

Českomoravský cement, a.s.
Mokrá 359
664 04 Mokrá-Horákov

Statistické hodnocení kvality cementu dle EN 197-1

Cement: CEM II/A-S 42,5 R

Období: Od: **01.04.2021**

Závod: **Mokrá**

Do: **30.04.2021**

Mechanické a fyzikální vlastnosti

| Datum | Měrný povrch | Normální konzistence | Počátek tuhnutí | Konec tuhnutí | Objemová stálost | Pevnost v tlaku | | Pevnost v ohybu | |
|---------------|------------------------|----------------------|-----------------|---------------|------------------|-----------------|-------------|-----------------|------------|
| | | | | | | 2 dny | 28 dní | 2 dny | 28 dní |
| Jednotka | [m ² /kg] | [%] | [min] | [min] | [mm] | [MPa] | [MPa] | [MPa] | [MPa] |
| 01.04.2021 | 474 | 27,6 | 235 | 323 | 1,0 | 25,4 | 56,8 | 5,2 | 9,6 |
| 04.04.2021 | 471 | 28,6 | 241 | 336 | 1,0 | 24,7 | 58,3 | 4,3 | 9,8 |
| 05.04.2021 | 463 | 28,0 | 268 | 343 | 0,5 | 24,7 | 58,1 | 5,2 | 9,3 |
| 06.04.2021 | 466 | 28,0 | 260 | 359 | 1,0 | 24,9 | 58,8 | 5,5 | 10,0 |
| 07.04.2021 | 477 | 28,2 | 270 | 354 | 1,0 | 25,8 | 59,0 | 5,6 | 9,8 |
| 12.04.2021 | 476 | 28,4 | 260 | 327 | 0,5 | 27,1 | 59,2 | 5,7 | 9,5 |
| 13.04.2021 | 488 | 28,2 | 270 | 330 | 0,0 | 26,7 | 58,8 | 6,0 | 9,9 |
| 13.04.2021 | 465 | 28,4 | 247 | 331 | 1,0 | 26,4 | 58,8 | 5,6 | 9,6 |
| 14.04.2021 | 477 | 27,8 | 249 | 343 | 0,5 | 26,7 | 59,5 | 5,9 | 9,6 |
| 18.04.2021 | 482 | 28,4 | 258 | 355 | 1,0 | 25,6 | 57,5 | 5,6 | 9,2 |
| 19.04.2021 | 483 | 28,2 | 273 | 354 | 0,5 | 25,9 | 60,8 | 5,9 | 9,9 |
| 20.04.2021 | 467 | 28,2 | 269 | 355 | 1,0 | 26,0 | 56,8 | 5,9 | 9,4 |
| 21.04.2021 | 465 | 28,4 | 260 | 360 | 1,0 | 26,4 | 57,8 | 5,7 | 9,4 |
| 25.04.2021 | 446 | 28,4 | 244 | 328 | 0,0 | 26,5 | 57,9 | 6,0 | 9,2 |
| 26.04.2021 | 451 | 28,0 | 249 | 322 | 0,0 | 25,9 | 58,0 | 5,6 | 9,2 |
| 27.04.2021 | 464 | 28,0 | 251 | 334 | 2,0 | 25,1 | 59,9 | 5,7 | 9,4 |
| 28.04.2021 | 458 | 27,6 | 273 | 359 | 0,5 | 24,6 | 54,3 | 5,3 | 9,7 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Průměr | 469 | 28,1 | 257 | 342 | 0,7 | 25,8 | 58,3 | 5,6 | 9,6 |
| Max | 488 | 28,6 | 273 | 360 | 2,0 | 27,1 | 60,8 | 6,0 | 10,0 |
| Min | 446 | 27,6 | 235 | 322 | 0,0 | 24,6 | 54,3 | 4,3 | 9,2 |
| Std | 11 | 0,3 | 12 | 13 | 0,5 | 0,8 | 1,4 | 0,4 | 0,3 |
| Četnost | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| Norma-min | | | 60 | | | 20,0 | 42,5 | | |
| Norma-max | | | | | 10 | | 62,5 | | |

