

Fabrication, characterisation and modelling of uniform and gradient auxetic foam sheets

DUNCAN, Oliver <<http://orcid.org/0000-0001-9503-1464>>, ALLEN, Tom, FOSTER, Leon <<http://orcid.org/0000-0002-1551-0316>>, SENIOR, Terry <<http://orcid.org/0000-0002-3049-5724>> and ALDERSON, Andrew <<http://orcid.org/0000-0002-6281-2624>>

Available from Sheffield Hallam University Research Archive (SHURA) at:

<http://shura.shu.ac.uk/14650/>

This document is the author deposited version. You are advised to consult the publisher's version if you wish to cite from it.

Published version

DUNCAN, Oliver, ALLEN, Tom, FOSTER, Leon, SENIOR, Terry and ALDERSON, Andrew (2017). Fabrication, characterisation and modelling of uniform and gradient auxetic foam sheets. *Acta Materialia*, 126, 426-437.

Copyright and re-use policy

See <http://shura.shu.ac.uk/information.html>

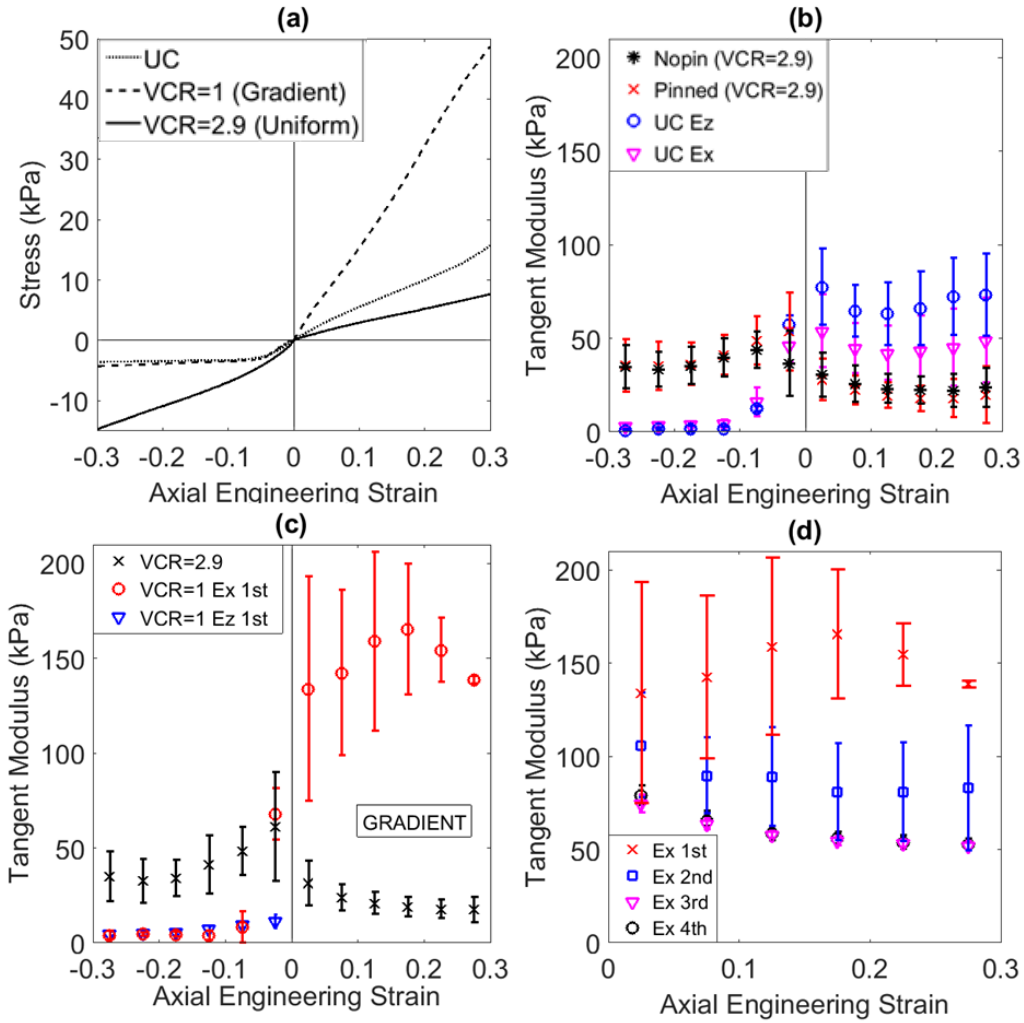


Figure 5: Tangent moduli responses. a) Stress vs axial engineering strain for VCR=2.9 uniform triaxially-compressed sample converted with pins, unconverted (UC) sample and VCR=1 gradient sheet sample, b) Tangent modulus vs axial engineering strain for UC and uniform triaxially-compressed samples, c) Tangent modulus vs axial engineering strain for gradient sheet samples (VCR=1 tensile data from 1st test performed on each sample) and d) Tangent modulus vs axial engineering strain for all tests on VCR=1 region (gradient foam), separated into test number. Error bars = 1 S.D.