

## Concrete mix

Таблица 1

Составы бетонной смеси

Компоненты	Содержание в примерах выполнения, мас. %	
	предлагаемый	
	1	2
Портландцемент М400	13	15
Кварцевый песок фракций менее 0,63 мм и 0,63-1,25 мм в соотношении, обеспечивающем получение смеси с наибольшей насыпной плотностью	81,301	78,3
Декстрин	0,006	0,009
Суперпластификатор	0,493	0,991
Вода	5,2	5,7

IPC classes for russian patent Concrete mix (RU 2229452):

[C04B24/38](#) - Polysaccharides or derivatives thereof[C04B24/22](#) - Condensation products thereof

[C04B111/20](#) - LIME; MAGNESIA; SLAG; CEMENTS; COMPOSITIONS THEREOF, e.g. MORTARS, CONCRETE OR LIKE BUILDING MATERIALS; ARTIFICIAL STONE; CERAMICS (devitrified glass-ceramics C03C0010000000); REFRACTORIES (alloys based on refractory metals C22C); TREATMENT OF NATURAL STONE

**Another patents in same IPC classes:****The complex** / 2203865

The invention relates to construction materials and can be used as plasticizing agents to wagamama

**Method of waterproofing plaster** / 2199500

**Method of waterproofing plaster using at least one alkylhydroperoxide and at least**

**one hydrocolloid** / 2198856

**The method of obtaining bystroznashivajushchiesja ulanovoy resin and cement based composition of this resin** /

2119923

**The complex additive in concrete and mortars** / 2228306

The invention relates to the composition of an additive used in the production of concretes, mortars, concrete and concrete products

**A method of obtaining a plasticizing additive for concrete mix** / 2199499

The invention relates to construction materials, in particular to methods for plasticizing additives used in the preparation of concrete and concrete products

**Polymer composition** / 2164899

The invention relates to construction materials, in particular, to polymer compositions for obtaining polymer stone

**The method of preparation of the complex modifier concrete and complex modifier concrete**

**(options)** / 2160723

The invention relates to methods of preparation of complex modifiers of concrete and structures of complex modifiers

**Concrete mix** / 2149851**(57) Abstract:**

The invention relates to the field of construction, in particular, compositions sandy co mixes. Concrete mix including Portland cement, quartz sand two fractions and plastic containing superplasticizer C-3, contains as quartz sand quartz sand fractions less 0,63 and 2.5 mm in a ratio providing the mixture with the highest bulk density, as a Portlar Portland cement grade 400 and plasticizing additive is further added dextrin in the foll wt.%. Portland cement grade 400 13-15 specified silica sand 78,3-81,301, dextrin 0 superplasticizer C-3 0,493-0,991, water is 5.2 to 5.7. The technical result - the reduc cement consumption in the manufacture of concrete. table 2.

The invention relates to the field of construction, in particular, compositions sandy co mixtures.

Known sand concrete mix consisting of the following components: cement, sand, wa different ratios depending on the type of concrete (edited Mikulski VP "Construction r Publisher Association building Universities, Moscow is her close, prototype is a concre the following composition, wt.%:

Cement alcovy "M500" 27,5-30,5

Quartz sand fraction

less 0,315 mm 30,0-32,0

Quartz sand fraction 0,315-1.25 mm 22-24,5

Micro silica with a specific surface area

 $S_{beats}(20-40) \cdot 10^3 \text{cm}^2/\text{g}$  2,0-3,0

Superplasticizer C-3 0,5-1,5

Comprehensive mineral Supplement 4,5-7,0

Water the rest

moreover, a comprehensive mineral Supplement consists of aluminate cement, quart a specific surface area  $(0.1 \text{ to } 0.15) \cdot 10^3 \text{cm}^2/\text{g}$  and silicates of calcium (patent RU 20 C 04 28/04, 04 111/20, published. 10.10.96, bull. No. 28).

The shortcoming of the above technical solution is the high consumption of cement.

The objective of the invention is to reduce the consumption of cement in the manufac concrete.

