

The Objective Standard for a Clear View

The haze-gard *plus* quantifies the visual perception with objective measurement data. All essential criteria for transparency can be measured with one instrument:

- Total transmittance
- Transmission haze
- See-through quality

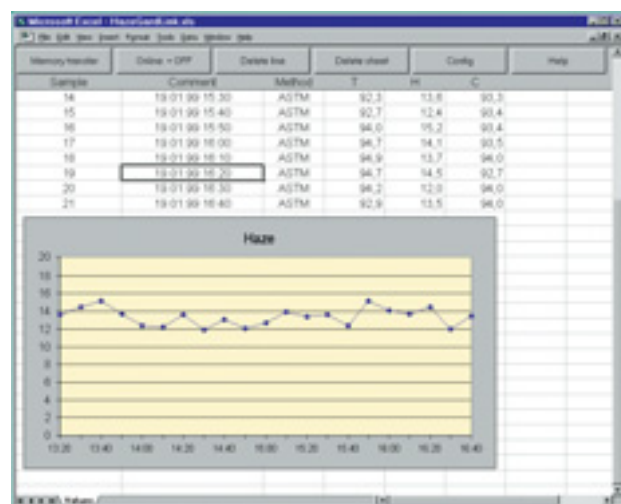
The Industry Standard according to ASTM

- Reference beam, self-diagnosis, and enclosed optics guarantee accurate readings – any time
- Built-in statistics with average, standard deviation, coefficient of variance, and min/max
- Large storage capacity and data transfer to a printer or PC for professional documentation



Quick Measurement of Variety of Samples

- Open sample area for small and large specimens
- Foot switch and automatic measurement allow hands-free operation
- Ready for measurement without warm-up time
- Automatic and long-term calibration allow easy and fast operation
- Operation in English, German, French, Spanish and Italian – switchable



Documentation of Measurement Data

The software easy-link transfers data to the PC for further data processing in Excel® (see page 20).

Training haze-gard *plus*

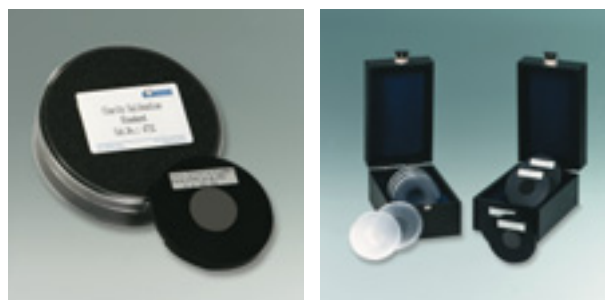
BYK-Gardner offers you more than just an instrument. We assist you in operation of the haze-gard *plus* and understanding your appearance readings. As a result you will be able to use the system to save time and money and at the same time improve your quality. Therefore, the instrument comes with a half day training course including:

Haze and Clarity Theory

- Visual perception, Transparency, Scattering, Haze, and Clarity
- Instrumental measurement, Standards and Application

Operation and Software Training

- Handling, Statistics, Maintenance
- Direct data transfer to Excel® and documentation



Ordering Information

Cat. No.	Description
E-4725	haze-gard <i>plus</i> Illuminant CIE-C
E-4726	haze-gard <i>plus</i> Illuminant CIE-A
EE-4700	Extended Warranty one year additional

Comes complete with:

haze-gard *plus*
Foot switch; Software easy-link; Interface cable; Clarity calibration standard;
Zero standard; Power cord; Operating manual; Training



*For Recertification
and Calibration
Services
see page 172*

Ordering Information

Cat. No.	Description
E-4732	Clarity Calibration Standard
E-4734	Clarity Reference Standard
E-4740	Haze Test Standard 1
E-4741	Haze Test Standard 5
E-4742	Haze Test Standard 10
E-4743	Haze Test Standard 20
E-4744	Haze Test Standard 30
E-4745	Haze Test Set
E-4750	Transmittance Standard 30
E-4751	Transmittance Standard 50
E-4752	Transmittance Standard 70
E-4753	Transmittance Standard 90
E-4754	Transmittance Standard Set

Standards

ASTM	D 1003	D 1044
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Technical Specification

Measurement Area	18 mm (ø 0.7 in)
Sample Port	25.4 mm (ø 1.0 in)
Measurement Range	0 to 100 %
Repeatability	± 0.1 units (standard deviation)
Reproducibility	± 0.4 units (standard deviation)
Geometry	0° / diffuse
Spectral Response	CIE luminosity function y
Illuminant C	General purpose
Illuminant A	Automotive windshields
Memory	7 x 999 values
Interface	serial RS 232
Power Supply	230 V / 50 Hz, 115 V / 60 Hz, 200 VA max.
Operating Temperature	+10 to 40 °C (+50 to 104 °F)
Storage Temperature	0 to 50 °C (+32 to 122 °F)
Dimensions	67 x 36 x 24 cm (26 x 14 x 10 in)
Weight	18 kg (40 lbs)

Additional Standards

Replacement standard for clarity, certificate included
Test standard for checking purposes, certificate included
Approx. 1% haze, for checking purposes, certificate included
Approx. 5% haze, for checking purposes, certificate included
Approx. 10% haze, for checking purposes, certificate included
Approx. 20% haze, for checking purposes, certificate included
Approx. 30% haze, for checking purposes, certificate included
Set of 5 pieces in hard box, certificate included
Approx. 30% total transmittance, for checking purposes, certificate included
Approx. 50% total transmittance, for checking purposes, certificate included
Approx. 70% total transmittance, for checking purposes, certificate included
Approx. 90% total transmittance, for checking purposes, certificate included
Set of 4 pieces in hard box, certificate included



Exact positioning of films with a holder guided in a precision track system.



Liquids are best measured using cuvettes and the cuvette table.



The measurement of haze is used to determine abrasion resistance of transparent materials. The Taber Abrasion Holder facilitates positioning of the abraded area in the measurement beam.

Ordering Information

Cat. No.	Description
E-4738	Film Holder
E-4735	Taber Abrasion Holder
E-4739	Cuvette Table
E-6180	Cuvette for Liquids, 2.5 mm
E-6181	Cuvette for Liquids, 4.0 mm
E-6182	Cuvette for Liquids, 5.0 mm
E-6183	Cuvette for Liquids, 10 mm
E-4613	Interface Cable
E-4545	BYKWARE easy-link
E-6650	Portable Printer
E-6649	Portable Printer
E-6648	Printer Paper
E-4731	Foot Switch
E-4736	Lamp

Accessories

For film size > 17 x 10 cm, film thickness < 0.5 mm
For evaluation of abrasion resistance
For measurement of liquids
Path length 2.5 mm, edge length 50 mm
Path length 4.0 mm, edge length 50 mm
Path length 5.0 mm, edge length 50 mm
Path length 10 mm, edge length 50 mm
For data transfer to a PC or printer, Sub-D 9-pin
Software for data transfer and documentation in Excel® (see page 20)
40 column serial printer, including charger 230 V
40 column serial printer, including charger 115 V
For portable printer Cat. No. GB-6649 and GB-6650
Replacement
For haze-gard plus