

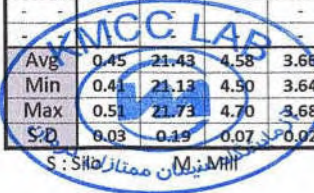


| Day | Chemical Compositions & Phases % |                  |                                |                                |      |       |                 |                  |                   |      |       |      |      |      |      |             | Physical Test |              |                             |              |             |               |                |                            |        |        |        | Lab.Code |                     |        |        |         |     |             |
|-----|----------------------------------|------------------|--------------------------------|--------------------------------|------|-------|-----------------|------------------|-------------------|------|-------|------|------|------|------|-------------|---------------|--------------|-----------------------------|--------------|-------------|---------------|----------------|----------------------------|--------|--------|--------|----------|---------------------|--------|--------|---------|-----|-------------|
|     | IR                               | SiO <sub>2</sub> | Al <sub>2</sub> O <sub>3</sub> | Fe <sub>2</sub> O <sub>3</sub> | CaO  | MgO   | SO <sub>3</sub> | K <sub>2</sub> O | Na <sub>2</sub> O | Cl   | LOSS  | C3S  | C2S  | C3A  | C4AF | C4AF + 2C3A | F-CaO         | Fineness     |                             | Setting time |             | Soundness     |                | Compressive Strength (MPa) |        |        |        |          | Bend Strength (MPa) |        |        |         |     |             |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |      |      |      |      |             |               | Sieve 90 mic | Blaine (m <sup>2</sup> /kg) | INIT (min)   | FINAL (min) | LEACHTER (mm) | Auto Clave (%) | 1 DAY                      | 2 DAYS | 3 DAYS | 7 DAYS |          | 28 DAYS             | 2 DAYS | 3 DAYS | 28 DAYS |     |             |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |      |      |      |      |             |               |              |                             |              |             |               |                |                            |        |        |        |          |                     |        |        |         |     |             |
| 1   | S                                | 0.55             | 20.93                          | 4.46                           | 3.61 | 63.63 | 1.32            | 2.78             | 0.60              | 0.67 | 0.018 | 1.88 | 56.9 | 17.1 | 5.7  | 11.0        | 22.4          | 1.70         | 1.7                         | 317          | 120         | 170           | 1.3            | 0.17                       | -      | -      | 22.9   | 30.1     | 38.9                | 48.4   | 4.2    | 5.8     | 8.4 | I-CE-01-308 |
| 1   | M                                | 0.61             | 21.24                          | 4.55                           | 3.61 | 63.58 | 1.32            | 2.77             | 0.59              | 0.66 | 0.018 | 1.71 | 53.8 | 20.3 | 5.9  | 11.0        | 22.9          | 1.55         | 1.5                         | 301          | 130         | 180           | 1.2            | 0.14                       | -      | -      | 22.1   | 29.2     | 37.6                | 47.6   | 4.1    | 5.2     | 7.8 | I-CE-01-309 |
| 4   | M                                | 0.58             | 21.27                          | 4.56                           | 3.64 | 63.59 | 1.33            | 2.70             | 0.58              | 0.66 | 0.017 | 1.78 | 53.7 | 20.5 | 5.9  | 11.1        | 22.9          | 1.60         | 1.4                         | 301          | 140         | 190           | 1.1            | 0.11                       | -      | -      | 20.9   | 27.4     | 36.6                | 46.5   | 3.9    | 4.8     | 8.3 | I-CE-01-313 |
| 5   | S                                | 0.59             | 20.48                          | 4.29                           | 3.55 | 62.52 | 1.26            | 2.63             | 0.58              | 0.63 | 0.018 | 1.76 | 57.5 | 15.4 | 5.4  | 10.8        | 21.5          | 1.60         | 1.5                         | 314          | 135         | 185           | 1.2            | 0.14                       | -      | -      | 21.2   | 28.7     | 37.9                | 46.5   | 4.3    | 5.1     | 8.1 | I-CE-01-314 |
| 5   | M                                | 0.66             | 21.33                          | 4.68                           | 3.70 | 64.06 | 1.35            | 2.75             | 0.60              | 0.68 | 0.019 | 1.86 | 54.1 | 20.3 | 6.1  | 11.3        | 23.5          | 1.65         | 1.4                         | 308          | 130         | 180           | 1.1            | 0.11                       | -      | -      | 20.7   | 26.9     | 37.7                | 46.9   | 4.0    | 5.2     | 7.8 | I-CE-01-315 |
