Environmental Impact Assessment on Lifecycle of Sofa Material

Journal	Advanced Materials Research (Volumes 287 - 290)
Volume	Applications of Engineering Materials
Edited by	Jinglong Bu, Pengcheng Wang, Liqun Ai, Xiaoming Sang, Yungang Li
Pages	3032-3035
DOI	10.4028/www.scientific.net/AMR.287-290.3032
Citation	Ya Kuan Chou et al., 2011, Advanced Materials Research, 287-290, 3032
Online since	July, 2011
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Advanced Materials Research Vols. 287-290 (2011) pp 3032-3035
Online available since 2011/Jul/04 at www.scientific.net

doi:10.4028/www.scientific.net/AMR.287-290.3032

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Keywords: Sofa, Environmental Impact Assessment, Life Cycle Assessment

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- Regarding sofa materials which are brought about the negative influence to the environment: Sofa casing: polyester fiber > leather > imitation leather > cotton; sofa frame: wood > plastic > metal; sofa cushion: TDI foam > MDI foam.
- If we deal with sofa materials by chemical methods, respiratory inorganics are caused from a great quantity of fossil fuels during production and the huge negative influence will result in climate change.
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- It will have positive help and decrease garbage if we can recycle sofa waste.

Introduction

It's quite a long development history of sofas. In 2000 B.C., Egyptians had used animal leathers to cover sitting. Nowadays Sofas play an important role in our modern daily life; they not only provide families with places for rest and receiving visitors but also have functions for sitting, lying or etc... People will feel relaxed and comfortable when sitting down and be covered by the contact surface against on the bodies [1].

Referring to their structure, we used of various materials to make sofa stabilized, soft, and comfortable. When their life cycle come to the end, it's important to dispose waste from their internal materials [2]. Landfill was the main waste disposal in our country in the past and it had a great deal of influence on our environment. Recently, we rely mainly on incineration while recycling subsidiary and it becomes more efficient to dispose garbage. It not only decreases garbage but also makes resources reused efficiently. As the web data from Environmental Protection Administration Executive Yuan, R.O.C. (Taiwan) shows, the recycling quantity of large waste has been reached 58,000 tons in 2010. Though they are not recycled thoroughly, the regeneration rate from recycling has been increased yearly and recycling has much efficiency to economize natural resources and decrease influence on environment [3].

After the Industrial Revolution, we have gained a lot of profit from industrialization; however, we make endless demands to Earth resources and it gradually brings about problems in environmental protection. Rachel Carson and Al Gore, the pre-president in the United States, emphasized the concepts of the ecological balance. They emphasized that people should coexist with nature but not control nature since we have to pay much attention to the vast damage to the ecological balance [4,5]."Design is the main issue to cause damage and the situation won't get better by just reducing damage. Sustainable and innovative design that put eco-efficiency into practice should be more taken notice of.", mentioned in Cradle and Cradle by William McDonough and Michael Braungart (2002). The concept of Cradle to Cradle makes product lifecycle keep going and that's the reason why we would like to investigate the environmental impact assessment of sofas [6].