**Supplementary Materials**

|  |  |  |  |
| --- | --- | --- | --- |
| **Exp. No.** |  **Temperature (X1)** |  **Na/Al (X2)** |  **Response variable:** |
|  **Coded** |  **Real** |  **Coded** |  **Real** |  **Compressive strength (MPa) (Y)** |
| 1 | 0.866 | 450 | 0.5 | 0.8 | 19.51 |
| 2 | 0.866 | 450 | -0.5 | 0.6 | 36.09 |
| 3 | 0 | 275 | -1 | 0.5 | 40.56 |
| 4 | -0.866 | 100 | -0.5 | 0.6 | 41.89 |
| 5 | -0.866 | 100 | 0.5 | 0.8 | 23.08 |
| 6 | 0 | 275 | 1 | 0.9 | 8.99 |
| 7 | 0 | 275 | 0 | 0.7 | 34.86 |
| 8 | 0 | 275 | 0 | 0.7 | 33.88 |
| 9 | 0 | 275 | 0 | 0.7 | 34.61 |

Table I- Conditions of geopolymer synthesis according to the Doehlert statistical design.

Table II- Analysis of variance (ANOVA) results for the full model.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Source | SS | Degrees of freedom | MS | Model F | Tabulated F | R2 | Adjusted R 2 |
|  Model | 944.95 | 5 | 188.99 | 192.15 | 9.03 | 0,99 | 0,99 |
|  Error | 2.95 | 3 | 0.98 |  |  |  |  |
|  Total | 947.91 | 8 | 118.49 |  |  |  |  |
|  Pure error | 0.52 | 2 | 0.26 | 9.34 | 18.48 |  |  |
|  Lack of fit | 2.43 | 1 | 2.43 |  |  |  |  |



Figure I- Regression coefficients.

Table III- Analysis of variance (ANOVA) results for the recalculated model.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  Source |  SS |  Degrees of freedom |  MS |  Model F | Tabulated F | R2 | Adjusted R2 |
|  Model | 936.10 | 3 | 312.03 | 132.17 | 5.41 | 0,98 | 0,99 |
|  Error | 11.80 | 5 | 2.36 |  |  |  |  |
|  Total | 947.91 | 8 | 118.49 |  |  |  |  |
|  Pure error | 0.52 | 2 | 0.26 | 14.46 | 19.19 |  |  |
|  Lack of fit | 11.28 | 3 | 3.76 |  |  |  |  |



 Figure II- Recalculated regression coefficients.