

 Content archived on 2024-06-18



Processing and Upscaling of Fire-Resistant Nano-Filled Thermosetting Polyester Resin

Fact Sheet

Project Information

POLYFIRE

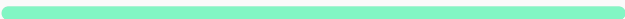
Grant agreement ID: 229220

[Project website](#) 

Project closed

Start date
1 September 2009

End date
31 August 2012



Funded under
Specific Programme "Cooperation": Nanosciences,
Nanotechnologies, Materials and new Production
Technologies

Total cost
€ 3 093 082,00

EU contribution
€ 2 254 281,00

Coordinated by
NETCOMPOSITES LIMITED
 United Kingdom

This project is featured in...



The big clean-up: how to tackle toxic substances

Objective

Polyfire will develop and upscale techniques for processing halogen-free, fire-retardant nanocomposites and coatings based on unsaturated polyester resins and nanoclays. These materials will improve public safety and environmental impact by eliminating halogenated fire-retardants, which produce toxic combustion products. The ability of well-dispersed nanoparticles to enhance the fire-retardancy of thermoplastic polymers is well-established, but thermoset polyester has received relatively little attention. In a recent collaborative project, the fire-retardancy of polyester resin was dramatically improved on a lab scale by adding small amounts of organomodified nanoclay, along with significantly reduced amounts of other, non-halogen fire-retardant additives. However, significant further work is required to scale-up production and to assess the health and environmental impacts. This project will develop and upscale the nanoclay modification and will use novel mixing techniques to enable industrial-scale production of the nano-filled polyester. The project will generate turn-key solutions for easy integration into industrial SMEs. Nanocomposites and coatings will be produced and subjected to stringent tests. The technology will be demonstrated by producing 3 large-scale case study parts from construction, rail and marine sectors. Comprehensive health and environmental impact assessments will be conducted.

Fields of science (EuroSciVoc)

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

[engineering and technology](#) > [materials engineering](#) > [coating and films](#)

[engineering and technology](#) > [nanotechnology](#) > [nano-materials](#)

[engineering and technology](#) > [materials engineering](#) > [nanocomposites](#)



Programme(s)

[FP7-NMP - Specific Programme "Cooperation": Nanosciences, Nanotechnologies, Materials and new Production Technologies](#)

Topic(s)

[NMP-2008-2.1-2 - Processing and upscaling of nanostructured materials](#)

Call for proposal

FP7-NMP-2008-SMALL-2
[See other projects for this call](#)

Funding Scheme

[CP-FP - Small or medium-scale focused research project](#)

Coordinator



NETCOMPOSITES LIMITED

EU contribution

€ 373 845,00

Total cost

No data

Address

**BRIDGE WAY 4A BROOM BUSINESS PARK
S41 9QG Chesterfield**

 **United Kingdom** 

Region

East Midlands (England) > Derbyshire and Nottinghamshire > East Derbyshire

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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

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

[HORIZON collaboration network](#) 

Participants (10)



LAVIOSA CHIMICA MINERARIA SPA

 Italy

EU contribution

€ 90 600,00

Address

Via Leonardo da Vinci 21
57123 Livorno 

Region

Centro (IT) > Toscana > Livorno

Links

- [Contact the organisation](#) 
- [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

No data



FUNDACION GAIKER

 Spain

EU contribution

€ 371 116,00

Address

PARQUE TECNOLOGICO DE VIZCAYA, EDIFICIO 202
48170 Zamudio 

Region

Noreste > País Vasco > Bizkaia

Activity type

Research Organisations

Links

- [Contact the organisation](#) 
- [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

No data



YTRON Process Technology GmbH & Co. KG

Germany

EU contribution

€ 270 960,00

Address

Am Anger 25
83233 Bernau

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#)
- [Website](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

No data



Scott Bader Co Ltd

United Kingdom

EU contribution

€ 59 999,00

Address

Wollaston
NN29 7RL Wellingborough, Northants

Region

East Midlands (England) > Leicestershire, Rutland and Northamptonshire > North Northamptonshire

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#)
- [Website](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost
No data



IRIS VERNICI SRL

Italy
EU contribution
€ 79 600,00

Address
Via Novi 42
15060 BASALUZZO

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
[Contact the organisation](#) [Website](#)
[Participation in EU R&I programmes](#)
[HORIZON collaboration network](#)

Total cost
No data



APC COMPOSIT AB

Sweden
EU contribution
€ 200 360,00

Address
Karlsviksvaegen 81
97594 Lulea

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
[Contact the organisation](#)
[Participation in EU R&I programmes](#)
[HORIZON collaboration network](#)

Total cost
No data



HORST TROITZSCH JURGEN

 Germany

EU contribution

€ 124 800,00

Address

Adolfsallee 30

65185 Wiesbaden 

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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

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

[HORIZON collaboration network](#) 

Total cost

No data



SHEFFIELD HALLAM UNIVERSITY

 United Kingdom

EU contribution

€ 367 582,00

Address

HOWARD STREET CITY CAMPUS

S1 1WB Sheffield 

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

No data



FUNDACION TECNALIA RESEARCH & INNOVATION

 Spain

EU contribution

€ 265 619,00

Address

PARQUE CIENTIFICO Y TECNOLOGICO DE BIZKAIA, ASTONDO BIDEA, EDIFICIO 700
48160 DERIO BIZKAIA 

Region

Noreste > País Vasco > Gipuzkoa

Activity type

Research Organisations

Links

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

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

[HORIZON collaboration network](#) 

Total cost

No data



PROCOAT Consorzio per la promozione dei prodotti vernicianti e ricopenti

 Italy

EU contribution

€ 49 800,00

Address

Viale Teresa Michel 5
15100 ALESSANDRIA 

Activity type

Other

Links

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

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

[HORIZON collaboration network](#) 

Total cost

No data

Last update: 1 August 2019

Permalink: <https://cordis.europa.eu/project/id/229220>

European Union, 2025