| 6   | M                                | 0.62             | 21.28                          | 4.67                           | 3.63 | 63.41 | 1.32            | 2.72             | 0.62              | 0.67 | 0.019 | 2.04 | 52.1 | 21.7 | 6.2  | 11.0        | 23.5          | 1.55         | 1.5                         | 301          | 130         | 185           | 1.2            | 0.14                       | -      | -      | 21.1   | 28.1     | 37.1                | 45.7   | 4.3    | 5.0     | 8.1 | I-CE-01-316 |
| 7   | S                                | 0.57             | 21.09                          | 4.54                           | 3.63 | 63.57 | 1.31            | 2.75             | 0.60              | 0.65 | 0.018 | 1.86 | 55.0 | 19.0 | 5.9  | 11.0        | 22.8          | 1.65         | 1.6                         | 317          | 125         | 175           | 1.1            | 0.14                       | -      | -      | 24.1   | 29.5     | 39.2                | 46.6   | 4.8    | 5.6     | 8.0 | I-CE-01-317 |
| 7   | M                                | 0.55             | 21.05                          | 4.57                           | 3.64 | 63.50 | 1.31            | 2.73             | 0.62              | 0.67 | 0.022 | 1.91 | 54.8 | 19.0 | 6.0  | 11.1        | 23.0          | 1.75         | 1.4                         | 298          | 130         | 180           | 1.1            | 0.11                       | -      | -      | 23.2   | 28.9     | 38.5                | 47.4   | 4.7    | 5.7     | 8.2 | I-CE-01-318 |
| 8   | S                                | 0.52             | 21.00                          | 4.51                           | 3.63 | 63.44 | 1.31            | 2.74             | 0.60              | 0.65 | 0.018 | 1.77 | 55.4 | 18.4 | 5.8  | 11.0        | 22.7          | 1.70         | 1.5                         | 314          | 130         | 180           | 1.0            | 0.11                       | -      | -      | 23.6   | 30.9     | 39.7                | 48.1   | 4.7    | 5.9     | 7.4 | I-CE-01-319 |
| 8   | M                                | 0.55             | 21.02                          | 4.51                           | 3.63 | 63.61 | 1.33            | 2.74             | 0.60              | 0.66 | 0.018 | 1.80 | 55.9 | 18.1 | 5.8  | 11.0        | 22.7          | 1.55         | 1.5                         | 305          | 135         | 185           | 0.9            | 0.07                       | -      | -      | 24.0   | 30.5     | 38.9                | 48.3   | 4.8    | 5.5     | 7.9 | I-CE-01-320 |
| 9   | M                                | 0.55             | 21.05                          | 4.51                           | 3.60 | 63.40 | 1.29            | 2.76             | 0.61              | 0.65 | 0.018 | 1.90 | 54.8 | 19.0 | 5.9  | 11.0        | 22.7          | 1.65         | 1.4                         | 305          | 125         | 175           | 1.2            | 0.14                       | -      | -      | 23.4   | 29.5     | 38.2                | 46.7   | 4.2    | 5.3     | 8.1 | I-CE-01-321 |
| 10  | S                                | 0.67             | 21.14                          | 4.58                           | 3.62 | 63.51 | 1.32            | 2.77             | 0.60              | 0.66 | 0.018 | 1.86 | 54.0 | 19.8 | 6.0  | 11.0        | 23.0          | 1.50         | 1.7                         | 320          | 130         | 180           | 1.2            | 0.14                       | -      | -      | 25.0   | 29.2     | 38.1                | 48.5   | 4.7    | 5.9     | 8.1 | I-CE-01-323 |
| 11  | S                                | 0.69             | 21.20                          | 4.62                           | 3.65 | 63.88 | 1.34            | 2.79             | 0.61              | 0.67 | 0.018 | 1.73 | 54.7 | 19.5 | 6.1  | 11.1        | 23.2          | 1.45         | 1.6                         | 317          | 125         | 175           | 1.1            | 0.11                       | -      | -      | 25.0   | 33.3     | 39.9                | 48.1   | 4.9    | 5.6     | 8.6 | I-CE-01-324 |
| 11  | M                                | 0.65             | 21.06                          | 4.54                           | 3.64 | 63.56 | 1.32            | 2.65             | 0.60              | 0.65 | 0.018 | 1.88 | 55.4 | 18.6 | 5.9  | 11.1        | 22.8          | 1.50         | 1.5                         | 305          | 135         | 185           | 1.1            | 0.11                       | -      | -      | 22.3   | 29.2     | 40.1                | 47.2   | 4.7    | 5.1     | 8.2 | I-CE-01-325 |
