RHOPINT INSTRUMENTS

RHOPINT AMERICAS

Manufactured by Rhopoint Instruments in the United Kingdom

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RHOPINT NOVO-HAZE TX

Novo-Haze TX Transmission Hazemeter

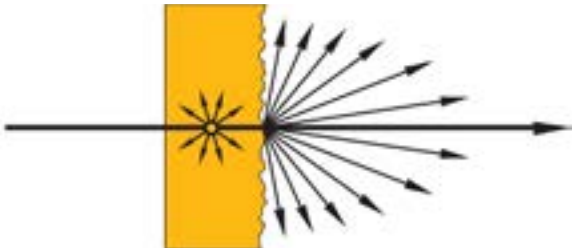
- Measures total transmission and haze
- Measure to ASTM D1003 (CIE C)
- For complete characterisation of films or glass, Rhopoint recommend the Rhopoint ID

What is transmission haze?

The Novo-Haze TX Transmission Hazemeter quantifies the optical qualities of transparent materials. The two most important aspects are:

Transmission

The transmission is a measurement of the total amount of light that passes through a material that is influenced by absorption and reflective properties.



In the plastic film industry the transmission measurement is related to the opacity of the material and/or the hiding power of the applied coatings.

Transmission Haze

The transmission haze is a measurement of the light scattering characteristics of a material. Haze can be due to suspended particles or contaminants within a sample or fine surface texture & contamination.

Haze measurement can be used to quantify optical characteristics of plastics and packaging films.

Viewed through material with low haze

Viewed through material with higher haze

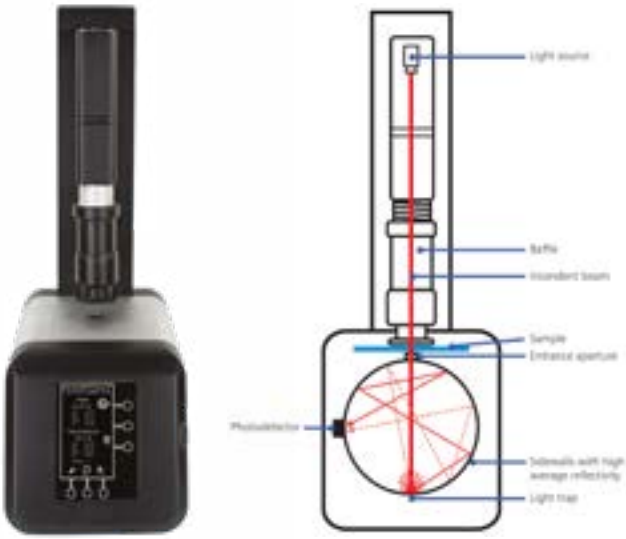
In packaging applications hazy films may reduce a consumer's quality perception as packed products can look cloudy and indistinct. For plastics with haze the visibility of the test material becomes more apparent and the contrast of viewed objects is reduced.

Novo-Haze TX Transmission Hazemeter

The Novo-Haze TX Transmission Hazemeter offers fast and accurate measurement of the optical quality of plastic films and other transparent materials.

This instrument measures total transmission and haze according to ASTM D1003 (CIE C), the most important standard used in most Quality Assurance (QA) applications.

Manufactured in direct response to industry requirements, the Novo-Haze TX is offered at huge savings compared to other instruments which contain additional superfluous test methods.



Uncompromising design, high quality materials and European manufacture make the Novo-Haze TX the ideal choice for any laboratory or QA environment.

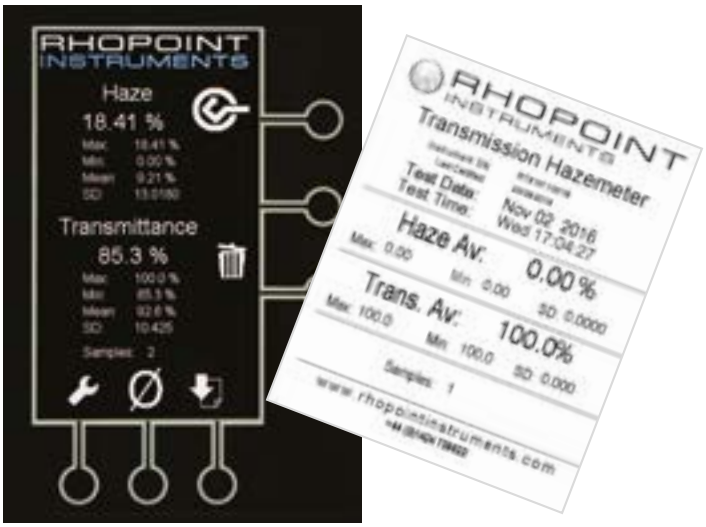
At 50% of the price of the market leader for only measuring to this standard (ASTM D1003, CIE C), the Rhopoint Novo-Haze TX represents huge savings without compromising measurement accuracy.

User Interface

The instrument features an intuitive user friendly interface which minimises the test time and makes it an ideal choice for both Quality Control (QC) and Research & Development (R&D).

The touch sensitive interface makes it incredibly easy to use, with no complicated menu structures; all measurement functions are accessible from one screen.

Single touch button or the footswitch can be used to initiate single measurements or automatic measurement mode.



At the end of the test the percentage of haze and transmittance are shown on screen.

If multiple tests are performed, statistics for the batch will be displayed and can be printed to the results printer to keep with retained samples.

