclosed spaces, quickly gaining strength.

## DESCRIPTION

Dry construction mixture waterproof surface to stop active leaks mixture, consists of a mixture of alumina and Portland cement, quartz sand and a complex of additives accelerators for setting and hardening, as well as additives that prevent the mixture from blurring when it is applied.

## PURPOSE

The dry mix is intended for an immediate stop of pressure leaks due to fast setting and strength set. It is used for the liquidation of pressure leaks of water recommendations are correct through concrete, when other materials are washed out with water before they begin to set.

## PREPARATION OF FOUNDATION

Increase the cavity with a jackhammer for a width of at least 25 mm and a depth of at least 60 mm with expansion in depth (if possible in the form of a cone). Clean the cavity of loose concrete.

## PREPARATION OF SOLVENT MIXTURE

**Attention! When preparing the mortar mixture, only clean containers and water are used.**

Prepare the amount of solution mixture, which can be used in the flow of 20-30 seconds. The optimum temperature of the mixing water is 20°C. With decreasing temperature, the time for setting the solution mixture increases. At weakly positive temperatures it is recommended to use warm water for mixing.

Mix the mixture with water in the proportion: 0.15-0.20 l of water per 1 kg of dry mixture. The consistency of the prepared mortar mixture ready for use is "dry ground".

## TECHNICAL CHARACTERISTICS

Appearance:	grey powder
Moisture by weight:	not more than 0,3%
Bulk density in standard condition:	1300±100 kg/m <sup>3</sup>
V/T:	0,15 - 0,20
Start of setting:	not less than 18 seconds
End of setting:	not longer than 120 seconds
Density:	1700±100 kg/m <sup>3</sup>
Mark for frost resistance:	not less than F300
Water resistance mark:	not less than W14

\* All the stated quality indicators and recommendations are correct for an ambient temperature of 20°C and a relative humidity of 90%. In other conditions, the technical characteristics of the material may differ from those.

## APPLICATION

Work should be done at a temperature of at least 5°C.

The prepared mortar mixture formed in the form of a cone squeeze by force out into a cavity of a leak and to keep within 40-60 seconds.

## CARE OF PROCESSED SURFACE

It is necessary to ensure that the treated surfaces remain moist for 3 days. For what you need to moisturize the surface 2-3 times a day.



# DRY WATERPROOFING LUBRICATING ELASTIC MIXTURE

## ARENA PolyElast PE

- ✓ The thickness of 2 layers of the application not less than 2mm;
- ✓ Effectively operates under direct water pressure;
- ✓ Resistant to mechanical damage;
- ✓ Has a high resistance to corrosive media;
- ✓ Vapor permeability;
- ✓ Economy;
- ✓ Ease of use;
- ✓ High adhesion and ability to perceive some deformations of the insulated surface (linear extensions, etc.);
- ✓ The possibility of applying to the wet surface in a manual and mechanized way.



### DESCRIPTION

The dry waterproofing surface lubricating elastic mixture consists of a mixture of mineral and polymer, as well as quartz sand. After hardening it represents as a thin multilayer elastic (at least 2 layers) waterproof coat 2-5 mm applied on the surface of the insulated construction using a brush and a spatula.

### PURPOSE

The dry mix is designed for waterproofing concrete and stone structures by creating waterproof layers on the insulated surface.

### PREPARATION OF FOUNDATION

Clean the insulated surface of the rests of plaster, paint and other impurities, preventing the adhesion of the waterproofing mixture to the foundation. Make a visual assessment of the site to be isolated and to identify water filtration sites. If there are active leaks, remove them with a dry mix of **ARENA PlugMix PW "Hydraulic plug"**.

### PREPARATION OF SOLVENT MIXTURE

Work should be carried out at a temperature of at least 5°C.

**Attention! When preparing the mortar mixture, only clean containers and water are used.** To prepare such volume of a mortar mix which can be developed within 60 minutes from the moment of mixing with water. The optimum temperature of the mixing water is 20°C. Per 1 kg of the mixture requires 0.15-0.16 l. Optimal mixing is a low-speed drill. Mix for 3 minutes before forming a homogeneous, placer-free mass without lumps. Hold the technological pause for 3-5 minutes and mix the mixture again.

**Attention! The mortar mixture during the use should be regularly mixed to preserve the initial consistency. Re-adding water to the solution is not allowed.**

### TECHNICAL CHARACTERISTICS

Appearance:	grey powder
Bulk density:	1250±100 kg/m <sup>3</sup>
V/T:	0,15 - 0,16
Mobility:	Pk1 - Pk2
Start of setting:	not less than 60 minutes
End of setting:	not longer than 210 minutes
Density:	2100±100 kg/m <sup>3</sup>
Compressive strength after 1/28 days:	not less than 15/45 MPa
Bending strength after 7/28 days:	not less than 8/10 MPa
Adhesion after 3/28 days:	not less than 1,0/2,5 MPa
Water resistance mark:	not less than W18
Shrinkage at the 28 days:	not more than 0,1%
Mark for frost resistance:	not less than F400

\* All the stated quality indicators and recommendations are correct for an ambient temperature of 20°C and a relative humidity of 90%. In other conditions, the technical characteristics of the material may differ from those.

### APPLICATION

Work should be done at a temperature of at least 5°C. The last coat should have a thickness of at least 2-4 mm. Even if with a thickness of 2 mm can be applied with a spatula, it is necessary to apply at least 2 more layers to seal the pores and micro-cracks formed when the first layer is hardened. Depending on the volume of work, the mortar can be applied with a spatula or a brush.

### CONSUMPTION

The consumption of the mixture is 1.8 kg/m<sup>2</sup> of concrete surface per 1 mm layer.

### CARE OF PROCESSED SURFACE

It is necessary to ensure that the treated surfaces remain moist for 3 days. For what you need to moisturize the surface 2-3 times a day.

## Comparison of the surface before and after mixture application

### original

- ✓ untreated tile surface
- ✓ passes water
- ✓ uneven edges



### processed with two layers of ARENA PolyElast PE

- ✓ preserved aesthetics
- ✓ emphasized structure
- ✓ the area is completely waterproof



# ARENA TopSL



- ✓ simple and fast application;
- ✓ interferes with rise of dust from the surface of concrete;
- ✓ increases surface resistance to wear and attrition;
- ✓ prevents the emergence of bloom salt;
- ✓ it is ready to the application, doesn't demand preliminary preparation.

