



BRITTLENESS



CEAST 

**DESIGN AND PRODUCTION OF
INSTRUMENTS AND APPARATUS
FOR QUALITY CONTROL
ON MATERIALS**

These instruments are made in
compliance with CE health and
safety requirements



Brittleness - code 6565.000 - 6567.000 - 6569.000

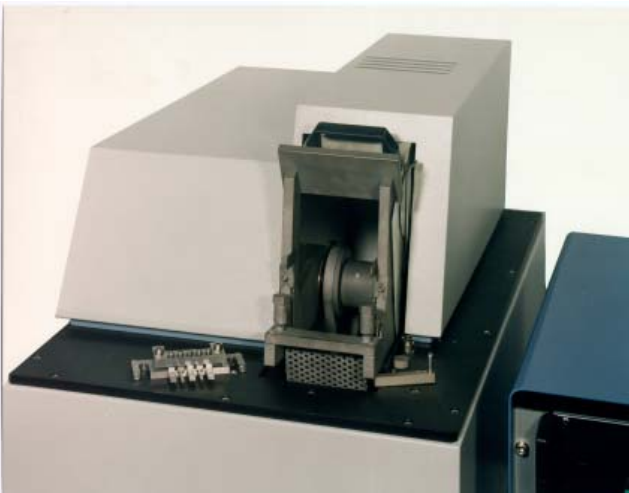


Fig. 1 - Working area

Scope

CEAST "BRITTLENESS" instruments are specifically used to determine the temperature, usually below 0°C, at which plastomers and elastomers exhibit brittle failure under specified impact conditions.

The test specimens, conditioned in a thermostatic bath and kept in position by a needle-holder, are impacted by a hammer moving at a defined speed.

The **Brittleness temperature**, object of the test, is statistically determined with reference to the failure temperature of 50% of the specimens.

Standards

The instruments were designed and built to meet the specifications set out by the following standards:

- ASTM D 746
- ASTM D 2137
- ISO 974
- DIN 53546
- UNI 5812

and other similar or equivalent.

BRITTLENESS - code 6565.000

- | | |
|-------------------------------|---|
| • Test temperature range | -70°C to room temperature |
| • Temperature regulation | Manual, by means of cooling and heating systems |
| • Cooling system | By manual introduction of solid carbon dioxide (dry ice) into the test bath |
| • Heating system | By electric immersion heater |
| • Test Temperature indication | By glass thermometer range -90 ÷ +30°C - 1°C/Div. |

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- Test temperature range –70°C to room temperature
- Temperature regulation Automatic through thermoregulator and Pt 100 probe. The control devices are placed in a separate module
- Cooling system Liquid Nitrogen into the test bath via a 30 litre dewar, complete with electrovalve controlled by the thermoregulator
- Heating system By electric immersion heater controlled by the thermoregulator
- Test Temperature indication Digital display built into the thermoregulator, which shows actual and set temperature

BRITTLENESS - code 6569.000

- Striker Speed Detector At impact (m/s). This device enables the operator to check the impact speed at every test, which is, according to standards, 2 ± 0.2 m/s
- Test temperature range –70°C to room temperature
- Temperature regulation Automatic through thermoregulator and Pt 100 probe. The control devices are placed in a separate module
- Cooling system Liquid Nitrogen into the test bath via a 30 litre dewar, complete with electrovalve controlled by the thermoregulator
- Heating system By electric immersion heater controlled by the thermoregulator
- Test Temperature indication Digital display built into the thermoregulator, which shows actual and set temperature

ANCILLARY EQUIPMENT

- Interchangeable specimen holder according to ASTM D 746 (Type A), ASTM D 2137 and DIN 53546 - code 6565.001. It allows to clamp 5 standard specimens
- Interchangeable specimen holder according to ASTM D 746 (Type B), ISO 974 and UNI 5812 - code 6565.002. It allows to clamp 15 standard specimens

Technical Data

Overall dimensions (L x D x H) Bsic Apparatus	500 x 760 x 600 approx.
Overall dimensions (L x D x H) Control Module	530 x 400 350 approx.
Weight [kg]	80 approx.
Supply	380 V - 50 Hz Threephase For 60 Hz the instrument codes are: 6565.000.60 - 6567.000.60 - 6569.000.60
Power [kVA]	2
Paint	fuchsia RAL 4006 - gray RAL 7035

"Due to the continuous development policy of CEAST's Research and Development Department, changes may be introduced without notice"



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