| 12  | M                                | 0.49             | 21.17                          | 4.58                           | 3.65 | 63.88 | 1.35            | 2.66             | 0.60              | 0.67 | 0.018 | 1.93 | 55.6 | 18.8 | 6.0  | 11.1        | 23.0          | 1.50         | 1.4                         | 308          | 130         | 180           | 1.3            | 0.17                       | -      | -      | 25.7   | 28.2     | 37.9                | 48.2   | 4.6    | 5.2     | 7.9 | I-CE-01-327 |
| 13  | S                                | 0.65             | 21.03                          | 4.55                           | 3.64 | 63.80 | 1.32            | 2.75             | 0.60              | 0.67 | 0.018 | 1.76 | 56.3 | 17.8 | 5.9  | 11.1        | 22.9          | 1.50         | 1.6                         | 314          | 130         | 180           | 1.2            | 0.14                       | -      | -      | 24.2   | 29.1     | 38.5                | 47.4   | 4.9    | 5.7     | 7.9 | I-CE-01-328 |
| 13  | M                                | 0.60             | 21.09                          | 4.55                           | 3.62 | 63.54 | 1.32            | 2.64             | 0.60              | 0.66 | 0.018 | 2.03 | 55.1 | 18.9 | 5.9  | 11.0        | 22.9          | 1.50         | 1.4                         | 305          | 125         | 175           | 1.3            | 0.17                       | -      | -      | 22.9   | 28.2     | 36.9                | 46.5   | 4.2    | 5.0     | 8.2 | I-CE-01-329 |
| 15  | S                                | 0.58             | 21.01                          | 4.53                           | 3.62 | 63.54 | 1.33            | 2.75             | 0.60              | 0.66 | 0.018 | 1.85 | 55.5 | 18.3 | 5.9  | 11.0        | 22.8          | 1.65         | 1.5                         | 311          | 130         | 180           | 1.1            | 0.11                       | -      | -      | 24.0   | 33.2     | 39.6                | 48.2   | 4.8    | 5.9     | 8.2 | I-CE-01-330 |
| 16  | M                                | -                | 21.33                          | 4.67                           | 3.63 | 63.51 | 1.33            | 2.67             | 0.61              | 0.66 | 0.019 | 1.74 | 52.3 | 21.7 | 6.2  | 11.0        | 23.5          | 1.70         | 1.4                         | 301          | 135         | 185           | 1.2            | 0.14                       | -      | -      | 23.6   | 30.0     | 38.3                | 47.4   | 4.5    | 5.2     | 8.3 | I-CE-01-331 |
| 17  | S                                | 0.69             | 20.98                          | 4.50                           | 3.62 | 63.54 | 1.32            | 2.71             | 0.60              | 0.66 | 0.018 | 1.91 | 56.1 | 17.8 | 5.8  | 11.0        | 22.6          | 1.45         | 1.5                         | 308          | 130         | 185           | 1.3            | 0.14                       | -      | -      | 23.5   | 30.4     | 38.2                | 46.5   | 4.7    | 5.8     | 8.0 | I-CE-01-332 |
| 17  | M                                | 0.67             | 21.24                          | 4.64                           | 3.65 | 63.53 | 1.33            | 2.66             | 0.60              | 0.66 | 0.018 | 2.05 | 53.2 | 20.7 | 6.1  | 11.1        | 23.3          | 1.25         | 1.5                         | 301          | 135         | 185           | 1.2            | 0.11                       | -      | -      | 23.4   | 31.0     | 37.9                | 47.3   | 4.4    | 5.5     | 7.8 | I-CE-01-333 |
| 18  | S                                | -                | 21.11                          | 4.57                           | 3.63 | 63.53 | 1.32            | 2.71             | 0.60              | 0.65 | 0.018 | 1.87 | 54.6 | 19.4 | 6.0  | 11.0        | 23.0          | 1.50         | 1.4                         | 308          | 130         | 180           | 1.3            | 0.14                       | -      | -      | 23.9   | 31.4     | 39.1                | 48.2   | 4.9    | 5.5     | 8.3 | I-CE-01-334 |
| 19  | S                                | 0.68             | 21.16                          | 4.63                           | 3.63 | 63.49 | 1.33            | 2.76             | 0.61              | 0.66 | 0.018 | 1.83 | 53.5 | 20.3 | 6.1  | 11.0        | 23.3          | 1.20         | 1.5                         | 305          | 130         | 180           | 1.2            | 0.14                       | -      | -      | 24.7   | 31.2     | 38.9                | 48.3   | 4.9    | 5.4     | 8.4 | I-CE-01-336 |