## DESCRIPTION

Membrane-formed impregnation for concrete **ARENA TopSL** - appearance Semi-transparent liquid aqueous solution based on acrylic resins with special polymer additives.

## APPOINTMENT

Seal the surface of wet fresh concrete by forming a thin, wear-resistant membrane that effectively protects from loss of moisture to complete the process of hydration of concrete.

## APPLICATION

It is applied to fresh concrete after about 12 hours, after laying, concrete with a freshly reinforced concrete-ARENA BiTop immediately after the last mechanical ment.

Work should be carried out at a temperature not lower than +5 °C. Membrane-forming impregnation for concrete is applied with a velor roller or sprayer for mortar mixtures evenly over the entire surface in a single layer.

# MEMBRANE-FORMED IMPREGNATION FOR CONCRETE

## TECHNICAL CHARACTERISTICS

Appearance	Semi-transparent liquid
Density (specific weight)	1,03 - 1,05 kg /litre
Dry rest	20-25% by weight
Expense	0,1 - 0,25 l /m <sup>2</sup>
Time of drying at the temp of environment +20°C	24 h.
Temp of using	+5...+25°C
Pack	Canister 10 l.
Storage life	12 months

## PREPARATION OF MORTAR MIX

It is supplied in ready to use.

## CARE OF THE TREATED SURFACE

Usage of the processed surface is recommended not earlier than 14 days after processing of concrete. For maintenance, it is recommended to use a conventional wet cleaning.

# ARENA Dry Deform

# BENTONITIC CORD, HYDROPHILIC, SELF-EXPANDING

✓ When the tourniquet becomes wet, it increases to 300%



## DESCRIPTION

Hydrophilic self-expanding cord on bentonite basis

## APPOINTMENT

The cord is made for sealing vertical and horizontal technological seams of new and existing concrete and reinforced concrete constructions, uneven surfaces, and between walls holes for the engineering communications.

You should not use the material in stagnant water, and on surfaces susceptible to freezing and icing.

## APPLICATION

- Remove paper from the thehydrophilic cord.
- Put it and press firmly to the surface of the structure, fixing it from displacement. Connect it to impose ends on each other cutting it is at an angle of 45° and press firmly to the base, need form a continuous layer.
- Do mounting mating constructions.
- Also, the cord may be placed on damp surfaces, but stagnant water should be removed from the surface of the base, where using the cord. This case, mounting mating constructions need to produce not over time 12 hours.

## TECHNICAL CHARACTERISTICS

Density	no more than 1,5 g/cm <sup>3</sup>
Volume expanding	
24 hours	no more than 140%
7 days	no more than 200%
14 days	no more than 300%
Homogeneity	Homogeneous mass with includes 0,35 mm
Maximal pressure	7.0 bar
Montage method	Dowel-nail/gules/staples/spacers/metal grid
Resistance to the action of fluids of acids HCl, H <sub>2</sub> SO <sub>4</sub>	Resistant
Resistance to the action of alkalis NaOH	Resistant
Resistance to the action of petroleum products	Resistant
Ultraviolet	do not create action
Water absorption	any less than 50%
Application: the acidity of environment	3-11 pH
Application: temperature of the surface	from -15 to +50°C
Exploitation temperature	from -40 to +100°C



# ELASTIC TINTED CONCRETE MASTIC

## ARENA WallProtect CM

- ✓ Does not require subsequent staining;
- ✓ Effectively works under direct water pressure;
- ✓ Resistant to mechanical damage;
- ✓ Has a high resistance to impact aggressive media;
- ✓ Water vapor permeability;
- ✓ Efficiency;
- ✓ High adhesion and ability to perceive insignificant deformations of the insulated surface;
- ✓ Possibility drawing on a damp surface in the manual and mechanized way.
- ✓ Requirements color can be matched



### DESCRIPTION

The dry waterproofing surface lubricating elastic mixture consists of a mixture of mineral and polymer binders, as well as fractionated quartz sand and pigment.

### PURPOSE

The dry mix is designed for waterproofing and protecting concrete, brick and stone structures, both gypsum board products by creating waterproof layers on the insulated surface.

### TECHNICAL ADVANTAGES

- Does not require subsequent staining;
- Effectively works under direct water pressure;
- Resistant to mechanical damage;
- Has a high resistance to impact aggressive media;
- Water vapor permeability;
- Efficiency;
- High adhesion and ability to perceive insignificant deformations of the insulated surface;
- Possibility drawing on a damp surface in the manual and mechanized way.

### PREPARATION AND INTRODUCTION

Prepare such volume of a mixture solution which can be developed within 60 minutes from the moment of mixing with water.

The optimum temperature water of created is 20 ° C. Works should be carried out at a temperature not lower 5 ° C.

On 1 kg of a dry mix, it is required 0,16 l of water. The dry mixture should be added to water. Stirring is carried out with a low-speed drill for 3 minutes, until a homogeneous elastic mass without lumps is formed. Hold the technological pause for 3-5 minutes and mix the mixture again.

Mixture solution during use regularly stirs to the original consistency. Re-adding water to the solution is not allowed.

### TECHNICAL CHARACTERISTICS

Appearance:	Loose powder gray
Bulk density:	1100±100 kg/m <sup>3</sup>
The largest grain size:	0.63 mm.
The content of grains of the largest size:	0.5%
V/T:	0.16
Water retention ability:	95-98 %
Setting time:	
- beginning	not before 60 min.
- end	not later than 210 min.
Density:	2100±100 kg/m <sup>3</sup>
Mobility:	Pk2 - Pk3
Compressive strength after 3/28 days:	not less 7/35 MPa
Bending strength, through:	
- 7 days:	not less 8.0 MPa
- 28 days:	not less 10.0 MPa
Mark for water resistance:	not less than W18
Shrinkage at the age of 28 days:	not more than 0.1%
Adhesion, MPa, not less than:	
- After 3 days:	not less than 1 MPa
- After 28 days:	not less than 2 MPa
Mark for frost resistance:	not less than F400



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# Repair Master R500 Repair Master R500 Winter Repair Master R500+



## DESCRIPTION

Dry construction mixture waterproof surface to stop active leaks mixture, consists of a mixture of alumina and Portland cement, quartz sand and a complex of additives accelerators for setting and hardening, as well as additives that prevent the mixture from blurring

## PURPOSE

The dry mix is intended for restoration of geometrical and operational parameters of a structure by their surface restoration. Can be applied by dry or wet tamping.

