

## Accepted Manuscript

An experimental and constitutive modeling study on the large strain deformation and fracture behavior of PC/ABS blends

J. Hund, J. Naumann, Th. Seelig

PII: S0167-6636(18)30100-5  
DOI: [10.1016/j.mechmat.2018.06.003](https://doi.org/10.1016/j.mechmat.2018.06.003)  
Reference: MECMAT 2888



To appear in: *Mechanics of Materials*

Received date: 4 February 2018  
Revised date: 25 May 2018  
Accepted date: 12 June 2018

Please cite this article as: J. Hund, J. Naumann, Th. Seelig, An experimental and constitutive modeling study on the large strain deformation and fracture behavior of PC/ABS blends, *Mechanics of Materials* (2018), doi: [10.1016/j.mechmat.2018.06.003](https://doi.org/10.1016/j.mechmat.2018.06.003)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## Highlights

- PC/ABS blends of different composition are investigated experimentally as well as through constitutive modeling.
- Using digital image correlation (DIC) it is revealed that the crack-tip plastic zone shape varies with the blend composition.
- Several constitutive models are shown to capture the true stress and volumetric strain response under uniaxial tension.
- Finite element analyzes of SENT fracture tests show that the suitability of the material models for PC/ABS also depends on the blend composition.

ACCEPTED MANUSCRIPT

Download English Version:

<https://daneshyari.com/en/article/7178491>

Download Persian Version:

<https://daneshyari.com/article/7178491>

[Daneshyari.com](https://daneshyari.com)