

## Plasticity Wallace Ageing Chamber (O14)

The O14 Wallace Ageing Chamber, ages rubber in accordance with international testing standards. In conjunction with the Wallace Plastimeter (P14), it allows the user to determine the Plasticity Retention Index (PRI) of raw natural rubbers.

### Features

- For use with the Wallace Plastimeter (P14) to calculate PRI, Plasticity Retention Index, widely used to grade natural rubber
- Temperature controlled to 140°C ± 0.2°C
- Conforms to BS ISO 2930 ASTM D 3194
- Tri-colour LEDs indicate test status for each of four test compartments
- Up to 48 samples can be accommodated
- High-tech PID Temperature Controller with digital display
- Easy access to replace air filter

Housed in a robust steel case, the O14 features an aluminium block with four chambers that carry the drawer units and sample dishes. Heater elements are wrapped around the block and high-quality insulation inside the case minimises heat loss.



An air pump with filters, which provide pre-heated air to the chambers is located on the rear panel for easy service access. Test samples are placed on round foil dishes, which locate in recesses in the drawer units.

When a drawer is pushed in, a timing sequence starts only for that chamber. As the 30-minute ageing process ends, by changing colour, the light next to the drawer reminds the operator when to remove the sample. If the ageing period is exceeded, the light changes to red indicating that the samples should be discarded.

A temperature of 140°C (required by the standard) is maintained by a PID Controller, which continuously displays the chamber temperature. The O14 is protected by a warning system, which is initiated if the correct temperature is exceeded by more than 10°C.

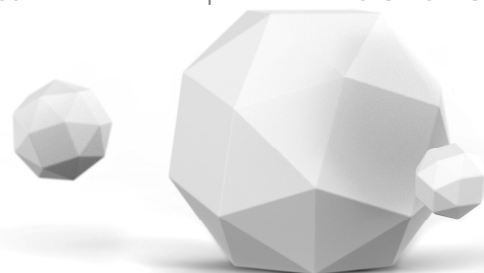
### The Plasticity Retention Index (PRI)

The PRI is a measure of the resistance of natural rubber to thermal oxidation. The procedure consists of a plasticity test ( $P_0$ ) on a non-aged specimen, followed by a test ( $P_{30}$ ) of a specimen that has been aged for 30 minutes at a temperature of 140°C ± 0.2°C.

$$PRI = \left( \frac{P_{30}}{P_0} \right) \times 100$$

$P_{30}$  is the median value of the aged results

$P_0$  is the median of the un-aged results



## Plasticity: Wallace Ageing Chamber (O14)

### Specifications

Wallace Ageing Oven (O14)	
Dimensions	270 (w) x 490 (d) x 230mm (h)
Weight	23kg
Maximum power	200 watts
Chamber size	50 (w) x 12 (d) x 280mm (h)
Number of heating chambers	4
Number of dishes per tray	4
Number of samples per tray	12 max
Number of samples per O14	48 max
Operating temperature	140°C ±0.2°C
Temperature recovery	< 2 mins @ 140°C after sample insertion
Standards	BS ISO 2930 ASTM D 3194

Owing to continuous development, we reserve the right to introduce improvements and modify specifications without prior notice.

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