

TECHNICAL INSTRUCTION FOR CEMENT CEM I 42,5R**Product: CEM I 42,5R, Portland cement****Strength rank: 42,5R according to norm EN 197-1:2011****Product description and application:**

CEM I 42,5R is pure Portland cement with added binding regulator (natural gypsum) and up to 5% of secondary additive. It is used for concrete preparation for all construction works carried out in regulated construction environment for highly demanding reinforced- and unreinforced concrete structures (bridges, tunnels, viaducts, residential construction, making of finished concrete elements), for making of prefabricated concrete elements and products and prestressed concrete structures and highly wear resistant concrete. Marked by high initial and finish strength and with fast increase of initial strength it is used for production of concrete elements (railway sleepers, transmission lines, supports and pillars) where it enables fast release of moulds. It is also convenient for construction of demanding buildings and structures where technology and dynamics of works requires quick formwork removal.

INSTRUCTIONS FOR USE:

When dosing it is necessary to hold on to concrete structure project. During preparation of concrete mixture one must apply results of first type concrete testing, concrete project and carry out prescribed concrete quality control.

Characteristics:

Characteristic values of mechanical, physical and chemical properties for cement CEM I 42,5R and requirements according to norm EN 197-1:2011:

Mechanical and physical properties:	CEM I 42,5R	Norm requirement
Setting time (min)	160	≥ 60
Soundness- Le Chatelier (mm)	0,5	≤ 10
Compressive strength 2 days (MPa)	32	≥ 20
Compressive strength 28 days (MPa)	60	≥ 42,5 ≤ 62,5
Chemical properties:		
SO ₃ (%)	3,6	≤ 4,0
Cl (%)	0,02	≤ 0,1
Loss of ignition (%)	2,2	≤ 5,0
Insoluble residue (%)	0,8	≤ 5,0

Quality control:

Production process is part of integrated management system certified according to international norms ISO 9001:2015 and ISO 14001:2015, OHSAS 18001:2007 and ISO 50001:2018. In addition to regular internal quality control in all phases of production process Institute for Civil Engineering in Zagreb Croatia carries out independent control. Product is subject to compliance proof according to EN 197-1:2011.

Certificate of constancy of performance: Issued by Institut IGH d.d. Zagreb**Declaration of performance:** 2477-CPR-2762-NC01-001 from 09/01/2020. Declaration of performance available at: www.nexe.hr/en / PRODUCTS&SERVICES/ Cement/ Declaration of performance CEM I 42,5R (number: 2477-CPR-2762-NC01-001).**Delivery, transport and storage:**

Cement is delivered in bulk in cisterns.

Bulk cement is delivered in dry and clean cisterns without organic and anorganic impurities. Bulk cement should be stored in concrete or metal silos isolated from atmospheric agents. It is recommended to fill the same silo with one type of cement, i.e. not mix different types of cement.

est before: 3 months from date of despatch on Despatch note, if conditions of transport and storage are met**COUNTRY OF ORIGIN: REPUBLIC OF CROATIA**

Technical information from this instruction is given according to latest information we dispose of, as general instructions only and are subject to change without previous notice. Information regarding cement content and property values are characteristic and approximate.

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DANGER

H318 Causes serious eye damage
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H335 May cause respiratory irritation
P102 Keep out of reach of children
P280 Wear protective gloves/protective clothing/eye protection/face protection
P305+P351+P338+P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician
P302+P352+P333+P313: IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention
P261+P304+P340+P312: Avoid breathing dust/fume/gas/mist/vapours/spray. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
P501 Dispose of contents/container according to national regulations.