

HORIZON
2020

Thermal and mechanical behaviours of geopolymer concrete at elevated temperatures

Fact Sheet

Project Information

TemGPC

Grant agreement ID: 101022142

[Project website](#) 

DOI

[10.3030/101022142](https://doi.org/10.3030/101022142) 

Project closed

EC signature date

25 February 2021

Start date

1 January 2022

End date

6 February 2024

Funded under

EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost

€ 224 933,76

EU contribution

€ 224 933,76

Coordinated by

UNIVERSITY OF PLYMOUTH

 United Kingdom

Project description

Solidifying knowledge of novel sustainable alternatives to conventional cement and concrete

Cement is an important binding and adhesive agent for concrete that is of fundamental importance to the construction industry. The global cement market value is expected to reach approximately USD 682 billion by 2025, and novel geopolymer binders, a sustainable alternative to industry-standard Portland cement, are poised to

increase their market share. However, the detailed thermal and mechanical properties of geopolymer concrete at elevated temperatures are not well characterised. The EU-funded TemGPC project will investigate them using experimental methods and computational modelling. The team plans to enhance knowledge of temperature and stress effects on novel concretes for better control over properties and improved performance of components.

Fields of science (EuroSciVoc)

[natural sciences](#) > [chemical sciences](#) > **[polymer sciences](#)**

[natural sciences](#) > [computer and information sciences](#) > [software](#) > [software applications](#) > **[simulation software](#)**

[engineering and technology](#) > [civil engineering](#) > [architecture engineering](#) > [sustainable architecture](#) > **[sustainable building](#)**



Keywords

[Geopolymer concrete](#)

[thermal](#)

[mechanical](#)

[elevated temperatures](#)

Programme(s)

[H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions](#)

MAIN PROGRAMME

[H2020-EU.1.3.2. - Nurturing excellence by means of cross-border and cross-sector mobility](#)

Topic(s)

[MSCA-IF-2020 - Individual Fellowships](#)

Call for proposal

[H2020-MSCA-IF-2020](#)

[See other projects for this call](#)

Funding Scheme

Coordinator



UNIVERSITY OF PLYMOUTH

Net EU contribution

€ 224 933,76

Total cost

€ 224 933,76

Address

DRAKE CIRCUS

PL4 8AA Plymouth

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Region

South West (England) > Devon > Plymouth

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

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Permalink: <https://cordis.europa.eu/project/id/101022142>

European Union, 2025