## ADVANTAGES

- High strength (especially in early hardening).
- No shrinkage.
- High adhesion to the substrate and water resistance.
- The possibility of applying up to -10°C (**ARENA Repair Master R500 Winter**).

## TECHNICAL CHARACTERISTICS

Appearance:	grey powder
Bulk density:	1400 ± 100 kg/m <sup>3</sup>
V/T:	0,16
Mobility:	Pk1 - Pk2
Start of setting:	not less than 60 minutes
End of setting:	not longer than 240 minutes
Density:	2100 ± 100 kg/m <sup>3</sup>
Compressive strength after 1/3/7 days:	not less than 23/50/70 MPa
Flexural strength after 7/28 days:	not less than 7,0/9,0 MPa
Adhesion after 3/28 days:	not less than 0,9/3,0 MPa
Water resistance mark:	not less than W14
Shrinkage at the 28 days:	not more than 0,1%
Mark for frost resistance:	not less than F400
Packing:	25kg sacks
Expiration date:	12 months

\* All the stated quality indicators and recommendations are correct for an ambient temperature of 20°C and a relative humidity of 60%. In other conditions, the technical characteristics of the material may differ from those.

# REPAIR COMPOSITION FOR CONCRETE HIGH-MARK

## WORKING PROCESS

Conduct a visual and instructional assessment of defective areas of concrete to calculate the required amount of materials. Clean the damaged areas from structurally weak concrete of other contaminants, preventing adhesion of the mortar to the surface of the repaired concrete. When bare reinforcing bars, remove the concrete around them no less than 15mm. If there are active leaks, remove them with a dry **ARENA PlugMix PW "Hydraulic plug"** mixture. Attention! Before applying **ARENA RepairMaster R500**, it is necessary to moisten the substrate with water to the maximum possible saturation.

## PREPARATION OF SOLVENT MIXTURE

The optimum temperature of the mixing water of 20°C per 1 kg of dry mixture requires 0.16 liters of water. It is best to mix with a low-speed drill. Mix for 3 minutes before forming a homogeneous plastic mass without lumps. Dissolve the mortar during use to maintain its original consistency. Re-adding water to the solution is not allowed.

At temperatures close to 0°C, use a dry mixture of **ARENA Repair Master R500 Winter**.

## APPLICATION

Work should be done at a temperature of at least 5°C.

Before applying the mortar mixture on the concrete surface of the repaired area should be abundantly moistened. Depending on the amount of work, the mortar can be applied with a trowel, a spatula manually or by wet-rolling. The optimum layer thickness of the applied material is 10 mm. When using a construction mixture ARENA Repair Master R500+ the maximum layer thickness of the applied material is 40 mm.

The subsequent layers can be applied after 60-120 minutes, pre-moisturizing.

The application of the repair mixture on large areas must be done on a masonry net.

## CARE OF PROCESSED SURFACE

It is necessary to ensure that the treated surfaces remain moist for 3 days. For what you need to moisturize the surface 2-3 times a day.



# REPAIR COMPOSITION FOR CONCRETE

## ARENA Repair Master R300

### DESCRIPTION

Dry construction mixture waterproof surface to stop active leaks mixture, consists of a mixture of alumina and Portland cement, quartz sand and a complex of additives accelerators for setting and hardening, as well as additives that prevent the mixture from blurring

### PURPOSE

The dry mix is intended for restoration of geometrical and operational parameters of a structure by their surface restoration. Can be applied by dry and wet shotcrete. Examples:

- elimination of cracks and potholes inside and outside buildings;
- elimination of chips, shells, caverns in concrete structures, defects in concreting;
- repair of monolithic concrete and reinforced concrete structures, beams, trusses, wall panels, columns;
- repair of structures exposed to sea water, mineral oils and other corrosive environments;
- restoration of protective layers of reinforced concrete;
- fixing of anchor elements in solid bases;
- Mounting of lighthouses;
- installation of electrical and plumbing.

### ADVANTAGES

- Economy;
- Optimum technical characteristics.

### TECHNICAL CHARACTERISTICS

Appearance:	grey powder
Bulk density in standard condition:	1400 ± 100 kg/m <sup>3</sup>
V/T:	0,18
Mobility:	Pk1 - Pk2
Start of setting:	not less than 40 minutes
End of setting:	not longer than 180 minutes
Density:	2100 ± 100 kg/m <sup>3</sup>
Compressive strength after 1/3/7 days	not less than 20/45/50 MPa
Flexural strength after 7/28 days:	not less than 5,0/7,0 MPa
Adhesion:	не менее 1,5 MPa
Water resistance mark:	from W12
Shrinkage at the 28 days:	not more than 0,1%
Mark for frost resistance:	not less than F300
Packing:	25kg sacks

\* All the stated quality indicators and recommendations are correct for an ambient temperature of 20°C and a relative humidity of 60%. In other conditions, the technical characteristics of the material may differ from those.

### WORKING PROCESS

Conduct a visual and instructional assessment of defective areas



of concrete to calculate the required amount of materials. Clean the damaged areas from structurally weak concrete of other contaminants, preventing adhesion of the mortar to the surface of the repaired concrete. When the reinforcing bars are bare, it is necessary to remove the concrete around them by at least 15 mm. In the presence of active leaks, it is necessary to eliminate them with a dry mixture of ARENA PlugMix PW "Hydraulic plug".

**Attention! Before applying ARENA RepairMaster R300, it is necessary to moisten the substrate with water to the maximum possible saturation.**

### PREPARATION OF SOLVENT MIXTURE

Work should be carried out at a temperature not lower than -5°C.

**Attention! Use only clean water and packaging to prepare the mortar.** To prepare such volume of a mortar mix which can be developed within 40 minutes from the moment of mixing with water.

The optimum temperature of the mixing water is 20°C. When the temperature decreases, the time for setting the solution mixture increases and the final strength of the solution decreases. When the temperature is increased, the time for grasping is reduced. On 1 kg of a dry mixmix it is required 0,18l of water. It is best to mix with a low-speed drill. Mix for 3 minutes before forming a homogeneous plastic mass without lumps. Dissolve the mortar during use to maintain the original consistency. Re-addition of water to the solution is not allowed.

### APPLICATION

Before applying the mortar mixture, the concrete surface of the area to be repaired should be thoroughly moistened. Depending on the amount of work, the mortar can be applied with a trowel, a spatula manually or by wet-rolling. The optimum layer thickness of the applied material is 10 mm. The subsequent layers can be applied after 60-120 minutes beforehand. The overpayment of the repair mixture on large areas must be done on a masonry net.

