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**Title:** Refinements on fracture toughness of PUR foams**Author(s):** Marsavina, L (Marsavina, Liviu); Constantinescu, DM (Constantinescu, Dan M.); Linul, E (Linul, Emanoil); Apostol, DA (Apostol, Dragos A.); Voiconi, T (Voiconi, Tudor); Sadowski, T (Sadowski, Tomasz)**Source:** ENGINEERING FRACTURE MECHANICS **Volume:** 129 **Special Issue:** SI **Pages:** 54-66 **DOI:** 10.1016/j.engfracmech.2013.12.006 **Published:** OCT 2014**Times Cited in Web of Science Core Collection:** 14**Total Times Cited:** 14**Usage Count (Last 180 days):** 1**Usage Count (Since 2013):** 9**Cited Reference Count:** 32

**Abstract:** Many efforts have been made in recent years to determine the fracture toughness of different types of foams in static and dynamic loading conditions. Taking into account that there is no standard method for the experimental determination of the fracture toughness of plastic foams different procedures and specimens were used. This paper presents the polyurethane foam fracture toughness results obtained for different foam densities. Two types of specimens were used for determining fracture toughness in modes I, II and a mixed one, and also the size effect, loading speed and loading direction were investigated. The paper proposed correlations for density, cell orientation and mixed mode loading based on the experimental testing results. (C) 2013 Elsevier Ltd. All rights reserved.

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[Constantinescu, Dan M.; Apostol, Dragos A.] Univ Politehn Bucuresti, Bucharest, Romania.

[Sadowski, Tomasz] Lublin Univ Technol, Lublin, Poland.

**Reprint Address:** Marsavina, L (reprint author), Politehn Univ Timisoara, Blvd M Viteazu 1, Timisoara, Romania.**E-mail Addresses:** msvina@mec.upt.ro**Author Identifiers:**

Author	ResearcherID Number	ORCID Number
APOSTOL, DRAGOS ALEXANDRU	P-5573-2014	0000-0002-2911-586X
Sadowski, Tomasz	F-1808-2010	0000-0001-9212-8340
LINUL, Emanoil		0000-0001-9090-8917

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