

HBA HEATING BLOCKS FOR ACCELERATED AGING

Product Datasheet

In the course of the lifetime of an explosive sample, the exothermal decomposition occurs. The rate of exothermal reaction is proportional to temperature. Under normal conditions, the rate of decomposition is small (the lifetime of propellants or explosives are usually many years). Therefore, accelerated aging is used to predict the lifetime of an explosive sample. The simplest method of accelerated aging is long-time storage of the samples of explosives at an increased temperature conditions (usually 50 °C to 90 °C). During the time of the test, changes in sensitivity, stability, chemical composition or mechanical properties are assessed.



APPLICATIONS

HBA 40 is designed to comply with requirements of the following standard of testing:

- STANAG 5075

INSTRUMENT DESCRIPTION

The instrument consists of a heating block made of aluminium with 10, 24 or 40 internal holes for glass tubes. The glass tubes with the samples to be tested are covered by a glass lid and inserted into the holes in the heating block. Each block contains 2 independent temperature sensors. The temperature of the block is controlled by a digital temperature controller. The controller unit contains an independent alarm circuit which switches off the heating if the temperature accidentally increases above a specified safety limit. The temperature in the heating block is controlled and corrected using calibrated mercury thermometers or a calibrated digital thermometer.

This instrument enables measurement of up to 40 samples with individual exposure time for each one. Further models of heating block with different number or hole dimensions are available upon request.

TECHNICAL PARAMETERS

Temperature range:	30 - 160 °C
Accuracy of temperature:	±0.1 °C
Typical sample weight:	5 g

STANDARD INSTRUMENT PARTS

HBA-HB-10	Heating block 12 holes
HBA-HB-24	Heating block 24 holes
HBA-HB-40	Heating block 40 holes
HBA-TC	Temperature and limit controller unit

OPTIONAL ACCESSORIES

HBA-CMT	Mercury thermometer 50 - 100 °C / 0.2 °C
DIG-T200	Calibrated digital thermometer 0 - 200 °C / 0.1 °C

CONSUMABLES

HBA-GTT	Glass test tube O.D. x L (26 mm x 152 mm) with lid
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INSTALLATION REQUIREMENTS

Main unit dimensions:	D x H: 390 x 390 mm; Weight: 40 kg
Temperature controller unit:	L x W x H: 30 x 21 x 14 cm; Net weight: 4.5 kg
Electric power source:	230 V / 50 Hz, 500W
Flameproof working desk for heating block unit	
Fume hood or local exhaust for heating block unit	

SHIPPING DATA

Package dimensions:	L x W x H: 70 x 60 x 70 cm
Package gross weight:	80 kg
Custom code:	9027 80 97