### CARE OF PROCESSED SURFACE

It is necessary to ensure that the treated surfaces remain moist for 3 days. For what you need to moisturize the surface 2-3 times a day.

## Comparison of the concrete surface of the parking lot before and after its repair

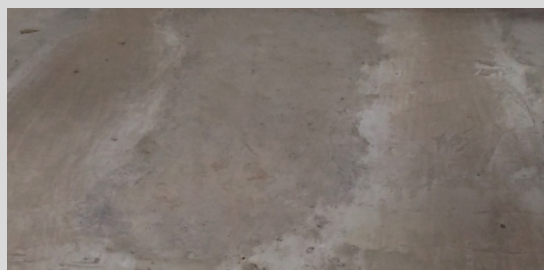
### original

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| ✓ destructed concrete foundation | ✓ The loose structure of concrete |
| ✓ deep rut                       | ✓ heterogeneous coating           |



### reconstructed surface with ARENA Repair Master R300

- |                        |                   |
|------------------------|-------------------|
| ✓ monolithic structure | ✓ strong          |
| ✓ waterproof           | ✓ frost resistant |
| ✓ flat                 |                   |





# ARENA Repair Master R500 LIQUID

## LIQUID REPAIR COMPOSITION FOR CONCRETE HIGH-MARK



### DESCRIPTION

Dry high-quality repair surface mixture. It consists of rapidly hardening Portland cement, fractionated quartz sand, reinforcing fibers, and a complex of additives of property modifiers.

### PURPOSE

The dry mix is intended for restoration of geometrical and operational parameters of a structure by their surface restoration. Can be applied by dry or wet tamping.

### ADVANTAGES

- High strength (especially in early hardening).
- No shrinkage.
- High adhesion to the substrate and water resistance.
- The possibility of applying up to -10°C (**ARENA Repair Master R500 Winter**).

### TECHNICAL CHARACTERISTICS

Appearance:	grey powder
Bulk density in standard condition:	1400 ± 100 kg/m <sup>3</sup>
V/T:	0,18
Mobility:	Pk4
Start of setting:	not less than 60 minutes
End of setting:	not longer than 240 minutes
Density:	2100 ± 100 kg/m <sup>3</sup>
Compressive strength after 1/3/7 days:	not less than 23/50/70 MPa
Flexural strength after 7/28 days:	not less than 7,0/9,0 MPa
Adhesion after 3/28 days:	not less than 0,9/3,0 MPa
Water resistance mark:	not less than W14
Shrinkage at the 28 days:	not more than 0,1%
Mark for frost resistance:	not less than F400
Packing:	25kg sacks
Expiration date:	12 months

\* All the stated quality indicators and recommendations are correct for an ambient temperature of 20°C and a relative humidity of 60%. In other conditions, the technical characteristics of the material may differ from those.

### WORKING PROCESS

Conduct a visual and instructional assessment of defective areas of concrete to calculate the required amount of materials.

Clean the damaged areas from the weak concrete of other contaminants, preventing adhesion of the mortar to the surface of the repaired concrete. When the reinforcing bars are holed, remove the concrete around them at least 15 mm. Clean the valve from corrosion. It is recommended to use sand blasting. If necessary, replace the equipment. In the presence of active leaks, remove them with a dry mixture of **ARENA PlugMix PW «Hydraulic plug»**.

### PREPARATION OF SOLVENT MIXTURE

The optimum temperature of the mixing water is 20°C. When the temperature decreases, the time for setting the solution mixture increases and the final the strength of the solution decreases. When the temperature is increased, the time for grasping is reduced. At temperatures close to 0°C, use a dry mixture of **ARENA Repair Master R500 Winter**. On 1 kg of a dry mix it is required 0,18l of water. It is best to mix with a low-speed drill. Mix for 3 minutes before forming a homogeneous plastic mass without lumps. Dissolve the mortar during use to maintain the original consistency. Re-addition of water to the solution is not allowed.

### APPLICATION

Repair work should be performed at a temperature not lower than +5°C.

Prepared repair composition should be poured continuously, avoiding vibration. Pouring from one side to prevent air retraction.

Before applying the mortar mixture on the concrete surface of the repaired area should be abundantly moistened. Depending on the amount of work, the mortar can be applied with a trowel, a spatula manually or by wet-rolling. The optimum layer thickness of the applied material is 10 mm. When using a construction mixture **ARENA Repair Master R500+** the maximum layer thickness of the applied material is 40 mm. The subsequent layers can be applied after 60-120 minutes, pre-moisturizing. The application of the repair mixture on large areas must be done on a masonry net.

### CARE OF PROCESSED SURFACE

It is necessary to ensure that the treated surfaces remain moist for 3 days. For what you need to moisturize the surface 2-3 times a day.



# LIQUID REPAIR COMPOSITION FOR CONCRETE

## ARENA Repair Master R300 LIQUID

### DESCRIPTION

Dry construction mixture waterproof surface to stop active leaks mixture, consists of a mixture of alumina and Portland cement, quartz sand and a complex of additives accelerators for setting and hardening, as well as additives that prevent the mixture from blurring

### PURPOSE

The dry mix is intended for restoration of geometrical and operational parameters by a design of their surface restoration. Can be applied by dry or wet tamping.

### ADVANTAGES

- Economy;
- Optimum technical characteristics.

### TECHNICAL CHARACTERISTICS

Appearance:	grey powder
Bulk density in standard condition:	1200 ± 100 kg/m <sup>3</sup>
V/T:	0,19
Mobility:	Pk4
Start of setting:	not less than 40 minutes
End of setting:	not longer than 180 minutes
Density:	2100 ± 100 kg/m <sup>3</sup>
Compressive strength after 1/3/7 days	not less than 20/45/50 MPa
Flexural strength after 7/28 days:	not less than 5,0/7,0 MPa
Adhesion:	не менее 1,5 MPa
Water resistance mark:	from W12
Shrinkage at the 28 days:	not more than 0,1%
Mark for frost resistance:	not less than F300
Packing:	25kg sacks

\* All the stated quality indicators and recommendations are correct for an ambient temperature of 20°C and a relative humidity of 60%. In other conditions, the technical characteristics of the material may differ from those.

### WORKING PROCESS

Conduct a visual and instructional assessment of defective areas of concrete to calculate the required amount of materials.

