Isolago

Our projects

CompoFoam

Technological development of expandable thermoplastic elastomer compounds for the production of a wide range of PET products

Beneficiary Entities

COMPONIT

piep
inovação
em engenharia
de polímeros

Cofinanced by

COMPETE 2020

PORTUGAL 2020

UNIÃO EUROPEIA
Fundo Europeu
de Desenvolvimento Regional

The Compofoam project consists of the research and technological development of low density and high abrasion resistance expandable thermoplastic elastomer compounds. The proposed solution requires the development of a TPU and SEBS compounds processing methodology, modified through the incorporation of expanding agents, fillers and additives for the production of broad spectrum products, namely shoe soles and o-rings.

It is, thus, intended to develop innovative low density compounds, at a competitive cost and with good mechanical properties, contrasting with the products available in the market. The project also involves testing and validation tests of compounds as well as of prototypes produced on a pilot scale.

To carry out this project, a consortium was set up with complementary experience and skills, namely the leading company Componit and the Pólo de Inovação em Engenharia de Polímeros [PIEP, Polymer Engineering Innovation Centre]. Finally, this project will also contribute to the expansion of Componit's product portfolio, which will promote its positioning in the market.

Objectives

1. EXPANSION OF THERMALLY EXPANDABLE MICROSPHERES DURING THE COMPOSITION PROCESS
Extrusion of compounds with less than 15 % expansion

2. PRODUCTION OF EXPANDABLE TPU COMPOUNDS WITH HIGH ABRASION RESISTANCE
Development of an expanded compound with < 100 mm3 abrasion

3. PRODUCTION OF LOW-DENSITY EXPANDABLE TPU COMPOSITES
Development of an expanded compound with a density of less than 9 % compared with the current one

4. PRODUCTION OF LOW-DENSITY EXPANDABLE SEBS COMPOSITES
Development of an expanded compound with a density of less than 30 % compared with the current one

Activities

1. Definition of the technical specifications of the material

2. Laboratory research

3. Construction of prototypes

4. Validation tests and trial runs in an industrial environment

5. Dissemination and promotion of results

Technical data sheet

Project name

CompoFoam - Technological development of expandable thermoplastic elastomer compounds for the production of a wide range of PET products

Project code

POCI-01-0247-FEDER-033614

Main Purpose

Reinforce research, technological development and innovation

Beneficiary Entities

Componit Lda. | PIEP

Approval date

22/05/2018

Start date

01/10/2018

End date

30/09/2021

Total eligible cost

EUR 638 691.90

European Union financial support | FEDER

EUR 404 774.94