| 20  | S                                | 0.58             | 21.06                          | 4.54                           | 3.61 | 63.34 | 1.30            | 2.69             | 0.61              | 0.65 | 0.018 | 2.11 | 54.5 | 19.3 | 5.9  | 11.0        | 22.8          | 1.45         | 1.4                         | 301          | 125         | 175           | 1.3            | 0.17                       | -      | -      | 24.3   | 30.7     | 39.6                | 48.1   | 4.8    | 5.5     | 8.6 | I-CE-01-338 |
| 20  | M                                | 0.42             | 21.27                          | 4.64                           | 3.63 | 63.47 | 1.33            | 2.68             | 0.60              | 0.66 | 0.018 | 1.89 | 52.7 | 21.2 | 6.2  | 11.0        | 23.4          | 1.35         | 1.6                         | 298          | 140         | 190           | 1.2            | 0.14                       | -      | -      | 22.7   | 26.1     | 37.2                | 46.9   | 4.1    | 5.3     | 8.1 | I-CE-01-339 |
| 21  | S                                | 0.66             | 21.17                          | 4.59                           | 3.62 | 63.51 | 1.31            | 2.74             | 0.61              | 0.65 | 0.018 | 1.87 | 53.8 | 20.1 | 6.0  | 11.0        | 23.1          | 1.50         | 1.5                         | 305          | 130         | 180           | 1.1            | 0.11                       | -      | -      | 25.7   | 29.2     | 37.8                | 45.4   | 5.1    | 5.7     | 8.3 | I-CE-01-340 |
| 22  | S                                | 0.68             | 21.19                          | 4.61                           | 3.62 | 63.57 | 1.31            | 2.69             | 0.61              | 0.65 | 0.018 | 1.92 | 53.9 | 20.1 | 6.1  | 11.0        | 23.2          | 1.50         | 1.4                         | 301          | 130         | 180           | 1.1            | 0.11                       | -      | -      | 23.5   | 27.8     | 36.6                | 45.7   | 4.6    | 5.4     | 7.7 | I-CE-01-342 |
| 22  | M                                | 0.68             | 21.31                          | 4.68                           | 3.59 | 63.28 | 1.31            | 2.68             | 0.61              | 0.65 | 0.018 | 2.08 | 51.4 | 22.3 | 6.3  | 10.9        | 23.6          | 1.50         | 1.5                         | 305          | 135         | 185           | 1.2            | 0.14                       | -      | -      | 24.0   | 28.3     | 37.1                | 47.8   | 4.5    | 5.5     | 7.9 | I-CE-01-343 |
| 23  | M                                | 0.65             | 21.36                          | 4.62                           | 3.59 | 63.58 | 1.35            | 2.73             | 0.62              | 0.66 | 0.019 | 1.86 | 52.5 | 21.6 | 6.2  | 10.9        | 23.3          | 1.70         | 1.5                         | 305          | 130         | 180           | 1.2            | 0.14                       | -      | -      | 21.3   | 26.2     | 35.9                | 46.4   | 4.2    | 4.9     | 7.6 | I-CE-01-344 |
| 25  | S                                | 0.69             | 21.19                          | 4.59                           | 3.62 | 63.50 | 1.32            | 2.76             | 0.61              | 0.65 | 0.018 | 1.98 | 53.6 | 20.3 | 6.0  | 11.0        | 23.1          | 1.50         | 1.7                         | 308          | 130         | 180           | 1.1            | 0.11                       | -      | -      | 21.4   | 28.1     | 37.5                | 47.6   | 4.3    | 5.4     | 8.2 | I-CE-01-347 |
| 25  | M                                | -                | 21.35                          | 4.67                           | 3.64 | 63.35 | 1.31            | 2.72             | 0.61              | 0.67 | 0.019 | 2.01 | 51.3 | 22.5 | 6.2  | 11.1        | 23.5          | 1.30         | 1.4                         | 298          | 135         | 185           | 1.2            | 0.14                       | -      | -      | 21.3   | 27.3     | 36.8                | 48.2   | 4.5    | 5.1     | 8.1 | I-CE-01-348 |
| 26  | M                                | 0.69             | 21.28                          | 4.67                           | 3.62 | 63.35 | 1.32            | 2.70             | 0.60              | 0.66 | 0.018 | 2.07 | 51.9 | 21.8 | 6.3  | 11.0        | 23.5          | 1.45         | 1.6                         | 301          | 140         | 190           | 1.2            | 0.14                       | -      | -      | 21.5   | 28.2     | 36.1                | 46.6   | 4.2    | 4.8     | 8.5 | I-CE-01-350 |