Clean the damaged areas from structurally weak concrete of other contaminants, preventing adhesion of the mortar to the surface of the repaired concrete. When bare reinforcing bars, remove the concrete around them no less than 15mm. If there are active leaks, remove them with a dry **ARENA PlugMix PW** «Hydraulic plug» mixture.



### PREPARATION OF SOLVENT MIXTURE

The optimum temperature of the mixing water of 20°C per 1 kg of dry mixture requires 0.19 litres of water. It is best to mix with a low-speed drill. Mix for 3 minutes before forming a homogeneous plastic mass without lumps. Dissolve the mortar during use to maintain its original consistency. Re-adding water to the solution is not allowed.

### APPLICATION

Work should be done at a temperature of at least 5°C.

Prepared repair composition should be poured continuously, avoiding vibration. Pouring from one side to prevent air retraction.

Before applying the mortar mixture, the concrete surface of the area to be repaired should be thoroughly moistened. Depending on the amount of work, the mortar can be applied with a trowel, a spatula manually or by wet-rolling. The optimum layer thickness of the applied material is 10 mm. The subsequent layers can be applied after 60-120 minutes beforehand. The overpayment of the repair mixture on large areas must be done on a masonry net.

### CARE OF PROCESSED SURFACE

It is necessary to ensure that the treated surfaces remain moist for 3 days. For what you need to moisturize the surface 2-3 times a day.



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Waterproofing,  
protection  
and concrete repair

# ARENA FastMix Hot30

## SELF-HEATING, QUICK-HARDENING CONCRETE COMPOUND

for work at a temperature from -25°C to + 45°C



- ✓ increased strength at the early stages of hardening (2 hours)
- ✓ increased frost and air resistance (alternating moistening and drying cycles shift)
- ✓ self-heating of the solution up to 60°C
- ✓ high mobility
- ✓ works at low temperatures up to -25°C

### DESCRIPTION

The universal compound ARENA FastMix Hot30 is able to solve multifunctional tasks at various construction sites, requiring compliance with the unique characteristics of ARENA FastMix Hot30. Dry quick-hardening repair mixture ARENA FastMix Hot30 consists of a mixed binder, quartz sand and a complex of property modifying additives.

### ADVANTAGES

- high strength in the early stages of 2h / 8h / 24h;
- self-heating of the mixture no later than 5-10 minutes after the expiration of the pot life (the possibility of the application at temperatures up to -25°C);

### TECHNICAL CHARACTERISTICS

Appearance: gray loose powder

Bulk density: 1200 ± 100 kg/m<sup>3</sup>

V/T: 0.19

Mobility of mortar mixture: Pk4

Pot life of mortar mixture at stirring: less than 45 minutes

Density: 2100 ± 100 kg/m<sup>3</sup>

Compressive strength: from -25 to -5° C higher -5° C

-2 h 14 – 15 MPa 18 – 19 MPa

-24 h 20– 25 MPa 25 – 27 MPa

-28 days not less than 40 MPa

Adhesive strength to the substrate: not less than 2.8 MPa

Self-heating of mortar mixture

from the moment of the setting of 2 hours: Up to 60° C

\* All the stated quality indicators and recommendations are correct for an ambient temperature of 20°C and a relative humidity of 60%. In other conditions, the technical characteristics of the material may differ from those.

### PREPARATION OF THE SUBSTRATE

Clean the surface of various contaminants, preventing the adhesion of the solution to the substrate.

**Attention! Before applying ARENA FastMix Hot30 material, it is necessary to moisten the substrate with water until the maximum possible saturation is achieved.**

### RECOMMENDATIONS

In order to obtain the regulatory characteristics of the compound, any changes in the ratio of water and solid are NOT allowed!

To achieve the pot life specified in the regulations, mortar mixture **ARENA FastMix Hot30** must be stirred regularly.

### RECOMMENDED WATER TEMP FOR GAUGING

at negative temperatures: - 25°C = 35°C – 40°C

- 5°C = 25°C – 30°C

at positive temperatures: > 5°C not lower than 10°C

When the temperature of water decreases, the setting time and strength gain of the mortar mixture increase, and the final strength of the mixture decreases.

### FORMATION OF MORTAR MIXTURE

The operation to be performed in the temperature range from -25°C to +45°C.

**Attention! Use only clean water and packaging to prepare the mortar.**

For gauging of 1 kg of the dry mixture, 0.19 litres of water is required. Mix thoroughly with a slow-speed drill or mortar mixer for 3 minutes until forming a homogenous soft mass without lumps. Withstand the technological pause for 3-5 minutes and re-stir the mixture.

**A mortar mixture needs to be stirred regularly to maintain the original consistency. Re-adding water to the mixture is not allowed. Adding water to the mortar mixture is not allowed.**

### APPLICATION

Before applying the mortar, the surface should be thoroughly moistened. The material can be applied manually or mechanically.

### HANDLING OF THE TREATED SURFACE

- at a positive temperature, to achieve adhesion strength (up to 2.8 MPa), the substrate must be moistened and ensure that the treated surfaces remain moist for 3 days;

- at a negative temperature to achieve routine strength, it is required to cover the exposed surface with a waterproof thermal insulation material for a period not shorter than 3 hours;

- protect from mechanical influences, including direct exposure to atmospheric precipitation.

The consumption per 1m<sup>3</sup> is 1925 kg.





# SELF-HEATING QUICK-HARDENING CONCRETE COMPOUND

**ARENA**  
**FastMix**  
**EasyHot8**

- ✓ increased strength at early stages of hardening 6h/8h;
- ✓ increased frost and air resistance (alternating moistening and drying cycles shift);
- ✓ self-heating of the composition to 20°C;
- ✓ high mobility.



## DESCRIPTION

The universal compound ARENA FastMix EasyHot8 is able to solve multifunctional tasks at various construction sites, requiring compliance with the unique characteristics of ARENA FastMix EasyHot8. Dry quick-hardening repair mixture consists of a mixed binder, quartz sand and a complex of property modifying additives.

## ADVANTAGES

- high strength in the early stages of 6h / 8h
- self-heating of the mixture
- high mobility.

## TECHNICAL CHARACTERISTICS

Appearance:	gray loose powder
Bulk density:	1200 ± 100 kg/m <sup>3</sup>
V/T:	0.19
Mobility of mortar mixture:	PK3
Pot life of mortar mixture at stirring:	less than 60 minutes
Density:	2100±100 kg/m <sup>3</sup>
Compressive strength:	- 2 h 6-8 MPa
	-24 h 24 MPa
	-28 days not less than 40 MPa

Adhesive strength to the substrate: not less than 1.5 MPa

Self-heating of mortar mixture from the moment of the setting of 2 hours: Up to 20° C

\* All the stated quality indicators and recommendations are correct for an ambient temperature of 20°C and a relative humidity of 60%. In other conditions, the technical characteristics of the material may differ from those.

