

BK-DRYING TIME RECORDERS

VF8000, VF8005, VF8010

DATASHEET

PRODUCT DESCRIPTION

The BK 3 speed Drying Recorder has been used widely in the coatings industry throughout the world for several decades. A needle carrier holding six hemispherical ended needles travels the length of the six 305 x 25 mm test strips in 6, 12 or 24 hours. Other speeds are available to special order. A time scale on the side cover is graduated to suit the three different travel times.



The BK 6 and BK 10 Recorders have independently operating tracks allowing tests to be made at different start times. Pairs of tracks operate at the same speed, and a wide range of travel times are available. Travel times of 6, 12, 24 and 48 hours are all considered as standard. A time scale on the front cover is graduated to suit the instrument's drying time ranges. Each pair of tracks has its own individual operating switch.

BUSINESS

Laboratory

FEATURES

The BK Drying Recorders will give useful information about the gelation times of many two component surface coating materials, and about the properties of such films.

SCOPE OF SUPPLY

Instrument, glass strips, hemispherical ended steel test needles, power cable, operating manual.

ART NO.

VF8000 – BK 3 Drying recorder
VF8005 – BK 6 Drying recorder
VF8010 – BK10 Drying recorder

SPARES AND ACCESSORIES**SPARES**

VF8104 Glass test Strips per 12
VF8105 Hemispherical ended steel Needles (standard) per 12

ACCESSORIES

| | |
|--------|---------------------------------------|
| VF8101 | Applicator (stainless steel) |
| VF8102 | Casterguide |
| VF8106 | Needles (stainless steel) per 12 |
| VF8107 | Needles (Teflon coated one end) per 6 |
| VF8108 | Needles (PTFE ball ended) per 6 |

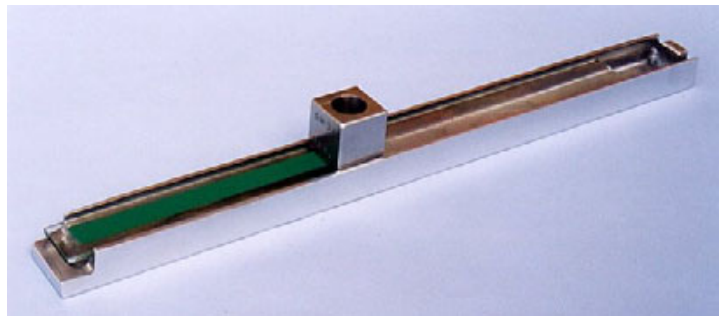
Applicator

The Applicator is a 25 mm stainless steel cube with a hole drilled centrally from one face through to the opposite face. From each end of this hole a gap 12 mm wide is ground from the hole to one side of the applicator, thus providing 2 gaps per applicator. The applicator is placed at one end of the glass strip with the ground gap facing the end. Paint is poured into the hole and the applicator steadily drawn down the glass strip and off the other end, the gap being the trailing end of the applicator. Paint will flow through the gap depositing a 12 mm wide film on the glass strip.

The standard applicator has a gap depth of 38 microns one end and 76 microns the other, applying a paint film thickness of approximately half the gap size. Any gap depth between 10 and 650 μ m can be supplied to suit customer requirements.

Casterguide

The Casterguide is a device for simplifying and "tidying-up" the process of applying the paint film to the glass strip. It consists of a cast aluminium trough with a ledge on each side to carry the glass strip and a step one end to allow the user to hold the strip in place. The applicator



is then positioned on the glass strip at the step end and filled with paint as described above. When using the applicator the casterguide ensures that the film is applied centrally and, as the applicator is drawn off the end of the glass strip, the surplus paint is collected in the trough underneath.

This operation may be repeated several times before cleaning is necessary. For this purpose use only suitable solvents, do not use caustic alkali or caustic detergents since these will attack the aluminium metal.

SPECIFICATIONS

| | |
|-----------------------|---|
| Dimensions (mm): | BK 3: 470x220x120, BK 6: 460x350x150, BK 10: 460x530x150 |
| Net weight (g): | BK 3: 3400, BK 6: 7100, BK 10: 1140 |
| Voltage: | 230 V AC / 50 Hz |
| Running length (mm): | 300 |
| Running speed (h) | alternatively 6, 12 or 24 (other speeds on request) |
| Operating conditions: | Indoor use Altitude up to 2000 metres Ambient temperature 5°C to 40°C Maximum RH 80% up to 31°C decreasing linearly to 50% RH at 40°C Installation Category II Pollution degree 1 or 2 (IEC 664) |

USE

The Recorders define stages in the drying process as:

- Stage 1 A pear shaped impression corresponding to the time taken for evaporation of solvent.
- Stage 2 The cutting of a continuous track, corresponding to a sol-gel transition.
- Stage 3 An interrupted track corresponding to the surface-dry time.
- Stage 4 The needle no longer penetrates the film, corresponding to the final drying time.

Brass weights, each weighing 5 grams, may be used to apply greater pressure on the needles and thus record the through-drying properties of alkyds, varnishes and paints. The BK Drying Recorders will give useful information about the gelation times of many two component surface coating materials, and about the properties of such films.

SPECIAL CARE

- Though robust in design, this instrument is precision-machined. Never drop it or knock it over
- Always clean the instrument after use.
- Clean the instrument using a soft dry cloth. Never clean the instrument by any mechanical means such as a wire brush or abrasive paper. This may cause, just like the use of aggressive cleaning agents, permanent damage.
- Do not use compressed air to clean the instrument.

SAFETY PRECAUTIONS

- Always make sure the instrument is connected to an earthed electric socket.
- Always make sure the instrument's power is turned off while adjusting any electric component
- A needle is a sharp object. Be careful when using it.

DISCLAIMER

The right of technical modifications is reserved.

The information given in this sheet is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. Whilst we endeavour to ensure that all advice we give about the product (whether in this sheet or otherwise) is correct we have no control over either the quality or condition of the product or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability whatsoever or howsoever arising for the performance of the product or for any loss or damage (other than death or personal injury resulting from our negligence) arising out of the use of the product. The information contained in this sheet is liable to modification from time to time in the light of experience and our policy of continuous product development.