

Aspects of using accelerated weather testing methods for polymeric materials

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Abstract

© Published under licence by IOP Publishing Ltd. The paper investigates the aspects of using accelerated weather testing methods for polymeric materials. The need has been identified for consistency of polymer ageing and degradation mechanisms in full-scale and laboratory conditions, as well as for equipment that most closely simulates the actual operating conditions.

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References

- [1] Pavlov N N 1982 Ageing of plastic materials in real-life and simulated conditions (Moscow: Khimiya Publ.) 220
- [2] Sulejmanov A M 2006 Abstract doctor of Technical Sciences (Kazan: Kazan State University of Architecture and Civil Engineering) Experimental and theoretical basics of prediction and increase in durability of construction soft shell materials 32
- [3] Internet resource: Artificial ageing. Predicting material behavior. Available at: <https://www.binder-world.com>. (accessed 22.10.2017) - ref-separator -
- [4] Sokolova Yu A, Zharin D E and Shafigullin L N 2009 Architecture and Construction 2 (Moscow: Russian Academy of Architecture and Building Sciences) Development of special-purpose polymeric composite materials Academia 104-7
- [5] Yu Jurasov S, Shafigullin L N, Shafigullina A N, Shajahmetova G R and Zharin E D 2017 Sound-Absorbing Polyurethane Foam for the Auto Industry Russian Engineering Research 37 38-40
- [6] Kashapov N F, Nafikov M M, Gazetdinov M X, Nafikova M M and Nigmatzyanov A R 2016 Innovative production technology ethanol from sweet sorghum IOP Conference Series: Materials Science and Engineering 134 012012 8
- [7] Shafigullin L N, Romanova N V and Shafigullina G R 2017 Investigation of UV resistance in polyurethane foam Research Journal of Pharmaceutical, Biological and Chemical Sciences 8 373-8
- [8] GOST 16350-80 1980 Climate of the USSR. Regionalizing and statistical parameters of climatic factors for technical purposes (Moscow: Izdatelstvo Standartov Publ.)
- [9] Fedyaev V L, Galimov E R, Gimranov I R, Takhaviev M S and Morenko I V 2016 Mathematical modeling of jet flow around of bodies when applying polymer powder coatings IOP Conference Series: Materials Science and Engineering 134 012005
- [10] Fedyaev V L, Galimov E R, Gimranov I R, Takhaviev M S, Morenko I V and Fazlyev L R 2016 Heat transfer of gas suspension jet flow on the product surface when applying polymer powder coatings Journal of Physics: Conference Series 669 012013