## PREPARATION OF THE SUBSTRATE

Clean the surface of various contaminants, preventing the adhesion of the mixture to the substrate.

**Attention! Before applying the ARENA FastMix EasyHot8 material, it is necessary to moisten the substrate with water to the maximum possible saturation.**

## FORMATION OF MORTAR MIXTURE

The operation to be performed in the temperature range from +5° C.

**Attention! Use only clean water and packaging to prepare the mortar.**

To prepare such volume of a mortar mix which can be developed within 60 minutes from the moment of mixing with water. Recommended water temperature for mixing: 20±2°C. When the temperature of the water decreases, the setting and strength of the mortar mixture increase, and the final strength of the solution decreases. For gauging of 1 kg of the dry mixture, 0.19 litres of water is required. Mix thoroughly with a slow-speed drill or mortar mixer for 3 minutes until forming a homogenous soft mass without lumps. Withstand the technological pause for 3-5 minutes and re-stir the mixture. A mortar mixture needs to be stirred regularly to maintain the original consistency. Re-adding water to the mixture is not allowed.

## APPLICATION

Before applying the mortar, the surface should be thoroughly moistened. The material can be applied manually or mechanically.

## HANDLING OF THE TREATED SURFACE

To achieve adhesive strength (up to 1.5 MPa), the substrate should be moistened and it is necessary to observe that the treated surfaces remain wet for 3 days.



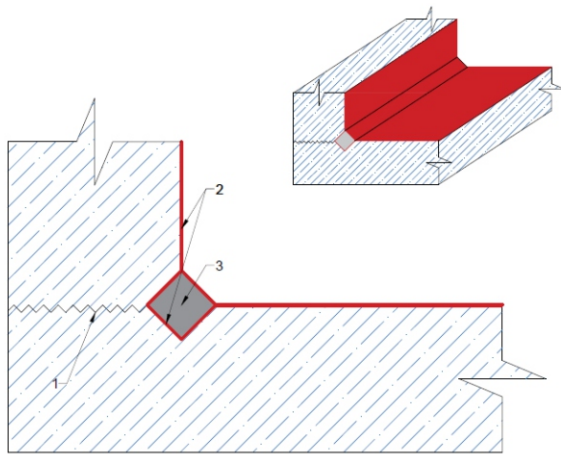
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Waterproofing,  
protection  
and concrete repair

# NODAL SOLUTIONS

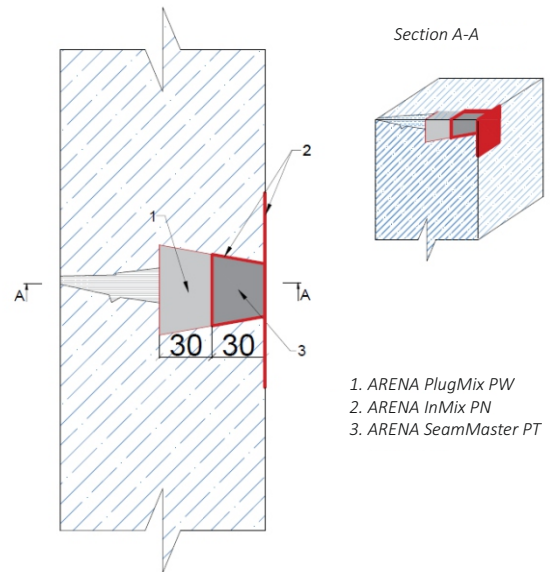
The application of waterproofing and repair mixes ARENA FORCE

## Adjunction



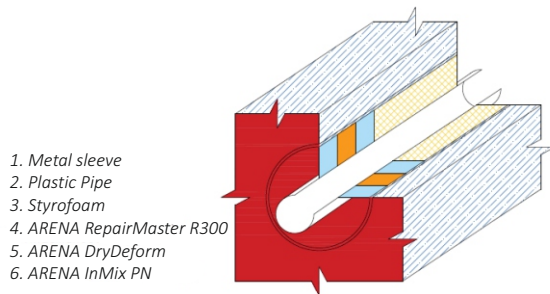
1. Concreting of seams
2. ARENA InMix PN
3. ARENA SeamMaster PT

