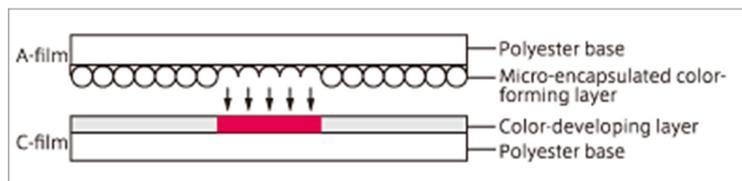


Prescale : Specifications



Structure

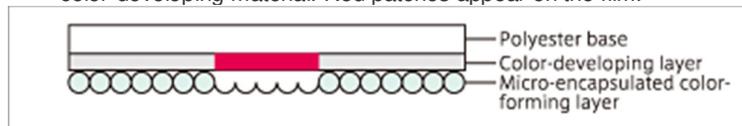
There are two types of Prescale. Mono-sheet type is composed of a polyester base on which the color-developing material is coated, with the micro-encapsulated color-forming material layered on top. Two-sheet type is composed of two polyester bases. One is coated with a layer of micro-encapsulated color forming material and the other with a layer of the color-developing material. Use two films facing the coated sides each other.



Two types of Prescale(Extreme Low:4LW~Medium:MW)

How it works

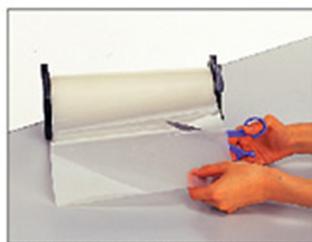
When pressure is applied, the microcapsules are broken and the color-forming material reacts with the color-developing material. Red patches appear on the film.



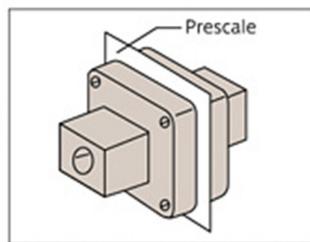
Mono-sheet type (Medium : MS~Super High : HHS)

How to use

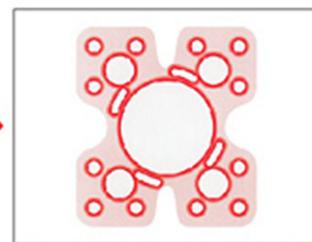
Prescale is the only material in the world able to measure pressure!
Microcapsules are broken and react with a color developing agent when pressure is applied.



①Cut Prescale to desired dimensions



②Insert Prescale in desired location and apply pressure



③Remove Pressure and Prescale and you can now See and check the pressure and it's distribution

Notes

- * Extra care should be taken in handling the extreme low pressure films. Do not touch, rub or bend the color-forming sheet surface.



Two-sheet type (Extreme Low : 4LW~Medium : MW)

Cut two Prescale films appropriately. (A-film in black poly sack and C-film in blue poly sack) Face the rough surfaces of each film and insert the films where you want to measure pressure. Apply pressure. Red patches appear on the film and the color density changes according to pressure level. Take out the C-film, see and check the pressure distribution. For further precise pressure values, please use the pressure analyzing system.

Mono-sheet type (Medium:MS~Super High : HHS)

Cut Prescale film in black poly sack appropriately.
Insert the film where you want to measure pressure.
Apply pressure. Red patches appear on the film and the color density changes according to pressure level.
Take out the film, see and check the pressure distribution.
For further precise pressure values, please use the pressure analyzing system.

Applications

Automobile



Adjustment of pressure distribution and balance for various automobile-parts.
-Cylinder head gasket, Engine, Brake, Clutch, Tire, Carburetor, Gasket and Packing, Molding, Oil pan, Transmission, etc.

LCD



- Adjustment of pressure distribution for Polarizer sticking.
- Adjustment of pressure distribution for ACF bonding and TCP bonding.

Semiconductors



- Adjustment of lamination roll pressure distribution for back grinding tape and dicing.
- Adjustment of polishing pressure distribution in semiconductor CMP processes.

Printed circuit boards



- Adjustment of squeeze pressure distribution of solder cream against printed circuit boards.
- Adjustment of dry film resist(DFR) lamination pressure distribution for multilayer printed circuit boards.

Suitable for many other different applications

- Adjustment of nip roll pressure balance of high-performance films
- Adjustment of pressure balance for lamination rolls



- Measurement of winding pressure for high-performance films
- Adjustment of pressure distribution for vacuum laminators
- Adjustment of pressure distribution and flow check for fuel cell stacks

