

K-Fail



KARAX

OVERVIEW

K-Fail Micro-mechanical Progressive Fracture Analysis is a validated & verified simulation tool that can be coupled into any Finite Element model to predict the failure properties of polymeric materials such as elongation at break, residual lifetime, strength, or changes of colour. K-Fail can significantly reduce the need for real-time aging experiment and can predict long-term aging using limited number of accelerated tests.



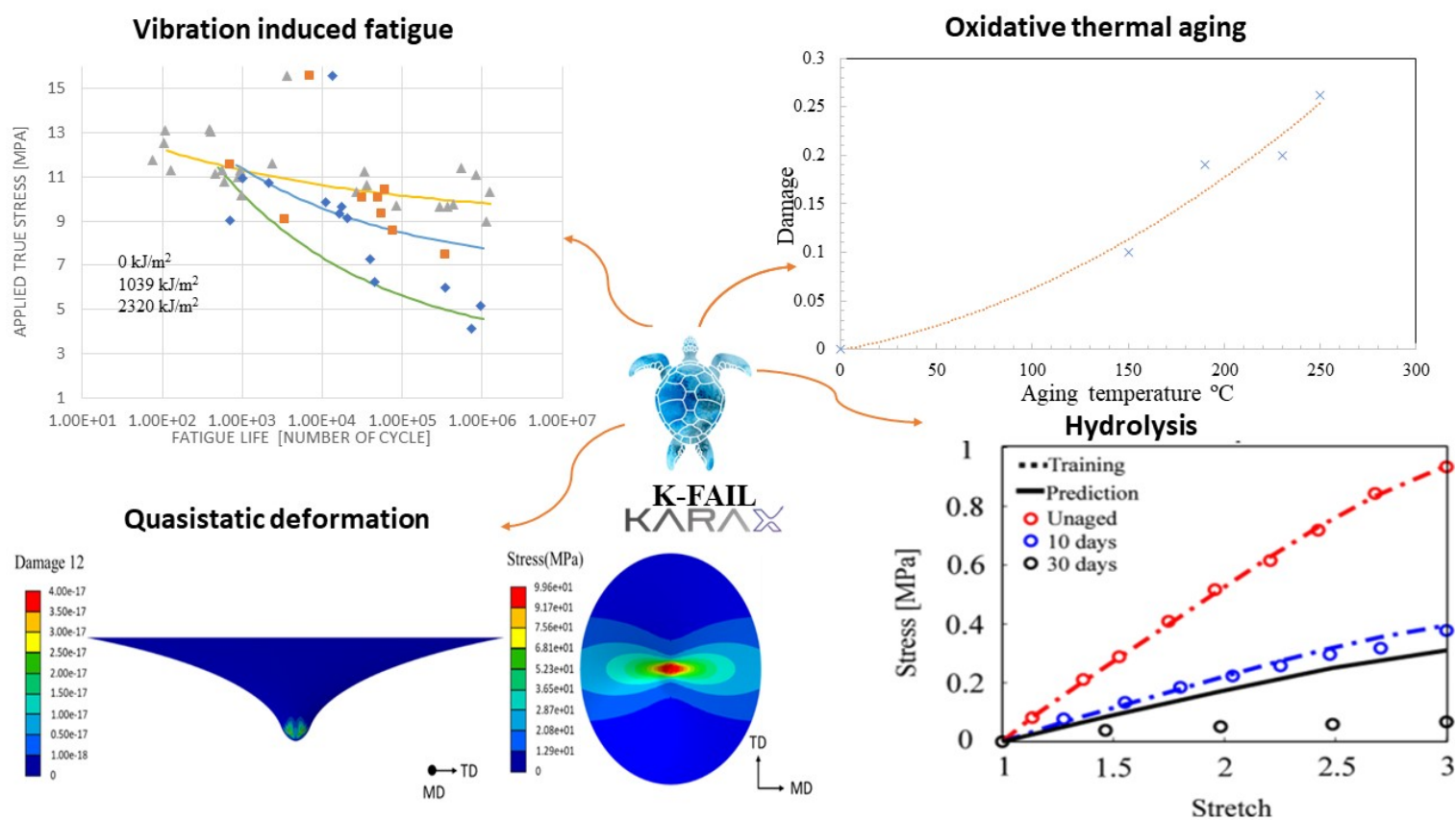
www.karax.us



contact@karax.us



+1 (989) 272 3938



BUSINESS VALUE

Accelerate Design: by minimizing the required number of experiments to assure certain durability.

Enhance Performance: by informing the designing process in selection of materials with minimized performance loss in the course of service life.

Reduce Maintenance Cost: By eliminating early retirement of the component due to overdesign.

Rapid assessment of Different properties, e.g. Yellowness index, changes in Carbonyl index, Indentation properties, Mechanical properties.

Allowing different definitions of failure to be used, such as crack initiation/propagation to failure, certain arcing properties in di-electric materials

CAPABILITIES

Prediction of Remaining Useful Life (RUL) due to various damage sources:

- Thermal-oxidative
 - Hydrolysis
 - Chain rupture
 - Gamma/UV radiation
- b. Remaining Useful Life (RUL) due to single extreme events
- Loss of coolant accident (LOCA)
 - detonations
 - Solar flares
 - plasma and radiation bursts