

MI-TECH™

Activity of **MATÉRIAU** **INGÉNIERIE**



MADE IN FRANCE

ZST

ZERO STRENGTH TIME OF PCTFE



Commercial reference(s): MO49-00

Type of tests:
Thermomechanical

Type of materials:
Thermoplastics

Standards:
ASTM D 1430

INTRODUCTION

The control of the molecular weight of polymers based on PCTFE (Polychlorotrifluoroethylene) is necessary because the transformation temperature range is very close to the degradation temperature.

Measurement of Melt-Index, conventionally used for thermoplastic control is not suitable for PCTFE, which is why a specific instrument has been developed to meet the ASTM D 1430 standard.

This method allows to obtain a correlation with the molecular weight.

Developed at the request of one of the players in the field, the ZST meet the current standards at both levels of the materials used as measurement systems and integrated control. Software supplied as standard enables statistical processing and archiving of results ■

APPLICATIONS

This instrument is suitable for Polychlorotrifluoroethylene (PCTFE) and all thermoplastic combining this polymer (copolymer for example) ■

PRINCIPLE

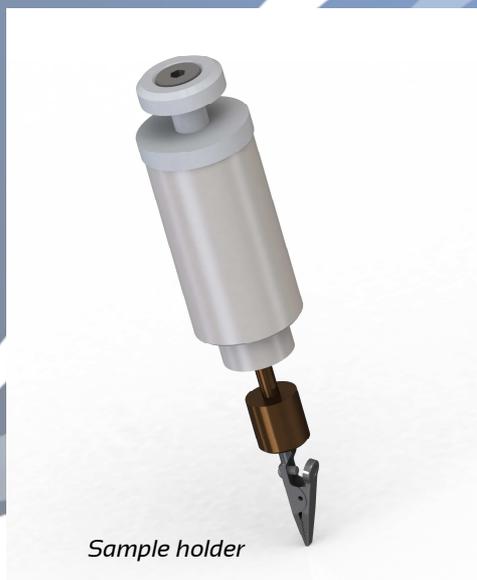
A specimen of PCTFE is suspended at the center of a thermoregulated tube at 250°C. A mass of 7.5 g. is attached to this sample. A stopwatch measures the time at which the sample will break under the combined effect of the weight and temperature ■

DESCRIPTION

The ZST respects the particularities of the ASTM D 1430 standard:

1 - A block of bronze is temperature controlled. This furnace comprises two tubes (19 mm diameter, 127 mm length) in which are placed the tubes held by a specific carrier.

2 - 2 sample holders are defined by the reference standard and are made of materials (high temperature cement and PTFE) insulation



3 - to the sample suspended mass to the tender is 7.5 g, stainless steel.

4 - All the heat regulation consists of two independent regulation zones. a zone consists of a heating collar, a Pt100 and a self-tuning PID control. This double regulation ensures a good homogeneity over the entire height of the tube where the sample is located.

The controllers are interfaced via software to a PC. The setpoint change is possible directly on the controller or through software.

A transparent door limits the convection air currents during testing.

5 - Detection systems are of 2 types: the stopwatch is started as soon as the sample holder in contact with mechanical switches. The stopwatch is stopped as soon as the relevant sample cutting a light barrier beneath the oven.

6 - Security has been the subject of special attention. The insulation jacket participates in the homogeneity of the temperature and protects the operator.

Support allows off work plan holders specimens on the right side placement. Holders specimens have a handful PTFE guaranteeing safe temperature during handling.

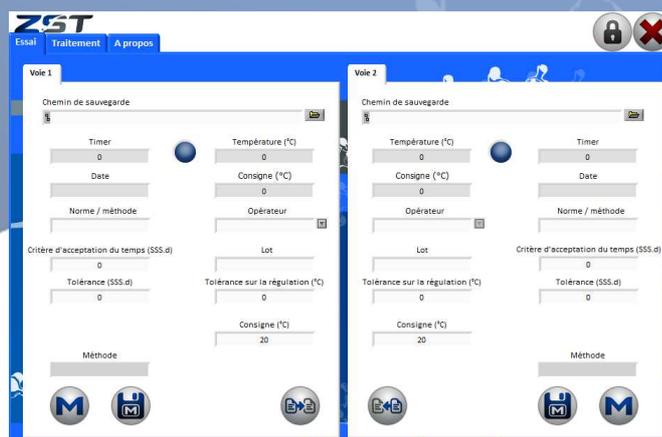
7 - A specially designed software allows one hand piloting the setpoint temperature control, but also the statistical treatment of results and archiving ■

SOFTWARE

The ZST operates autonomously, but the software provides functions related to quality assurance:

1 - The use of pre-registered methods by an administrator limits the mistakes and allow operators to save time.

2 - Fast processing of results and their comparison possible with criteria included the chosen method more reliable the test operation.



Page access the tests - The software automatically acquires the results when the test is run - 1 or 2 tests can be run at the same time or at different times.