| 27  | S                                | 0.69             | 21.21                          | 4.62                           | 3.63 | 63.61 | 1.32            | 2.76             | 0.61              | 0.66 | 0.019 | 1.97 | 53.7 | 20.3 | 6.1  | 11.0        | 23.2          | 1.35         | 1.6                         | 314          | 130         | 180           | 1.1            | 0.14                       | -      | -      | 22.3   | 29.7     | 37.6                | 48.5   | 4.6    | 5.7     | 8.4 | I-CE-01-351 |
| 27  | M                                | 0.68             | 21.23                          | 4.67                           | 3.63 | 63.41 | 1.31            | 2.69             | 0.60              | 0.66 | 0.018 | 1.99 | 52.6 | 21.2 | 6.2  | 11.0        | 23.5          | 1.45         | 1.5                         | 301          | 135         | 185           | 1.1            | 0.11                       | -      | -      | 21.2   | 27.2     | 36.1                | 47.7   | 4.1    | 5.2     | 8.1 | I-CE-01-352 |
| 28  | S                                | 0.57             | 21.12                          | 4.59                           | 3.62 | 63.50 | 1.31            | 2.76             | 0.61              | 0.66 | 0.019 | 1.87 | 54.1 | 19.7 | 6.0  | 11.0        | 23.1          | 1.55         | 1.7                         | 317          | 130         | 180           | 1.0            | 0.11                       | -      | -      | 21.9   | 28.4     | 37.6                | 47.4   | 4.4    | 5.3     | 8.3 | I-CE-01-353 |
| 28  | M                                | 0.51             | 21.12                          | 4.56                           | 3.60 | 63.39 | 1.32            | 2.70             | 0.60              | 0.66 | 0.018 | 1.71 | 54.1 | 19.8 | 6.0  | 11.0        | 22.9          | 1.15         | 1.5                         | 298          | 140         | 190           | 1.2            | 0.14                       | -      | -      | 21.3   | 27.3     | 35.9                | 46.7   | 4.1    | 5.4     | 8.2 | I-CE-01-354 |
| 29  | M                                | 0.59             | 21.21                          | 4.61                           | 3.61 | 63.37 | 1.32            | 2.72             | 0.61              | 0.66 | 0.018 | 2.04 | 52.9 | 20.9 | 6.1  | 11.0        | 23.2          | 1.15         | 1.4                         | 295          | 130         | 180           | 1.0            | 0.11                       | -      | -      | 20.4   | 27.0     | 35.4                | 46.7   | 4.3    | 5.1     | 7.7 | I-CE-01-356 |
| 30  | M                                | -                | 21.32                          | 4.67                           | 3.63 | 63.33 | 1.35            | 2.70             | 0.60              | 0.65 | 0.018 | 2.13 | 51.5 | 22.3 | 6.2  | 11.0</      |               |              |                             |              |             |               |                |                            |        |        |        |          |                     |        |        |         |     |             |





| Day | Chemical Compositions & Phases % |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  | Physical Test |              |                             |              |             |               |                |                            |        |        | Lab.Code |        |                     |        |        |         |             |   |  |  |  |  |
|-----|----------------------------------|------------------|--------------------------------|--------------------------------|------|-------|-----------------|------------------|-------------------|------|-------|------------------|------------------|------------------|-------------------------------|--|---------------|--------------|-----------------------------|--------------|-------------|---------------|----------------|----------------------------|--------|--------|----------|--------|---------------------|--------|--------|---------|-------------|---|--|--|--|--|
|     | IR                               | SiO <sub>2</sub> | Al <sub>2</sub> O <sub>3</sub> | Fe <sub>2</sub> O <sub>3</sub> | CaO  | MgO   | SO <sub>3</sub> | K <sub>2</sub> O | Na <sub>2</sub> O | Cl   | LOSS  | C <sub>3</sub> S | C <sub>2</sub> S | C <sub>3</sub> A | C <sub>4</sub> A <sub>F</sub> | C <sub>4</sub> A <sub>F</sub> +2C <sub>3</sub> A | F.CaO         | Fineness     |                             | Setting time |             | Soundness     |                | Compressive Strength (MPa) |        |        |          |        | Bend Strength (MPa) |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               | Sieve 90 mic | Blaine (m <sup>2</sup> /kg) | INIT (min)   | FINAL (min) | LEACHTER (mm) | Auto Clave (%) | 1 DAY                      | 2 DAYS | 3 DAYS |          | 7 DAYS | 28 DAYS             | 2 DAYS | 3 DAYS | 28 DAYS |             |   |  |  |  |  |
