placard

The ecofriendly plasticizer for soft PVC

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About PLACARD Plasticizer

The PLACARD project proposes the production and application of a new environmental friendly plasticizer for soft PVC. The product promises improved environmental/economic sustainability and replicability in a joint-venture approach between chemical industries and an European network of plastic converters SMEs.

The aim of this project is to substitute traditional plasticizers with a bi-obased one obtained by chemical modification of cardanol.

Cardanol is an industrial grade yellow oil obtained by vacuum distillation of cashew nut shell liquid.

Advantages of PLACARD Plasticizer

- Primary resources are not used since cardanol is a natural derived by-product of the food industry. Moreover, cardanol does not contribute to the subtraction of resources to food chain.
- Its miscibility with PVC is comparable or even better than that of DEHP.
- It is characterized by a reduced migration.
- The volatility at room temperature is very low and comparable to that of DEHP.
- Its gelation properties are comparable to those of DEHP, which involves a very low interaction with the polymer at room temperature, and processing conditions very similar to those used for traditional PVC.
- It can be used in standard soft PVC processing equipment.

Expected Results

- Production of 1 ton of PLACARD plasticizer at the end of the project
- Production of 1000 tons/year of PVC products Placard based two years after the end of the project
- Reduction of the environmental impact of plasticizer for soft PVC, by substituting oil derived products with bio based ones (reduction of 1.1 ton of CO_2 per ton of new plasticizer)
- Increase of PVC waste mechanically recycled thanks to the improved thermal stability of PLACARD based products
- Market up-take of more environmentally friendly soft PVC products with mechanical, physical and durability properties comparable to those of conventional soft PVC
- Development of a sustainable process, business models and market structuring for systematic replication

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