TECHNICAL CHARACTERISTICS*

Thermal regulation:	
- Heating areas	2
- Type	Adaptative PID
- Regulation range	40 to 350 \pm 0,5°C
Starting the stopwatch:	
- Type	roller touch
Breach detector:	
- Type	fiber optical barrier
Software:	
- Compatible with Windows® XP and later	
- Language	French and English
Output:	RS 232
Weigh:	32 kg
Dimension (Lxdxh) :	543x286x443 mm
Power supply:	Single phase, 230 V, 50 Hz, 1,2 kW

Temp	Température °C	Essai complet	Conformité temps	Conformité température
138,0	249,2	OK	OK	OK
137,0	250,0	OK	OK	OK
Moyenne	137,5	249,6		
Ecart type	0,7	0,6		

3- A report comprising results, useful such as date, batch number, reference to the manufacturer, the name of the operator, etc. is editable more information

Page des résultats - Les statistiques sont calculées automatiquement..

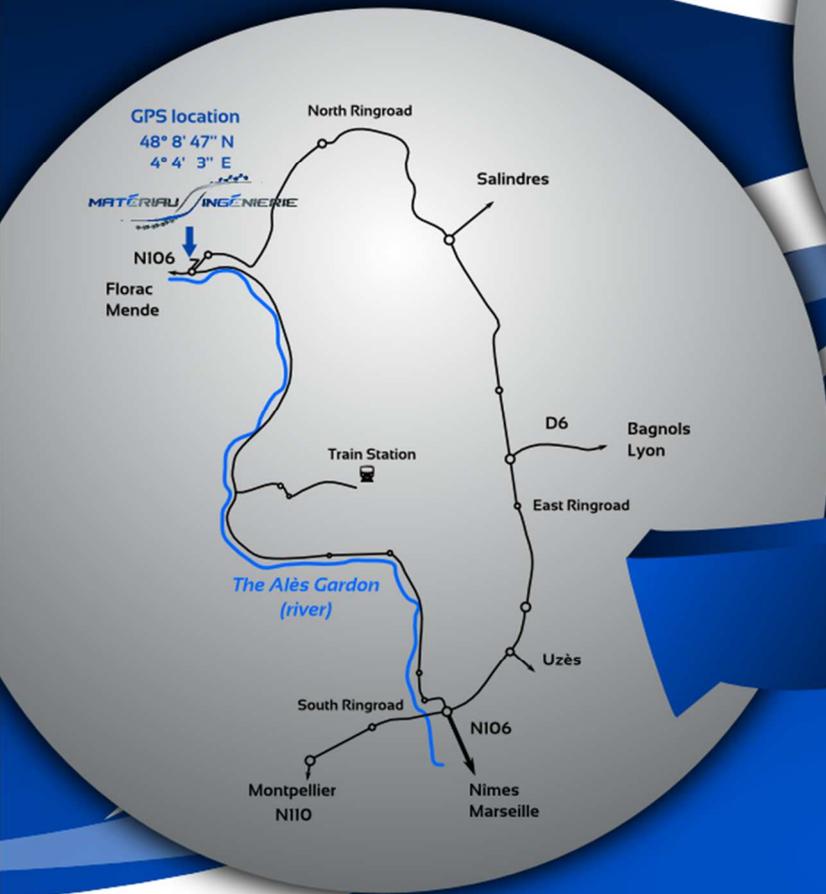
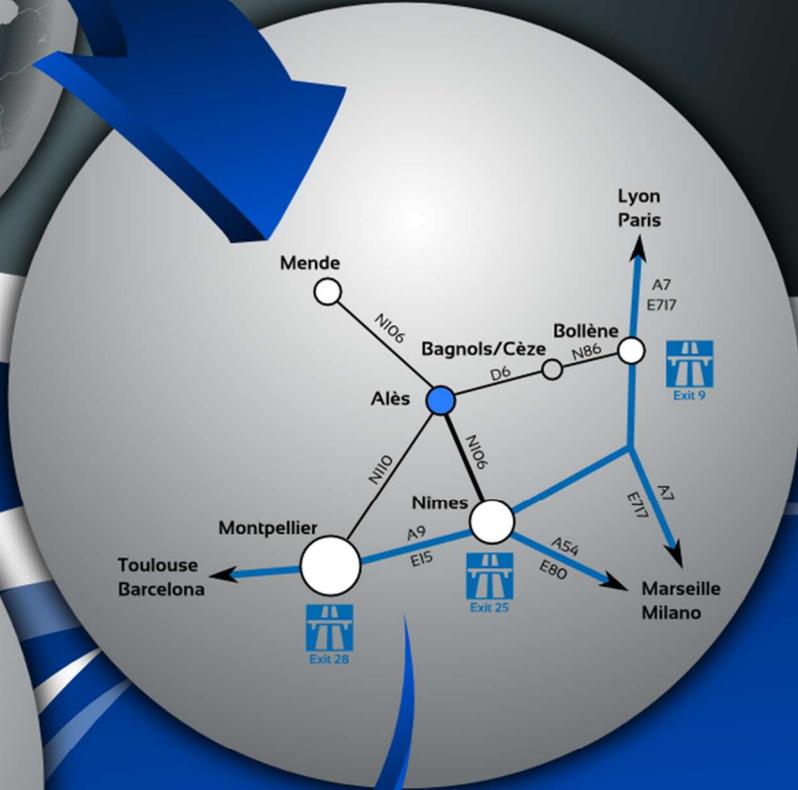
ACCESSOIRES DELIVERED

- 2 sample holders
- IEC power cord
- 2 masses of 7.5 g
- Calibration certificate
- User manual
- Software (CD-Rom)
- EC certificate

ATTRACTIVE PRICE**ERGONOMIC****RELIABLE****SECURITY****EVOLUTIVE**

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