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# The delamination behaviour of Vectran/Epoxy composites having a novel Non-Crimp Fabric architecture

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## Abstract

The Mode I and Mode II Interlaminar Fracture Toughness (IFT) of Vectran / Epoxy composite material were investigated using the Double Cantilever Beam (DCB) and 4 End Notched Flexure (4ENF) methods, respectively. Due to the relatively low compressive strength of Vectran material (<10% of its tensile properties), specimens were hybridised by over wrapping Vectran / Epoxy with T800s/M21 to prevent compressive failure during testing. Experimental results were then simulated using the non-linear Finite Element Method (FEM) package, LS-Dyna. Fractographic studies were also conducted to understand the mechanism of failure and factors influencing it. © 2021

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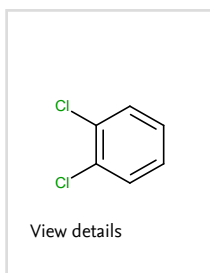
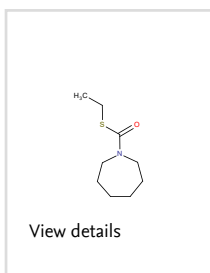
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