| 2   | M                                | 0.44             | 21.42                          | 4.56                           | 3.64 | 63.77 | 1.32            | 2.65             | 0.60              | 0.66 | 0.018 | 1.21             | 53.4             | 21.1             | 5.9                           | 11.1   | 22.9          | 1.75         | 1.4                         | 301          | 125         | 175           | 1.2            | 0.14                       | -      | 20.7   | 26.2     | 36.5   | 45.8                | 4.0    | 5.1    | 8.0     | I-CE-01-310 |   |  |  |  |  |
| 3   | M                                | 0.43             | 21.48                          | 4.50                           | 3.64 | 63.83 | 1.32            | 2.57             | 0.60              | 0.67 | 0.017 | 1.20             | 53.8             | 21.0             | 5.8                           | 11.1   | 22.6          | 1.90         | 1.6                         | 295          | 130         | 180           | 1.1            | 0.11                       | -      | 20.8   | 26.7     | 36.1   | 46.3                | 3.7    | 5.3    | 7.9     | I-CE-01-312 |   |  |  |  |  |
| 18  | M                                | 0.41             | 21.13                          | 4.54                           | 3.66 | 63.13 | 1.29            | 2.63             | 0.57              | 0.65 | 0.017 | 1.24             | 53.2             | 20.5             | 5.8                           | 11.1   | 22.8          | 1.30         | 1.5                         | 295          | 135         | 185           | 1.2            | 0.11                       | -      | 21.1   | 27.6     | 36.4   | 47.5                | 4.2    | 5.2    | 8.1     | I-CE-01-335 |   |  |  |  |  |
| 19  | M                                | 0.46             | 21.48                          | 4.62                           | 3.68 | 63.67 | 1.34            | 2.63             | 0.59              | 0.67 | 0.017 | 1.03             | 52.2             | 22.2             | 6.0                           | 11.2   | 23.2          | 1.15         | 1.4                         | 295          | 130         | 180           | 1.2            | 0.14                       | -      | 20.5   | 26.8     | 35.7   | 46.6                | 4.1    | 5.1    | 7.9     | I-CE-01-337 |   |  |  |  |  |
| 24  | M                                | 0.51             | 21.73                          | 4.70                           | 3.66 | 64.03 | 1.37            | 2.81             | 0.60              | 0.67 | 0.018 | 1.30             | 50.7             | 24.1             | 6.3                           | 11.1   | 23.7          | 1.40         | 1.4                         | 298          | 130         | 175           | 1.2            | 0.14                       | -      | 21.5   | 27.3     | 36.2   | 47.3                | 4.1    | 5.0    | 7.9     | I-CE-01-346 |   |  |  |  |  |
| 29  | S                                | 0.44             | 21.36                          | 4.54                           | 3.66 | 63.76 | 1.31            | 2.73             | 0.59              | 0.66 | 0.017 | 0.84             | 53.7             | 20.7             | 5.8                           | 11.1   | 22.8          | 1.50         | 1.3                         | 301          | 130         | 180           | 1.0            | 0.09                       | -      | 21.6   | 28.2     | 38.8   | 48.3                | 4.2    | 5.5    | 8.0     | I-CE-01-355 |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
|     |                                  |                  |                                |                                |      |       |                 |                  |                   |      |       |                  |                  |                  |                               |  |               |              |                             |              |             |               |                |                            |        |        |          |        |                     |        |        |         |             |   |  |  |  |  |
