

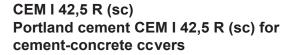


# Technical list [ Á Jortland cement CEM I 42,5 R (sc) for cement-concrete covers

January 2021







### **Description:**

CEM I 42,5 R Portland cement is manufactured in in accordance with ČSN EN 197-1 ed. 2. It is a hydraulic binder in powder form manufactured by grinding together Portland clinker, calcium sulphate and additives. These constituents are specified technical standards EN 197-1, Article 5.

It meets the requirements defined in Article 6.1 pof the specific technical documents of ČSN 73 6123-1.

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HmdecZ	AUjb ₩ca dcbYbh
<sup></sup> cement	∰Rortland &ļậ å^¦
CEM I	100%

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**IgYX:** Ø[¦Ás@eÁi¦[å`&cāi}}Ái-Á&∧{^}dË&[}&\^c∿Á&[ç^¦•È

## CharaWeristic Z/Uhi fYg:

- ¦æ];ãåÁ§;&¦^æ•^Á§;Áid^}\*œ@
- @# @#s ããæ; A d^} \* c@
- higher development of hydration heait in the process of setting and hardeningÁ

# A Yh cX cZXY ]j Yfm

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### Quality, environment, safety

- Quality Management Certificate according to ČSN EN ISO 9001
- Environmental Management Certificate according to ČSN EN ISO 14001
- Occupational Safety Management Certificate according to ČSN ISO 45001

#### Technicæparamet^¦•:

CEM I 42,5 R (sc)										
Paramet^¦////////////////////////////////////		EN 197-1 ¦^ັ ă^{ ^}c a} å ČSN 73 6123-1	ÁŒÇ^¦æt^Áæ&@ã∿ç^å çæpĭ^∙							
Initial strength (2 days) (compresive strength)	MPa	≥ 20	24							
Standardized strength (28 days) (compresive strenght)	MPa	42,5 - 62,5	57							
Ù^ccāj * Álj átábetáj }	minut^•	≥ 90	160							
X[ ǐ{ ^Á(cæàảặãố (^¢]æ})•āį})	mm	≤ 10	1,0							
Š[••Á;}Á\$;}ããā;}	%	≤ 3,0	1,16							
<b>Q</b> •[ `à ^Á^∙ãa`^	%	≤ 5,0	0,2							
Ù´ ]@eee^Á&[}c^}o4(ae=SO <sub>3</sub> )	%	≤ 4,0	3,05							
Ô@{[¦ãå^Á&{]}c^}c	%	≤ 0,1	0,017							
Ô[ } c^} cC <sub>3</sub> A ậ &ậ \^¦ (C <sub>3</sub> A = 2,65 Al <sub>2</sub> O <sub>3</sub> - 1,69 Fe <sub>2</sub> O <sub>3</sub> )	%	≤ 8,0	7,23							
Mill (Blaine)	m²/kg	≤ 350	3400							
Na <sub>2</sub> O <sub>ekv.</sub>	%	≤ 0,80	0,55							

The given values are for information only and may differ from the values of the specific samples.

# Usability of cements for the degree of environmental influence according to ČSN EN 206+A1 and ČSN P 73 2404

	9bj]fcba YbłIJ⁻]bŻi Yb₩rXY[ fYY																	
Cement	corrosion risk free	corrosion caused by carbonation			corrosion cau- sed by chlori- des (other than seawater)			alternating freeze -thaw action				chemically aggressive environment			abrasion			
	X0	XC1	XC2	XC3	XC4	XD1	XD2	XD3	XF1	XF2	XF3	XF4	XA1	XA2	XA3	XM1	XM2	XM3
CEM I	Х	х	х	х	х	х	х	х	х	х	х	х	х	X <sup>a)</sup>	X <sup>a)</sup>	х	х	х

x ... usable for the given degree of environmental

a) under chemical sulfate aggression with the degree of environmental influence exceeding XA1 (concentration of sulfate ions  $SO_4^{2^2}$  greater than 600 mg/l in the groundwater or 3000 mg/kg, optionally 2000 mg/kg in the natural ground) it is necessary to use the sulfate-resistant cement SR. With the content of  $SO_4^{2^2}$  up to 1500 mg/l it is possible to use CEM I with adequate dose of puzzolant admixture (e.g. with at least 20% fly ash content). For other cases of influence of environment XA2 and XA3, such cement type is suistable.

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