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Cardanol based PVC plasticizer

PLACARD

Worldwide, about 70% of the soft PVC is produced using phthalate plasticizers, in particular di-ethyl-hexylphthalate (DEHP), which are synthetic esters of phthalic acid, characterized by acute toxicity. As a consequence the EU banned phthalates for some applications, in which the plasticizer migration can make them harmful to human health. Besides phthalates are synthetic, oil derived products, and therefore have a significant impact on the carbon dioxide balance. Consequently, in recent years, phthalates have been subjected to major revisions, leading to severe restrictions in their use by the EU. On the other hand, most of the alternative plasticizer suffer for a plasticizer effectiveness lower than that of DEHP, and for the increased cost. Currently, the cost of alternative plasticizers such as adipates, trimellitates and citrates is 50%, 100%, and 140% higher than that of DEHP, respectively. In these cases a plasticizer content of 50 phr, involves a cost increase of soft PVC about 60%.

Benefits

Substitution of fossil resources with bio based products (not useful for human feeding); Production of eco-sustainable products for building field.

Results

- To Demonstrate economic and environmental sustainability in a first-time industrial application of the innovative process
- Securing medium term return-on-investment by preparing and developing the market for up-take-, i.e. market testing of the innovative PVC plasticizer and new business models with chemical companies, plastic converters and directly with consumers;
- Preparing and stimulating European replication developing a receptive network of SMEs active in soft PVC production, to exploit the business model together with the relevant European organizations.

Partners and coordinator

[KO'MMI SAS DI GIUSEPPE CALO' & C.](#) [1]

Italy

[European Plastics Converters](#) [2]

Belgium

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Budget

Overall budget: 987.402,00 € (EU contribution: 50,00 %)

In brief

Sector: Greening Business

Duration: 01/01/2014 to 31/08/2016

Contract number: ECO/12/332833

Tags:

bio-based

Related projects

- [[ERUTAN](#) ^[5]] A bio-based floor covering with ERUTAN inside
- [[ECOTPU](#) ^[6]] ECOTPU - PLASTICS FROM RENEWABLE SOURCES APPLIED IN FOOTWEAR

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