Specifications and Operational Environment

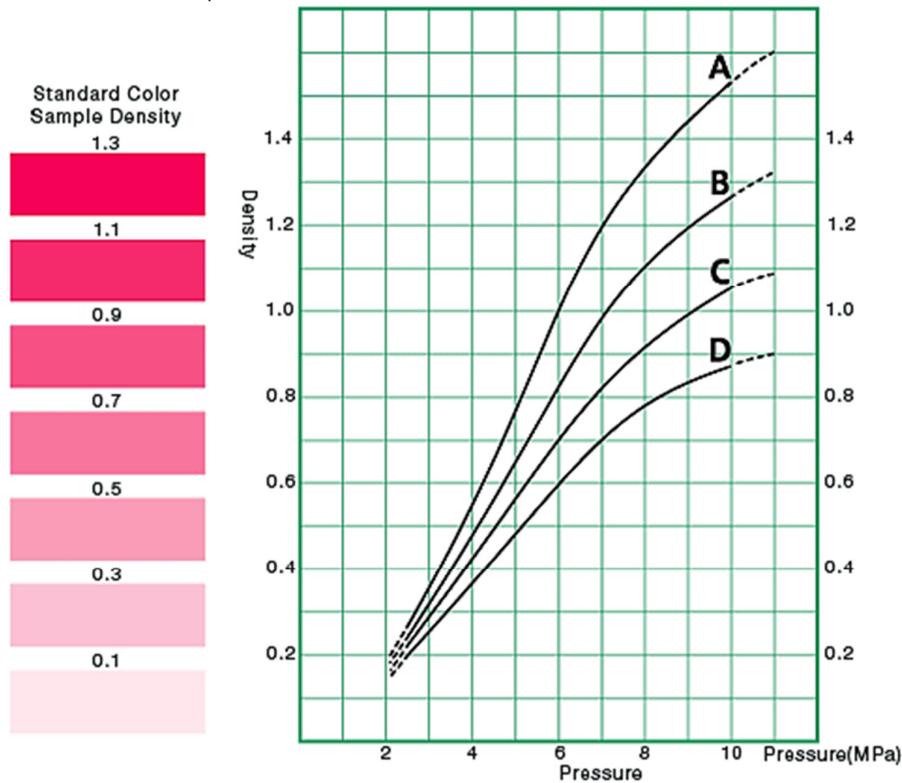
Accuracy	±10% or less (measured by densitometer at 23°C,65% RH)
Recommended service temperature	20°C~35°C(68 °F~ 95°F) (*1)
Recommended service humidity	35% RH ~ 80% RH(*2)
Thickness	mono-sheet type(S): 100µm two-sheet type(W):100µm x2

- *1 Extreme low pressure (4LW) , Super high pressure (HHS): 15 °C~30 °C
- *2 Extreme low pressure (4LW) : 20% RH ~ 75% RH
Super high pressure (HHS) : 35% RH ~ 70% RH

Pressure Chart (Low Pressure <LW> case)

Continuous pressure

Measurement pressure range:Low pressure (2.5~10 MPa)
Pressure application condition:Time to reach the pressure 2 min.
Time of retention at the pressure 2 min.



As the pressure indicated by the broken line may exceed the permissible error range, please use the data for reference purpose only. Pressure(MPa)

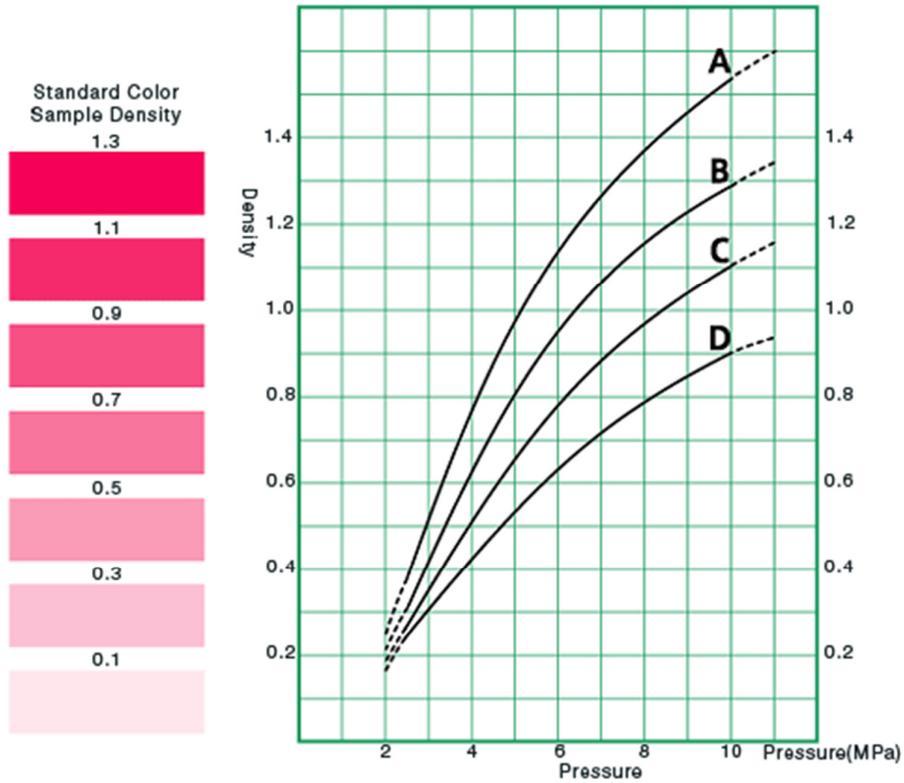
- * Taking the temperature and humidity condition into consideration, select a curve among A, B and C.

Momentary pressure

Measurement pressure range: Low pressure (2.5~10 MPa)

Pressure application condition: Time to reach the pressure 5 sec.

Time of retention at the pressure 5 sec.



As the pressure indicated by the broken line may exceed the permissible error range, please use the data for reference purpose only.

- * Taking the temperature and humidity condition into consideration, select a curve among A, B and C.