This object is achieved by the use of a concrete mixture comprising Portland cement, two fractions and plasticizing additive containing superplasticizer C-3, and it contains ; sand quartz sand fractions less 0,63 0,63 mm and 2.5 mm in a ratio providing ssuu a further added dextrin in the following ratio of components, wt.%:

Portland cement grade 400 13-15

The specified silica sand 78,3-81,301

Dextrin 0,006-0,009

Superplasticizer C-3 0,493-0,991

Water 5,2-5,7

Dextrin is a commercial product, produced according to GOST 6034-74.

Dextrin in small amounts in the composition of the concrete and the mortar is not on plasticizing, but the addition of hardening.c. SU # 1144997, IPC 04 In 24/10, publishe 15.03.1985. bull. No. 10). Introduction dextrin significantly increases the strength of , that can be attributed to increased adhesion (adhesion) between the cement stone a aggregate. Moreover, it is found experimentally that the optimum content of dextrin, strength is increased by 15-20% or more, is within 0,03-0,06% relative to the ceme increase in the concentration of dextrin above 0.06% reduces the strength of concre Superplasticizer C-3 is the sodium salt of the condensation product of naphthalenesul formaldehyde. Produced on an industrial scale under the name of "Thinner " C-3" on 14-625-80 NIIZHB, CNII MF Gosstroy, was Moscow.

Using the proposed concrete mixture of quartz sand two fractions with the lowest of their porosity of the finished concrete, increase its strength, water resistance, durabili Concrete mix proposed composition was prepared in the laboratory. Dextrin and sup C-3 pre-mixed with water. From the concrete mixture produced cubic samples with t the cube 7,07 cm with seal compaction. Pressure on the concrete mixture when the : MPa.

Examples of carrying out the invention are illustrated in the table. 1 and 2.

Concrete mix including Portland cement, quartz sand two fractions and plasticizing ad containing superplasticizer C-3, characterized in that it contains as quartz sand quartz fractions less to 0.63 and 0.63-2.5 mm in a ratio providing the mixture with the high density, as a Portland cement - Portland cement grade 400 and plasticizing additive is added dextrin in the following ratio, wt.%:

Portland cement grade 400 13-15

The specified silica sand 78,3-81,301

Dextrin 0,006-0,009

Superplasticizer C-3 0,493-0,991

Water 5,2-5,7

The invention relates to the production of building materials and decorative concrete mixtures for the manufacture and finishing of slabs, paving roads, small architectural forms, as well as monolithic floorings and roads

**The method of obtaining an additive for concrete mix / 2132308**

**Concrete mixture and method of its preparation / 2131856**

**The**

**method of obtaining an additive in concrete and mortars / 2122986**

The invention relates to the production of additives for concrete and mortar mixes used in construction, as well as the manufacture of concrete and concrete products

**The plasticizer cement slurries / 2122627**

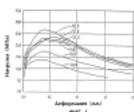
The invention relates to the composition of the plasticizer grouting mortars based on Portland cement and can be used for cementing oil, gas, exploration, and geothermal wells

**A method of obtaining a plasticizer concrete mixes / 2121465**

The invention relates to a process for the production of plasticizers for the preparation of concrete mixes

**A method of manufacturing arbolita / 2228307**

The invention relates to building materials and can be used in the manufacturing of constructions and products from arbolita



**Concrete, reinforced with metal fibers, cementitious mortar part of the concrete mixture and the dry ingredients for the preparation of mortar part of the concrete mix and concrete / 2227127**

The invention relates to concrete, reinforced fibers, especially the concrete for the manufacture of elements of structures for construction equipment intended for the construction of buildings and structures highways

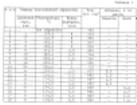
**Concrete mix / 2223926**

The invention relates to the construction materials industry and can be used in the construction

**Concrete mix / 2223242**

The invention relates to construction materials, and in particular to concrete mixtures subjected to curing heat treatment, and can be used in the manufacture of reinforced concrete structures

**The method of obtaining cement concrete / 2223241**



The invention relates to the field of technology for concrete products and structures on the basis of Portland cement



**The complex "alvik" / 2222507**

The invention relates to the construction and building industry



**Raw mixture and method for producing granulated insulating material / 2220928**

The invention relates to the production of building materials, in particular the production of porous artificial products, and can be used in the manufacture of granulated insulating material, particularly a lightweight aggregate for concrete industrial and civil construction

© 2013-2015 Russian business network RussianPatents.com - Special Russian commercial information project for world wide. Foreign filing in English.