| Avg |                                  | 0.45             | 21.43                          | 4.58                           | 3.66 | 63.70 | 1.33            | 2.67             | 0.59              | 0.66 | 0.017 | 1.14             | 52.8             | 21.6             | 5.9                           | 11.1   | 23.0          | 1.50         | 1.4                         | 298          | 130         | 179           | 1.2            | 0.12                       | -      | 21.0   | 27.1     | 36.6   | 47.0                | 4.1    | 5.2    | 8.0     | -           | - |  |  |  |  |
| Min |                                  | 0.41             | 21.13                          | 4.50                           | 3.64 | 63.13 | 1.29            | 2.57             | 0.57              | 0.65 | 0.017 | 0.84             | 50.7             | 20.5             | 5.8                           | 11.1   | 22.6          | 1.15         | 1.3                         | 295          | 125         | 175           | 1.0            | 0.09                       | -      | 20.5   | 26.2     | 35.7   | 45.8                | 3.7    | 5.0    | 7.9     | -           | - |  |  |  |  |
| Max |                                  | 0.51             | 21.73                          | 4.70                           | 3.68 | 64.03 | 1.37            | 2.81             | 0.60              | 0.67 | 0.018 | 1.30             | 53.8             | 24.1             | 6.3                           | 11.2   | 23.7          | 1.90         | 1.6                         | 301          | 135         | 185           | 1.2            | 0.14                       | -      | 21.6   | 28.2     | 38.8   | 48.3                | 4.2    | 5.5    | 8.1     | -           | - |  |  |  |  |
| S/D |                                  | 0.03             | 0.49                           | 0.07                           | 0.02 | 0.30  | 0.03            | 0.09             | 0.01              | 0.01 | 0.01  | 0.17             | 1.21             | 1.39             | 0.18                          | 0.05   | 0.38          | 0.28         | 0.10                        | 2.95         | 3.16        | 3.76          | 0.08           | 0.02                       | -      | 0.4    | 0.7      | 1.1    | 0.9                 | 0.2    | 0.2    | 0.1     | -           | - |  |  |  |  |



تاریخ: ۱۴۰۱/۰۷ - مهر کارخانه: ۷

مدیر کنترل کیفی و آزمایشگاهها: حمیدرضا...

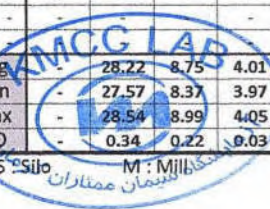
رئیس آزمایشگاهها: [Signature]

کارشناس آزمایشگاه: [Signature]





| Day  | Chemical Compositions & Phases % |                  |                                |                                |       |      |                 |                  |                   |       |      |     |     |     |      |           |       | Physical Test |                             |              |             |                  |                |                            |        |        |        |         | Lab.Code |                     |        |             |
|------|----------------------------------|------------------|--------------------------------|--------------------------------|-------|------|-----------------|------------------|-------------------|-------|------|-----|-----|-----|------|-----------|-------|---------------|-----------------------------|--------------|-------------|------------------|----------------|----------------------------|--------|--------|--------|---------|----------|---------------------|--------|-------------|
|      | IR                               | SiO <sub>2</sub> | Al <sub>2</sub> O <sub>3</sub> | Fe <sub>2</sub> O <sub>3</sub> | CaO   | MgO  | SO <sub>3</sub> | K <sub>2</sub> O | Na <sub>2</sub> O | Cl    | LOSS | C3S | C2S | C3A | C4AF | C4AF+2C3A | F.CaO | Fineness      |                             | Setting time |             | Soundness        |                | Compressive Strength (MPa) |        |        |        |         |          | Bend Strength (MPa) |        |             |
|      |                                  |                  |                                |                                |       |      |                 |                  |                   |       |      |     |     |     |      |           |       | Sieve 90 mic  | Blaine (m <sup>2</sup> /kg) | INIT (min)   | FINAL (min) | LEACHTELIER (mm) | Auto Clave (%) | 1 DAY                      | 2 DAYS | 3 DAYS | 7 DAYS | 28 DAYS |          | 2 DAYS              | 3 DAYS | 28 DAYS     |
| 3 S  | -                                | 28.32            | 8.82                           | 4.01                           | 51.55 | 1.20 | 2.05            | 0.93             | 1.22              | 0.017 | 1.86 | -   | -   | -   | -    | -         | 1.35  | 1.4           | 374                         | 140          | 190         | 0.9              | 0.09           | -                          | 16.1   | 21.4   | 30.7   | 40.4    | 3.4      | 4.2                 | 8.0    | I-CE-01-311 |
