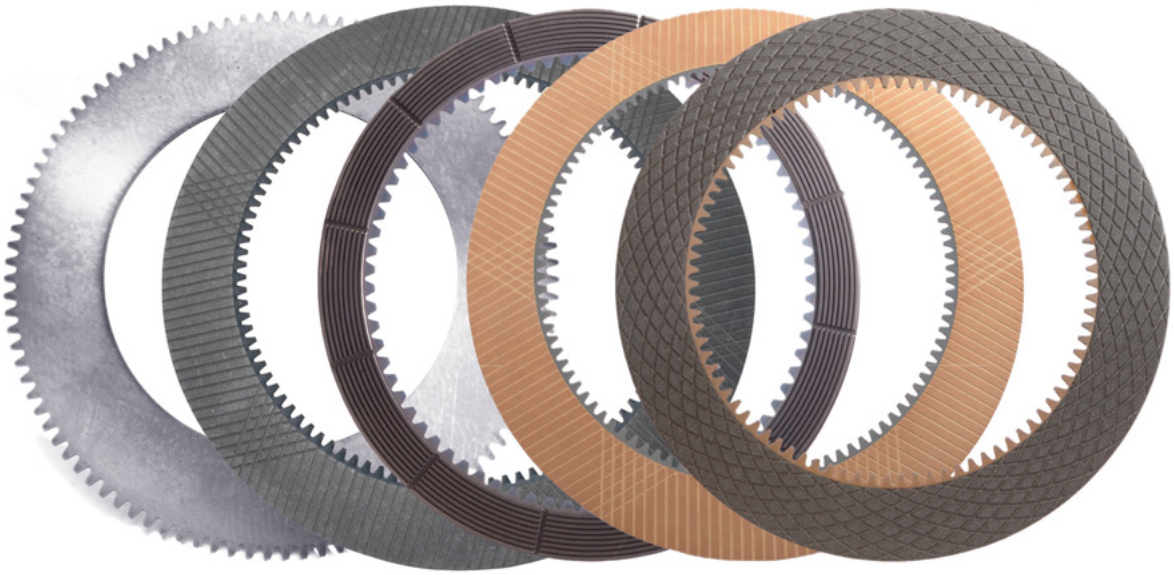
Cat® Friction Material



Total system design ensures you don't install doubt

- The type of friction material your equipment requires is based on machine size and application. Heavy-load applications like mining, for example, require friction material with different functional properties than cycling applications like construction.
- Caterpillar engineers match the characteristics of friction material to the function it performs, the equipment in which it operates, and the fluids and other components used in that system—ensuring the right match of material to function.
- Total system design helps ensure safe performance, balanced component life, and maximum parts reusability. Improper design considerations may cause premature wear, overheating, noise, creep, poor performance, and more. Don't install doubt.

Real-world validation delivers better performance

- Caterpillar invests millions of dollars to design, test, and develop friction material for each machine application, a process that can take years. All friction material must undergo a stringent certification process to ensure it performs to Cat specs.
- Caterpillar® elastomeric friction materials, for example, feature an exclusive material designed by Caterpillar that is molded and bonded to a core for use in transmissions and load clutches in off-highway trucks and wheel loaders.
- Choosing Cat friction material is your assurance of safety and reliability—the result of real-world validation, quality assurance, and experience gained by millions of hours of operation. Other brands may not be subjected to such extensive validation.

Caterpillar. The difference counts.™

Cat Dealers define world-class product support. We offer you the right parts and service solutions, when and where you need them.

The Cat Dealer network of highly trained experts keeps your entire fleet up and running to maximize your equipment investments.

CATERPILLAR®

Cat Friction Material—Genuinely Better

Friction Material Uses

	MACHINES	APPLICATIONS
Paper	Off-highway trucks Wheel loaders Track-type tractors	Brakes Transmission clutches Steering clutches
Bronze	Track-type tractors	Brakes
Elastomeric	Off-highway trucks Wheel loaders	Transmission clutches
Extended Life	Off-highway trucks Wheel loaders	Brakes
Separator Plate	All machines	All applications

Using genuine Cat friction material ensures your parts are designed for the best performance, safety, and reliability.

Built to perform in Cat machines

Friction material is key to drive train system success. Components made with Cat friction material allow proper fluid flow and heat dissipation, resulting in longer life and lower maintenance costs than other brands. That's why it's critical to select Cat components when it's time to choose replacement brake, transmission, and steering parts. Only Cat friction material is proven to deliver long, reliable performance in Cat machines. Caterpillar provides reusability guidelines so you know what is required for servicing—another way we help you manage your owning and operating costs.

Built to last, even under incredible stress

Drive train components operate under incredible stress—and their ability to stand up to tough conditions can mean significant cost savings. The friction material used in Cat components is designed to last until regularly scheduled assembly overhauls. Its life is better matched to that of other drive train components, so you can make all repairs and replacements at once—minimizing repair costs and downtime.

For more information about Caterpillar friction material and our complete line of drive train components for all Cat machines and applications, give us a call.

Cat friction material is designed just for Cat drive train components working in Cat machines. Here are a few examples of problems that can be avoided by using Cat friction material:

Material selection

- Unapproved adhesives can result in poor bond strength or premature bond failure.
- Improper density, weight, hardness, thickness, or composition can affect braking and shifting and cause premature wear, noise, drag, creep, and damage to the mating part in the system.

Heat treatment

Improper heat treat can cause premature spline wear and damage to the mating part.

Manufacturing processes

- Improper forming of materials can cause misalignment, premature wear, and power overloading.
- Improper groove type, width, and depth can affect oil flow and cooling, resulting in higher running temperatures, loss of coefficient of friction, wear, glazing, and discoloration.
- Improper positioning of the friction material on the core can interfere with the mating part.
- Failure to conform to Cat specs for blanking, tooth shaping, and broaching can create improper fit, resulting in premature failure and damage to the mating part.

Stress relieving

Lack of or improper stress relieving can cause premature wear, warping of the separator plate, and damage to the mating part.

Surface finish and cleaning

- Improper surface preparation can result in poor bond strength with the core, resulting in partial or complete separation from the core plate.
- Poor surface finish can result in accelerated wear on the friction disk, as well as noise, creep, drag, and reduced coefficient of friction.
- Failure to remove loose material can clog fluid filters and affect fluid flow, resulting in poor lubrication and higher running temperatures.

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