## Elimination of pressure leak

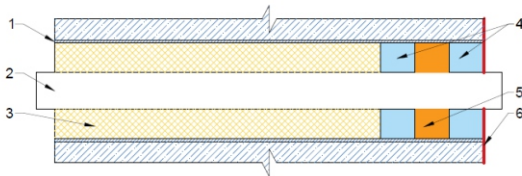


1. ARENA PlugMix PW
2. ARENA InMix PN
3. ARENA SeamMaster PT

## Sealing input holes communications

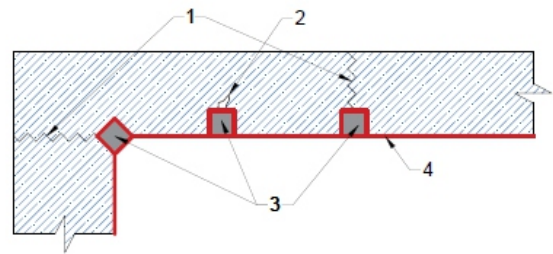


1. Metal sleeve
2. Plastic Pipe
3. Styrofoam
4. ARENA RepairMaster R300
5. ARENA DryDeform
6. ARENA InMix PN

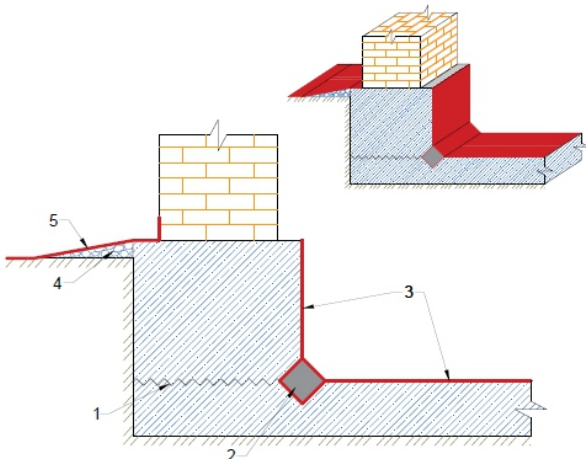


1. Working seams of concreting
2. Crack in the plate
3. ARENA SeamMaster PT
4. ARENA InMix PN

## Waterproofing monolithic overlapping

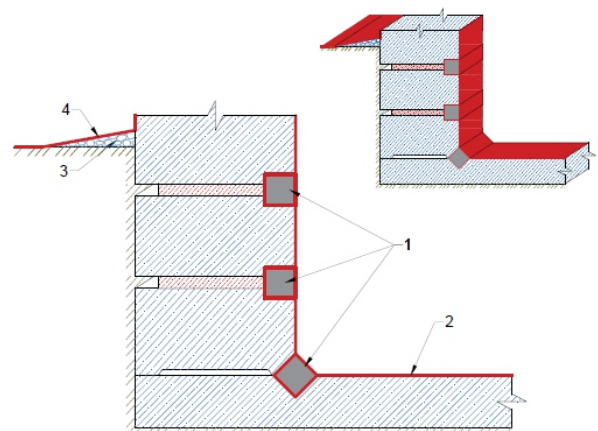


## Waterproofing of the foundation



1. Work the seam of concreting
2. ARENA SeamMaster PT
3. ARENA InMix PN
4. Blind area
5. ARENA PolyElast PE into two layers between which is laid the reinforcing mesh

## Waterproofing of walls and concrete blocks

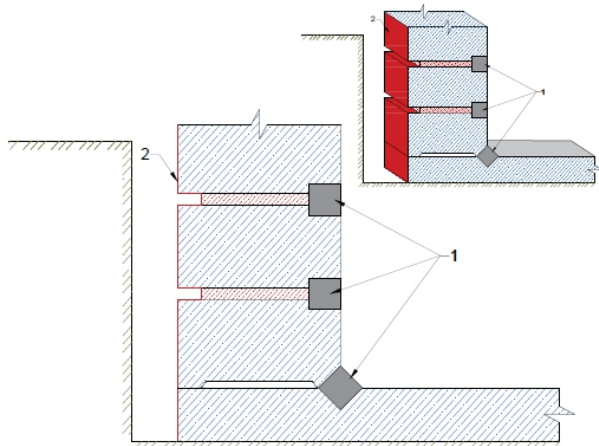


1. ARENA SeamMaster PT
2. ARENA InMix PN
3. Blind area
4. ARENA PolyElast PE into two layers between which is laid the reinforcing mesh

# NODAL SOLUTIONS

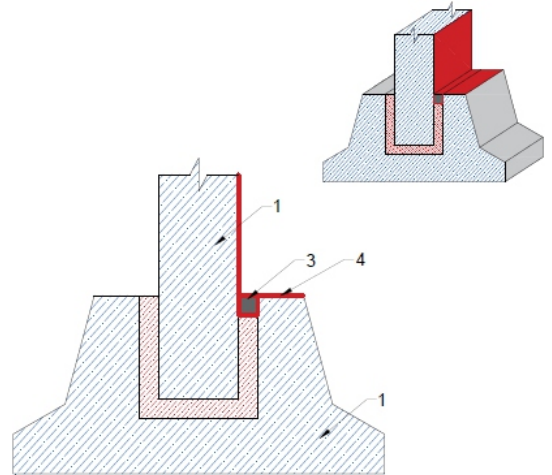
The application of waterproofing and repair mixes ARENA FORCE

Waterproofing of concrete block walls with the possibility of an excavation of the Foundation



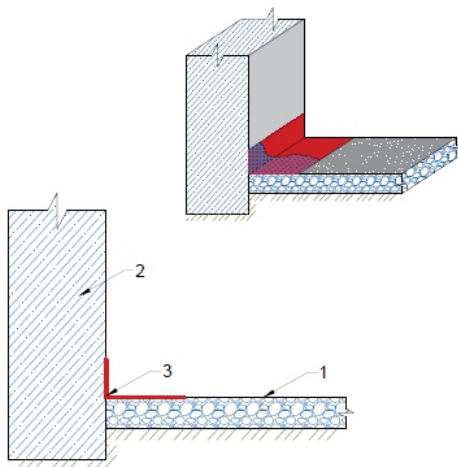
1. ARENA SeamMaster PT
2. ARENA PolyElast PE

Sealing of joints of wall panels



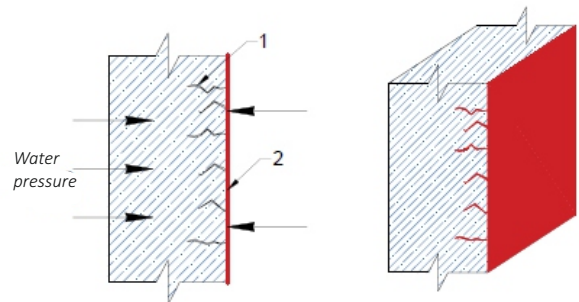
1. Wall panel
2. Prefabricated Foundation
3. ARENA SeamMaster PT
4. ARENA InMix PN

Waterproofing of the junction of the concrete-asphalt



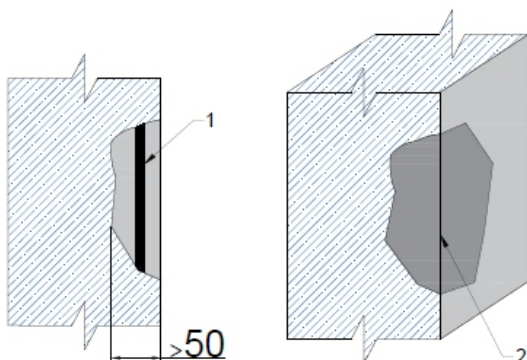
1. Asphalt coating
2. Concrete structure
3. ARENA PolyElast PE into two layers between which is laid the reinforcing mesh

Waterproofing of cracked concrete and concrete structures with an opening no more than 0.4 mm. capillary healing



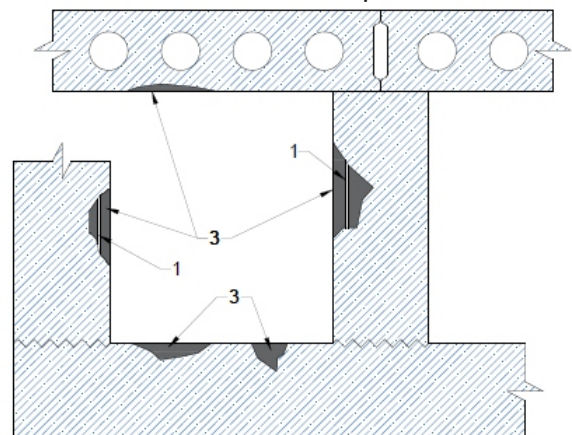
1. The crack opening is not more than 0.4 mm
2. ARENA InMix PN

