Film Cores

Sonoco Alcore® film cores are designed to specifically manage the stresses and pressures experienced during winding, handling, storage, and unwinding of various film types.

Depending on the film product, different core properties are required to provide efficient winding and contribute to a good roll structure. One of the biggest issues for the film industry is core crushing. When this occurs it causes machine downtime for you, the film producer (when a core gets stuck on a mandrel), and adds waste and cost to your customer (core crushes during storage or transportation). In order to avoid these issues, you need to use reliable, durable and cost effective cores. Sonoco Alcore™ provides the leading cores in the industry which use the latest testing technologies, such as radial crush, to ensure that you are provided with the optimal core for your needs.

BENEFITS IN BRIEF

- ***Specific Surface Properties** - Ability to tailor the surface properties of the core to your needs.*
- ***Vibration/pressure measurement** - Measurements on your line can be completed to increase production efficiency.*
- ***Quickstripe adhesive strip** - To speed up your start-up process*
- ***Identify the critical points** in the logistic chain in regard to moisture and core properties to prevent problems.*

Sonoco Alcore® Film Cores:

- *designed with specific radial crush strengths which deliver optimal core performance.*

This leads to:

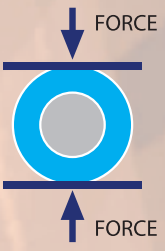
- *Optimal core for your needs*
- *Improved system cost*
- *Decreased waste*
- *Minimal downtime during manufacturing*

SONOCO ALCORE®

THE IMPORTANCE OF RADIAL CRUSH TO THE FILM INDUSTRY

CONVENTIONAL TECHNOLOGY (FLAT CRUSH)

Historically, film cores have been tested to measure flat crush strength in order to avoid core failures. This measurement is useful but does not fully represent the forces and pressures placed on the core during film winding, storage, and unwinding, of films with memory, or excessive tension.

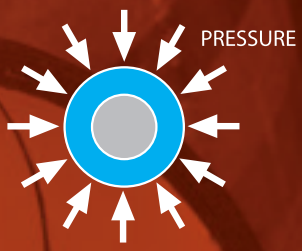


FLAT CRUSH STRENGTH TEST

Measurement is taken when pressure is applied to the top and bottom of the core. This does not simulate the pressures that occur after an elastic material is wound on a core.

SONOCO ALCORE® TECHNOLOGY (RADIAL CRUSH)

Sonoco Alcore® developed a measuring technique to determine the pressure applied to the core by the film wound on it. This radial pressure can be simulated in the lab, which allows Sonoco Alcore® to design a core which is tailor-made for your application. This provides a cost effective and optimized core ensuring that we meet your needs



RADIAL CRUSH STRENGTH TEST

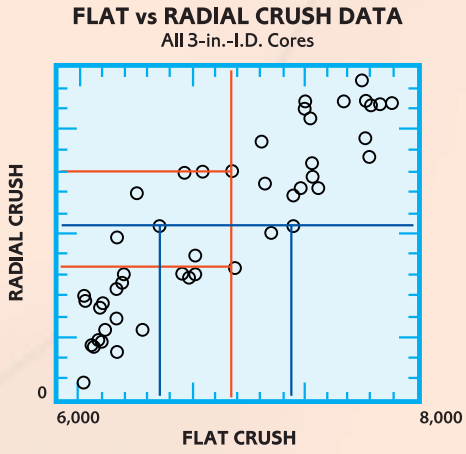
Radial Crush measures maximum pressure at which a core collapses.

The core is placed in a compression chamber and a linear growing pressure is exerted evenly on the core. Pressure build-up stops when the core breaks or at a pre-determined level. Measurements are taken to assess the cores' strength and stability.

The arrows demonstrates where the pressure is placed on the core during radial crush testing. This is the same as the environment in which a core operates during film processing.

RELATION FLAT CRUSH/RADIAL CRUSH

This graph illustrates that there is no correlation between flat crush and radial crush. Therefore the core design needs to be based on radial crush as it simulates the type of loading and pressure placed on the core during film winding, actual storage, and unwinding.



BENEFITS IN BRIEF

- *The benefits of specifically designed radial crush tested cores*
- *Avoids the film crush failures which can result in the core getting stuck on the mandrel*
- *Decreases costs as it minimizes core failures and prevents film damage*
- *Increases production efficiency due to less core failures*

Every Sonoco Alcore® film core is produced with radial crush as the most influential factor. This delivers a core that minimizes core failures, prevents the risk of added cost and protects your product.

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