V Mokré dne : 08.06.2021

Ing. Jiří Lerch - vedoucí útvaru řízení jakosti

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Chemické vlastnosti

| Datum | SiO ₂ | Al ₂ O ₃ | Fe ₂ O ₃ | CaO | MgO | K ₂ O | Na ₂ O | Obsah síranů (jako SO ₃) | Na ₂ O ekv. | Obsah Cl | Ztráta žháním | Nerozpustný zbytek | Vodorozpustný chrom (Cr ⁶⁺) | C ₃ A ve slinku |
|---------------|------------------|--------------------------------|--------------------------------|--------------|-------------|------------------|-------------------|---|------------------------|--------------|---------------|-----------------------|--|----------------------------|
| Jednotka | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [ppm] | [%] |
| 01.04.2021 | 22,59 | 5,21 | 2,89 | 57,10 | 2,29 | 0,72 | 0,20 | 2,83 | 0,67 | 0,074 | --- | --- | --- | 7,26 |
| 04.04.2021 | 22,92 | 5,21 | 2,76 | 58,42 | 2,35 | 0,78 | 0,20 | 2,67 | 0,71 | 0,051 | --- | --- | --- | 7,21 |
| 05.04.2021 | 23,07 | 5,19 | 2,98 | 57,65 | 2,30 | 0,74 | 0,18 | 2,74 | 0,67 | 0,082 | --- | --- | --- | 7,05 |
| 06.04.2021 | 22,84 | 5,25 | 2,74 | 58,31 | 2,39 | 0,77 | 0,21 | 2,68 | 0,72 | 0,071 | --- | --- | --- | 7,05 |
| 07.04.2021 | 22,69 | 5,22 | 2,67 | 57,96 | 2,32 | 0,75 | 0,21 | 2,73 | 0,70 | 0,081 | --- | --- | --- | 7,05 |
| 12.04.2021 | 22,82 | 5,25 | 2,73 | 58,63 | 2,37 | 0,74 | 0,21 | 2,64 | 0,70 | 0,074 | --- | --- | --- | 6,93 |
| 13.04.2021 | 22,74 | 5,21 | 2,83 | 57,80 | 2,55 | 0,78 | 0,23 | 2,74 | 0,74 | 0,074 | --- | --- | --- | 7,21 |
| 13.04.2021 | 22,80 | 5,23 | 2,73 | 58,49 | 2,36 | 0,74 | 0,21 | 2,63 | 0,70 | 0,073 | --- | --- | --- | 7,21 |
| 14.04.2021 | 23,10 | 5,25 | 2,78 | 57,98 | 2,74 | 0,76 | 0,24 | 2,64 | 0,74 | 0,072 | --- | --- | --- | 7,23 |
| 18.04.2021 | 22,92 | 5,18 | 2,74 | 58,02 | 2,62 | 0,80 | 0,24 | 2,66 | 0,77 | 0,090 | --- | --- | --- | 7,23 |
| 19.04.2021 | 22,95 | 5,16 | 2,72 | 57,77 | 2,60 | 0,81 | 0,24 | 2,65 | 0,77 | 0,091 | --- | --- | --- | 7,23 |
| 20.04.2021 | 22,88 | 5,17 | 2,64 | 58,34 | 2,72 | 0,78 | 0,22 | 2,67 | 0,73 | 0,082 | --- | --- | --- | 6,68 |
| 21.04.2021 | 22,70 | 5,13 | 2,68 | 58,44 | 2,63 | 0,76 | 0,21 | 2,69 | 0,71 | 0,074 | --- | --- | --- | 6,68 |
| 25.04.2021 | 21,64 | 5,04 | 2,99 | 59,55 | 2,20 | 0,78 | 0,23 | 2,81 | 0,74 | 0,079 | --- | --- | --- | 6,01 |
| 26.04.2021 | 22,00 | 5,09 | 2,94 | 58,94 | 2,31 | 0,77 | 0,23 | 2,78 | 0,74 | 0,081 | --- | --- | --- | 6,01 |
| 27.04.2021 | 22,75 | 5,14 | 2,89 | 59,11 | 2,74 | 0,69 | 0,19 | 2,64 | 0,64 | 0,072 | --- | --- | --- | 6,96 |
| 28.04.2021 | 22,80 | 5,16 | 2,87 | 58,80 | 2,62 | 0,69 | 0,19 | 2,72 | 0,64 | 0,067 | --- | --- | --- | 6,96 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Průměr | 22,72 | 5,18 | 2,80 | 58,31 | 2,48 | 0,76 | 0,21 | 2,70 | 0,71 | 0,076 | --- | --- | --- | 6,94 |
| Max | 23,10 | 5,25 | 2,99 | 59,55 | 2,74 | 0,81 | 0,24 | 2,83 | 0,77 | 0,091 | --- | --- | --- | 7,26 |
| Min | 21,64 | 5,04 | 2,64 | 57,10 | 2,20 | 0,69 | 0,18 | 2,63 | 0,64 | 0,051 | --- | --- | --- | 6,01 |
| Std | 0,36 | 0,06 | 0,11 | 0,58 | 0,18 | 0,03 | 0,02 | 0,06 | 0,04 | 0,009 | --- | --- | --- | 0,38 |
| Četnost | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 0 | 0 | 0 | 17 |
| Norma-min | | | | | | | | | | | | | | |
| Norma-max | | | | | | | | 4,0 | 0,10 | | | | | |

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