Repair of concrete structures



1. Armature
2. ARENA RepairMaster R300(R500)

Repair of Reinforced Concrete structures and structures from monolithic concrete at low temperatures



1. Armature
2. ARENA FastMix Hot30
3. ARENA FastMix EasyHot30

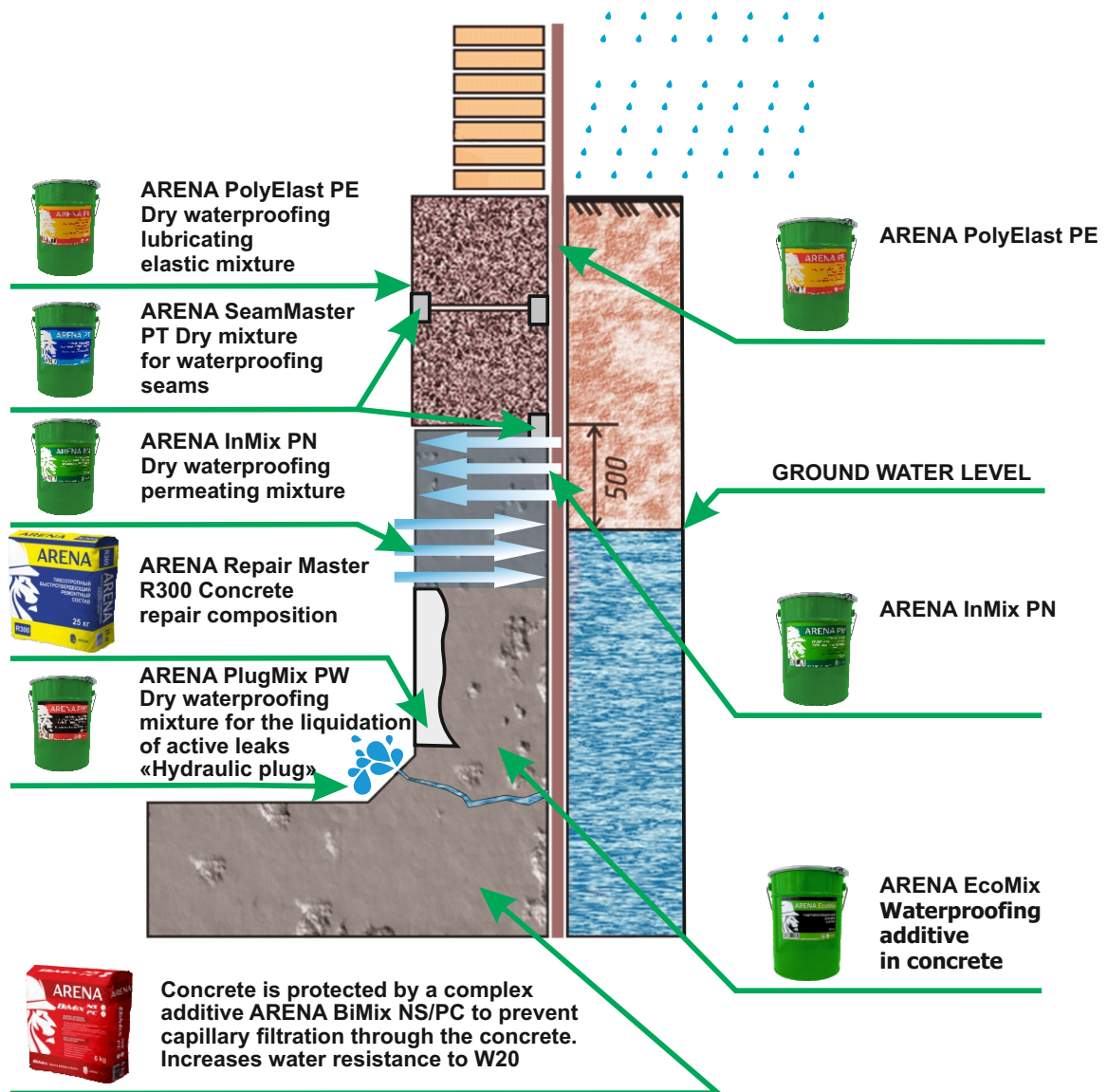




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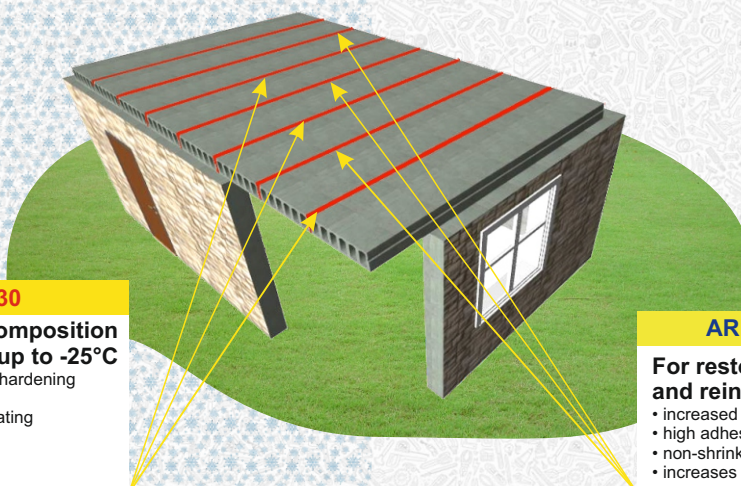
## SOLUTIONS FOR WATERPROOFING CIVIL AND INDUSTRIAL BUILDINGS



### ARENA FastMix Hot30

**Self-heating fast-hardening composition  
for work at negative temp. of up to -25°C**

- increased strength in the early stages of hardening (8 hours - 17 MPa);
- increased frost and air resistance (alternating moistening and drying cycles shift);
- self-heating of the solution up to 60°C;
- high mobility.



### ARENA Repair Master R300

**For restoration and repair of concrete  
and reinforced concrete structures**

- increased strength at the early stages of hardening;
- high adhesion;
- non-shrinking;
- increases the concrete water resistance (W12).