

Pressure Measurement Film

# PRESCALE

Application Examples

[No.10]

## Measured Object



Brake pads (disc brakes), transportation

## Uses

Checking brake pad fitting

## Benefits

Time saving

Less material loss

## Industry

**Automotive (production, maintenance)**

## Applications

**Checking the fitting of the brake pads of disc brakes**

## Challenges

Disc brakes serve to reduce or halt the motion of an automobile by means of the frictional force between the discs and brake pads. If the fit between the discs and the pads is not optimal, serious defects can occur. These include brake failure, uneven component wear, noise and vibration. Thus, the proper fitting of brake pads is important for automobile performance, safety, and part life. Yet, until now, there has been no easy way to check the fit between pads and discs.

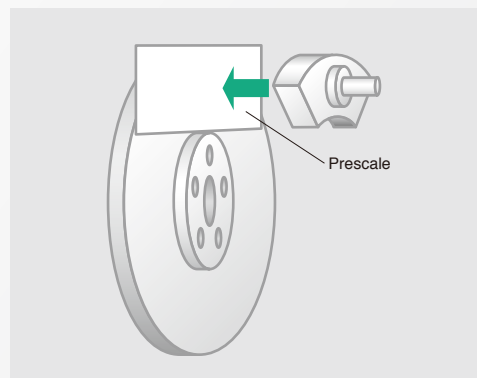
## Measurement

### Product used: Prescale (Medium Pressure MW/MS and High Pressure HS)

Sandwich the Prescale film between the disc and brake pad and apply brake pressure equivalent to normal conditions. Then remove the film and assess its coloring.

It should be easy to determine:

- whether the fitting is optimal
- the performance of brake pad and disk
- wear conditions after the test drive



## Results (images)

### ● Not Good



Contact pressure between disc and brake pad is uneven

### ● Good



Fit between disc and brake pad is uniform and of optimum pressure

## Benefits of Prescale

### ● Time Savings

Design efficiency is greatly improved compared to repeated trial and error

### ● Quality improvement

Prescale enables easy measurement at any time, thereby ensuring a stable braking system. This also helps to improve the performance and stability of other related auto parts.

#### Without using Prescale

Design and assembly are based on experience and estimation, and results are confirmed by actual braking tests. This repeated trial and error **results in substantial losses of time and labor.** Additionally, since assessments are made based on the subjective evaluations of drivers and the conditions of parts, **it is not possible to implement evidence-based quality control.**

#### With Prescale

Valuable data about brake effectiveness, pad wear unevenness, brake noise and vibration during braking, etc., can be accumulated by examining the coloring and patterns collected on the Prescale film. This data **enables optimum brake design in a short period of time.** Prescale **can also be used to check the product quality** after long test drives.

\*Note that the specifications and performance data described in this catalog are subject to change without notice for the purpose of improvement. Since the images provided are used for illustration purposes, they may differ slightly from actual products.