

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

Statistické hodnocení kvality cementu dle EN 197-1 / ČSN 73 6123-1*

Cement: CEM I 42,5 R (sc)

Období: Od: **01.09.2021**

Závod: **Mokrá**

Do: **30.09.2021**

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] |
| 04.09.2021 | 328 | 28.0 | 209 | 298 | 0.0 | 29.7 | 60.4 | 5.2 | 9.5 |
| 07.09.2021 | 327 | 27.6 | 211 | 283 | 1.0 | 28.3 | 59.6 | 6.0 | 9.8 |
| 13.09.2021 | 328 | 28.2 | 234 | 314 | 1.0 | 29.5 | 60.2 | 6.1 | 9.1 |
| 15.09.2021 | 310 | 28.0 | 206 | 318 | 1.0 | 28.4 | 61.4 | 5.2 | 8.6 |
| 19.09.2021 | 314 | 27.2 | 206 | 288 | 0.5 | 28.7 | 59.7 | 5.1 | 9.7 |
| 22.09.2021 | 320 | 27.2 | 215 | 287 | 0.5 | 27.0 | 61.0 | 5.1 | 9.6 |
| 27.09.2021 | 320 | 28.2 | 235 | 310 | 1.0 | 28.0 | 60.8 | 5.3 | 9.0 |
| 29.09.2021 | 304 | 28.0 | 240 | 325 | 1.0 | 24.1 | 57.5 | 4.8 | 9.4 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Průměr | 319 | 27.8 | 220 | 303 | 0.8 | 28.0 | 60.1 | 5.4 | 9.3 |
| Max | 328 | 28.2 | 240 | 325 | 1.0 | 29.7 | 61.4 | 6.1 | 9.8 |
| Min | 304 | 27.2 | 206 | 283 | 0.0 | 24.1 | 57.5 | 4.8 | 8.6 |
| Std | 8 | 0.4 | 13 | 15 | 0.4 | 1.6 | 1.1 | 0.4 | 0.4 |
| Četnost | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Norma-min | | | 60/90* | | | 20.0 | 42.5 | | |
| Norma-max | 350* | | | | 10 | | 62.5 | | |

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 | Nerozpuštěný zbytek | v. CaO | Vodorozpuštěný chrom (Cr ⁶⁺) | C ₃ A ve sílnku |
|---------------|------------------|--------------------------------|--------------------------------|--------------|-------------|------------------|-------------------|--------------------------------------|------------------------|--------------|---------------|---------------------|-------------|--|----------------------------|
| Jednotka | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [%] | [ppm] | [%] |
| 04.09.2021 | 20.09 | 4.68 | 3.55 | 63.33 | 1.34 | 0.76 | 0.21 | 3.41 | 0.71 | 0.022 | 1.66 | 0.46 | 0.65 | 0.00 | 6.92 |
| 07.09.2021 | 20.01 | 4.67 | 3.30 | 64.28 | 1.35 | 0.77 | 0.21 | 3.30 | 0.72 | 0.023 | --- | --- | --- | --- | 7.32 |
| 13.09.2021 | 20.08 | 4.71 | 3.57 | 63.02 | 1.31 | 0.74 | 0.23 | 3.36 | 0.72 | 0.027 | --- | --- | --- | 0.00 | 7.32 |
| 15.09.2021 | 19.83 | 4.65 | 3.34 | 64.79 | 1.30 | 0.66 | 0.19 | 3.30 | 0.62 | 0.021 | --- | --- | --- | --- | 6.65 |
| 19.09.2021 | 19.81 | 4.63 | 3.35 | 64.88 | 1.30 | 0.66 | 0.19 | 3.30 | 0.62 | 0.020 | 1.51 | 0.30 | --- | --- | 6.65 |
| 22.09.2021 | 20.42 | 4.74 | 3.35 | 63.70 | 1.48 | 0.66 | 0.19 | 3.12 | 0.62 | 0.028 | --- | --- | --- | --- | 6.45 |
| 27.09.2021 | 20.46 | 4.74 | 3.31 | 63.84 | 1.47 | 0.66 | 0.19 | 3.09 | 0.62 | 0.032 | --- | --- | 0.00 | --- | 6.55 |
| 29.09.2021 | 20.82 | 4.87 | 3.28 | 63.90 | 1.50 | 0.71 | 0.15 | 3.06 | 0.62 | 0.022 | --- | --- | --- | --- | 6.55 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Průměr | 20.19 | 4.71 | 3.38 | 63.97 | 1.38 | 0.70 | 0.20 | 3.24 | 0.66 | 0.024 | 1.59 | 0.38 | 0.33 | --- | 6.80 |
| Max | 20.82 | 4.87 | 3.57 | 64.88 | 1.50 | 0.77 | 0.23 | 3.41 | 0.72 | 0.032 | 1.66 | 0.46 | 0.65 | 0.00 | 7.32 |
| Min | 19.81 | 4.63 | 3.28 | 63.02 | 1.30 | 0.66 | 0.15 | 3.06 | 0.62 | 0.020 | 1.51 | 0.30 | 0.00 | 0.00 | 6.45 |
| Std | 0.33 | 0.07 | 0.11 | 0.61 | 0.08 | 0.05 | 0.02 | 0.12 | 0.04 | 0.004 | 0.08 | 0.08 | 0.33 | 0.00 | 0.33 |
| Četnost | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 2 | 2 | 2 | 2 | 8 |
| Norma-min | | | | | | | | | | | | | | | |
| Norma-max | | | | | | | | 4.0 | 0.80* | 0.10 | 5,0/3,0* | 5.0 | | | 8,0* |

Ve statistickém hodnocení cementu CEM I 42,5 R (sc) se uváděný obsah Cr 6+ vztahuje na redukovaný cement, který je redukován pouze v určitém omezeném objemu a je určen pouze jednomu odběrateli. Ostatní objem produkce tohoto cementu není redukován.

V Mokré dne : 08.11.2021

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