| 10 S | -                                | 28.16            | 8.69                           | 4.01                           | 51.73 | 1.22 | 2.06            | 0.93             | 1.21              | 0.017 | 1.96 | -   | -   | -   | -    | -         | 1.30  | 1.4           | 372                         | 135          | 185         | 0.9              | 0.07           | -                          | 15.7   | 20.1   | 28.9   | 39.1    | 3.1      | 4.5                 | 7.2    | I-CE-01-322 |
| 12 S | -                                | 27.57            | 8.37                           | 3.97                           | 52.73 | 1.22 | 2.15            | 0.92             | 1.20              | 0.017 | 1.82 | -   | -   | -   | -    | -         | 1.25  | 1.6           | 372                         | 140          | 190         | 1.0              | 0.11           | -                          | 18.7   | 22.7   | 31.6   | 41.5    | 3.5      | 3.9                 | 7.8    | I-CE-01-326 |
| 21 M | -                                | 28.54            | 8.99                           | 4.03                           | 51.30 | 1.20 | 1.91            | 0.93             | 1.20              | 0.017 | 1.85 | -   | -   | -   | -    | -         | 1.30  | 1.5           | 377                         | 140          | 190         | 1.0              | 0.09           | -                          | 16.2   | 21.1   | 29.4   | 40.6    | 3.1      | 5.9                 | 7.4    | I-CE-01-341 |
| 24 S | -                                | 28.27            | 8.73                           | 4.05                           | 51.46 | 1.25 | 2.14            | 0.94             | 1.22              | 0.018 | 1.91 | -   | -   | -   | -    | -         | 1.10  | 1.6           | 361                         | 140          | 190         | 0.8              | 0.07           | -                          | 15.6   | 19.2   | 26.8   | 38.5    | 3.2      | 3.9                 | 7.3    | I-CE-01-345 |
| 26 S | -                                | 28.45            | 8.91                           | 4.01                           | 51.49 | 1.19 | 2.03            | 0.93             | 1.21              | 0.017 | 1.75 | -   | -   | -   | -    | -         | 1.30  | 1.8           | 361                         | 140          | 195         | 1.0              | 0.11           | -                          | 15.1   | 19.2   | 25.7   | 38.1    | 3.1      | 4.2                 | 7.1    | I-CE-01-349 |
| Avg  | -                                | 28.22            | 8.75                           | 4.01                           | 51.71 | 1.21 | 2.06            | 0.93             | 1.21              | 0.017 | 1.86 | -   | -   | -   | -    | -         | 1.27  | 1.6           | 370                         | 139          | 190         | 0.9              | 0.09           | -                          | 16.2   | 20.6   | 28.9   | 39.7    | 3.2      | 4.4                 | 7.5    | -           |
| Min  | -                                | 27.57            | 8.37                           | 3.97                           | 51.30 | 1.19 | 1.91            | 0.92             | 1.20              | 0.017 | 1.75 | -   | -   | -   | -    | -         | 1.10  | 1.4           | 361                         | 135          | 185         | 0.8              | 0.07           | -                          | 15.1   | 19.2   | 25.7   | 38.1    | 3.1      | 3.9                 | 7.1    | -           |
| Max  | -                                | 28.54            | 8.99                           | 4.05                           | 52.73 | 1.25 | 2.15            | 0.94             | 1.22              | 0.018 | 1.96 | -   | -   | -   | -    | -         | 1.35  | 1.8           | 377                         | 140          | 195         | 1.0              | 0.11           | -                          | 18.7   | 22.7   | 31.6   | 41.5    | 3.5      | 5.9                 | 8.0    | -           |
| S.D  | -                                | 0.34             | 0.22                           | 0.03                           | 0.52  | 0.02 | 0.09            | 0.01             | 0.01              | 0.000 | 0.07 | -   | -   | -   | -    | -         | 0.09  | 0.15          | 6.83                        | 2.04         | 3.16        | 0.08             | 0.02           | -                          | 1.3    | 1.4    | 2.3    | 1.3     | 0.2      | 0.8                 | 0.4    | -           |



۱۴۰۱/۹/۱۷

محمد رضا ایرانشهری مدیر کارخانه

مدیر کنترل کیفی و آزمایشگاهها:

رئیس آزمایشگاهها:

کارشناس آزمایشگاه: