

APPLICATION SPOTLIGHT

RAW MATERIALS SUPPLIERS



Imagine the impact your team can make with simulation results highlighting the benefits of your new additive, polymer or filler.

CAPABILITIES

Simulation, combined with Endurica's testing methods, provides the ability to realistically account for actual service conditions as no other standard testing can.

Simulate the effect of your raw material on product performance:

- Durability
- Heat build-up
- and more
- Rolling resistance
- Handling / stiffness

Simulations are available for a range of rubber applications including:

- Suspensions
- Tires
- Engine mounts
- and more

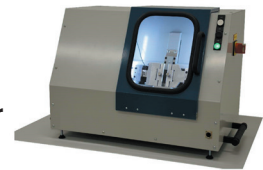
BENEFITS

- Show how your raw materials perform in your customer's applications
- Combine Testing + Simulation to generate confidence in your product offerings
- Cut learning curve and gain speed to market with shorter development iterations
- Achieve light weighting and sustainability while managing risks of performance / durability loss

Test fatigue performance in your own lab using Endurica protocols running on Coesfeld instruments. Endurica is the exclusive distributor of Coesfeld instruments in North and South America

Intrinsic Strength Analyser

- Indicates the threshold fracture mechanical strength of a polymer network (the mechanical fatigue threshold)
- Stay under the mechanical fatigue threshold for optimum durability



Tear & Fatigue Analyser

- Measures crack growth under dynamic loading cycles

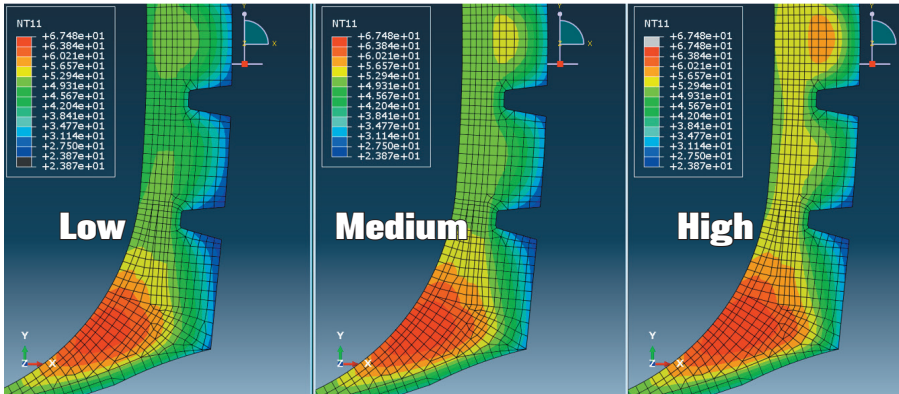


Instrumented Chip & Cut Analyser

- Measures chip and cut resistance of rubber compounds under cyclic impact loading



We can help you demonstrate
THE BENEFITS OF YOUR RAW MATERIALS
 in your client's applications

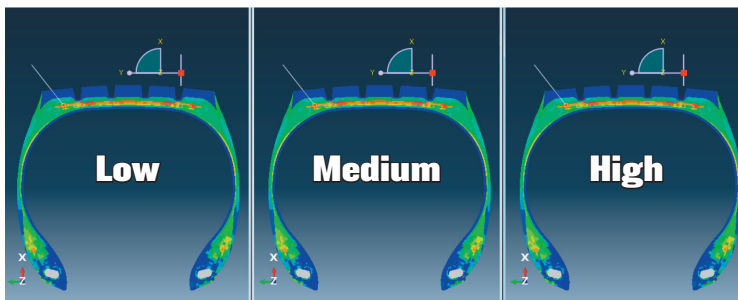
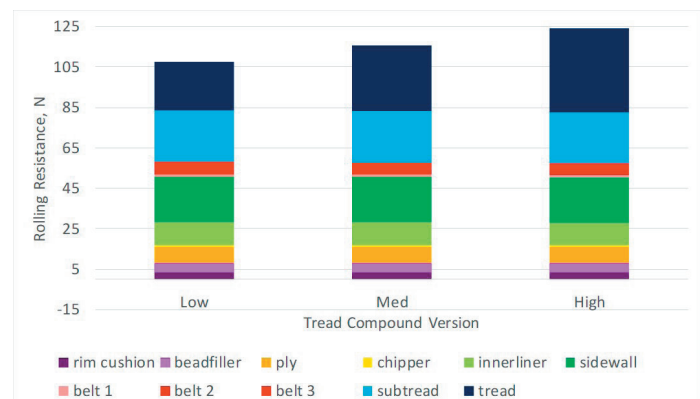


Temperature Distribution

- Differences in tire temperature distribution were computed with Endurica CL™, using heat build up properties measured with our Fatigue Property Mapping Thermal Module. Here, tread compound carbon black loading was varied at 3 levels: low, medium and high.

Compute Rolling Resistance

- The simulation shows the contribution of every compound to total tire rolling resistance. The tread contributes between 20-30% of the total rolling resistance.

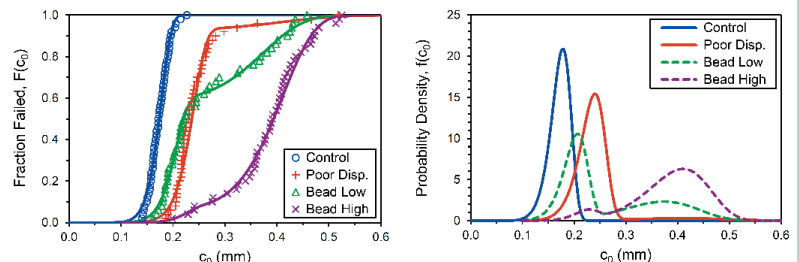


Durability

- Fatigue behavior of rubber compounds depends strongly on temperature. Changing tread carbon black levels can therefore affect belt edge operating temperatures and fatigue life. The impact on life can be realistically simulated so that the first project tire build has the best chance to get durability right.

Filler Dispersion

- The mix quality with which fillers are incorporated to the rubber compound has a strong impact on the size of crack precursors and on fatigue performance. Endurica's Fatigue Property Mapping Reliability module gives you frequency statistics on crack precursor size distribution.



SBA 2020 TIBBETTS AWARD WINNER

Endurica

Get Durability Right®

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