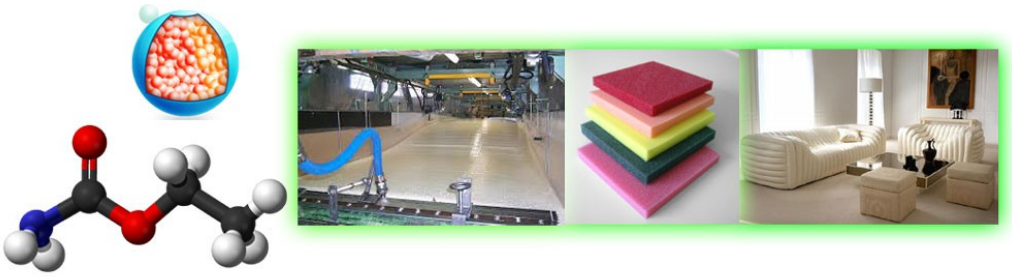
FreeFOAM

[Novel PUR foaming manufacturing process with reduced toxic isocyanate content]



The science and manufacturing techniques used in today's production of PUR expanded foam utilises isocyanate to fully react the polyurethane mixture during the foaming process.

However, an inherent aspect of this process is the release of isocyanate molecules to the atmosphere ('free isocyanate'). This has given rise to real concerns over the possible detrimental effect to the health of people who are exposed to this free isocyanate environment during the production process.

The aim of the FreeFOAM project, which has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 309283, is to reduce the risks to health by lowering the concentration and emission of free isocyanate into the atmosphere. This will involve a new method of isocyanate encapsulation, a new PUR foam formulation and a new foaming method for manufacturers.

The project proposes a unique homogeneous reactive mixture for the PUR foaming process where the reactants are physically separated by using functionalized microcapsules of isocyanate dispersed in a polyol mixture.

FreeFOAM brings together a consortium of nine organisations to deliver the project led by CETEM (Science & Technology - Spain) and includes Inspirallia (Research - Spain), Polymer Expert (Innovative & Research - France), Tagra (Technology & Innovative - Israel), Plama-pur (Flexible PUR Producer - Slovenia), Cosmetic Valley (Development & Innovative - France), Wood Industry Cluster (Wood Industry Association - Slovenia), ZCHFP (Chemical & Pharmaceutical - Slovakia) and BFM (Furniture Industry Association - United Kingdom).

Having commenced in May 2013 the project has a planned duration of three years.

The project website: www.freefoam-project.eu

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CONSORTIUM:

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