



Orion PTS

PRECISION TESTING SOLUTIONS



OR-ESCR

Environmental Stress Cracker

V1.01

Introducing a brand new range of materials testing equipment from **Orion-PTS**.

The **Environmental Stress Cracking Apparatus** is used to determine the susceptibility of ethylene plastics to environmental stress-cracking when subject to conditions of stress in the presence of environments such as soaps, wetting agents, oils or detergents. Under certain conditions of stress these environments can accelerate the mechanical failure of the material by cracking, defined by an internal or external rupture caused by tensile stresses less than its short time mechanical strength

Designed in accordance with the ASTM D1693 international test standard the apparatus is extremely cost effective, very simple to use and is ideal for polymer testing laboratories for testing Environmental Stress-Cracking Resistance of High Density Polyethylene.

Manufactured to a high standard the instrument comes with an integrated temperature bath manufactured from 316 stainless steel and fitted with a 16th Din PID digital temperature controller, heater and a PT100 platinum resistance thermometer which accurately maintains the test temperature, usually $50\text{ }^{\circ}\text{C} \pm 0.5\text{ }^{\circ}\text{C}$ or $100\text{ }^{\circ}\text{C} \pm 0.5\text{ }^{\circ}\text{C}$. To ensure temperature stability within the bath a stirrer motor is fitted and the duration of the test is monitored by a built in electronic timer. For safety the apparatus is fitted with a thermostat and emergency stop and comes complete with a lid to cover the bath when in use.

Internally the bath is fitted with a 316 stainless steel sample rack which holds up to 46 borosilicate test tubes which are immersed in a heat transfer medium. Rubber stoppers to seal the tubes and brass test sample specimen holders are supplied for each tube. The specimen holder is designed to maintain a constant stress on the mid section of the test samples with up to 10 specimens fitted into a specimen holder at one time.

To Compliment the apparatus a full set of tooling is supplied to prepare the sample ready for test. This includes, sample cutting die (38mm x 13mm), sample bending clamp, Sample nicking jig and sample transfer tool.

The apparatus can be supplied in either 110-120v 60 Hz and 220-240v 50 Hz.

Specifications

- Simple Stress Cracking Determination for Ethylene Plastics
- PID temperature control
- Temperature resolution +/- 0.1°C
- Thermal stability +/- 0.2°C
- Integrated electronic timer HR:MIN:SEC
- 316 stainless steel bath and test tube rack
- Emergency stop and over temperature thermostat
- Supplied with 46 test tubes, rubber stoppers and brass sample holders.
- Complete with sample cutting die (38mm x 13mm), sample bending clamp, sample nicking jig and sample transfer tool.
- Fully traceable certificate of calibration and instrument user manual
- UKCA/CE Certified
- Dimension (CM) - 67W x 33D x 42H
- Net Weight (Kg) - 25
- Available in 110-120v 60Hz and 220-240v 50Hz

Options

- 316 Stainless Steel sample holders
- Manual Sample Press
- Pneumatic Sample Press
- Sample Notching Blades