Instrument & Accessories

FREE EXTENDED WARRANTY

Included accessories:

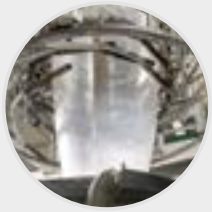
- 2x Haze checking standards, NPL traceable
- Calibration certificate
- 24V DC power supply with mains cable
- USB drive

Optional Extras:

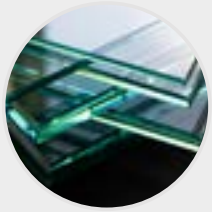
Results printer

Footswitch

Custom sample holders



Plastic film



Glass

Specifications

Haze	Details
Repeatability	±0.05 units SD
Reproducibility	±0.4 units SD
Resolution	0.01%

Transmission	Details
Repeatability	±0.02 units SD
Reproducibility	±1.0 units SD
Resolution	0.01%

Instrument	Details
Light source	White light LED filtered for equivalence to CIE C luminosity function λ plus human photopic response
Measurement area	14mm ø
Measurement range	0 - 100%
Geometry	0° / diffuse
Sample thickness	Maximum 3mm, standard instrument Maximum 10mm using additional light baffle
Measurement standards	Conforms to ASTM D1003 (CIE C) Verified to ISO 14782, ISO 13468-1, JIS K 7361
Memory	10,000 results via USB stick (supplied) Internal memory: 99 results (for statistical analysis only)
Power supply	230V / 50Hz, 115V / 60Hz
Operating conditions	Operating temperature: 15 to 40°C Storage temperature: 0 to 50°C
Dimensions	(H) 580mm x (W) 200mm x (D) 320mm
Packed dimensions	(H) 720mm x (W) 440mm x (D) 320mm
Weight	16kg
Packed weight:	21.7kg
Commodity code	9027 5000
Order code	A3000-001

Free extended 2 year warranty: Requires registration at www.rhopointinstruments.com within 28 days of purchase. Without registration, 1 year standard warranty applies.

Calibration and service: Fast and economical service via our global network of accredited calibration and service centres. Please visit www.rhopointinstruments.com for detailed information.

For complete characterisation of films or glass

Rhopoint recommend the Rhopoint ID

The Rhopoint ID - More than just a haze meter

The Rhopoint ID is an instrument that can measure what the eye can see. It quantifies the see-through qualities of materials in a method that can be matched to real world conditions with results highly correlated to customer perception. It also measures small sample sizes that cannot be measured with a traditional haze meter.

The unique Rhopoint ID method fully characterises the transparency of a material in a single measurement.

Measurement parameters:

Haze

Haze: quantifies the loss of contrast for objects viewed through a material.

When a material has haze, it changes the appearance of both the material and any objects viewed through it. This can lead to a reduction in perceived quality.

- The product viewed through the material appears lifeless and dull – but details remain sharp
- The colour of a viewed object appears washed-out and faded
- The material itself appears cloudy or milky.

Measure Haze with the Rhopoint ID to ensure visibility of products are at their best and can be seen properly by the customer.

Sharpness

Sharpness quantifies the loss of perceived detail for objects viewed through a material.
What are the effects of reduced Sharpness?

When viewed through a material with high sharpness, an object appears sharp and distinct. As material sharpness decreases, the object appears blurry and obscured.

Anisotropic Sharpness

Anisotropic Sharpness.
A material can often exhibit optical effects which are directional. These phenomena are often induced in plastic parts by specific processing faults.
Visible texture is a common feature of plastic films and causes a significant reduction in their see- through quality.

Clarity

Clarity: Quantifies the blurriness of an object when viewed through a material, results are proportionate with Sharpness, but the measurement scale is compressed and the measurement resolution is reduced.

Clarity is a scale used by traditional haze and clarity meters. When measured using the 8mm adaptor plate, Rhopoint ID Clarity data conforms to specifications written for these meters.

Waviness

Waviness is an optical effect caused by large structures (0.1-2mm) on the surface of the material. If the structure is homogeneous it is often described as orange peel – the surface resembles the peel of an orange.

If the effect is anisotropic, visible lines can often be seen when looking through the material.

Distance dependant haze

Many materials exhibit a variation of transparency depending on whether the material is in contact with a viewed object, or separated by an 'air gap' distance between them..

Matching the material exactly to the application allows quality improvements and production cost savings.
To match a specific material application the Rhopoint ID can measure ID Haze at any distance within 0–40 mm.

Using the ID it is possible to identify the air gap distance at which maximum Haze is obtained (typically <25 mm).

Visible Transmittance

When considering how material is perceived by a consumer it is important to consider how bright an object viewed through it will appear*

Visible Transmission to human observer

- Rhopoint Transmittance (TID) quantifies the amount of light passing through the material and reaching the camera/eye of the observer
- This measurement describes the brightness/ luminosity of the viewed object and is correlated to how one perceives the quality of the material.

Benefits of the ID

- ✓ Comprehensive quantitative evaluation of transparency (Haze, Sharpness, Transmittance)
- ✓ Full correlation with visual perception, including effects of air gap distance and anisotropy
- ✓ On-demand ASTM D1003-equivalent haze data
- ✓ Ability to identify local optical defects
- ✓ Suitable for plastic films and sheets, glasses, coatings and liquids with thickness up to 35mm
- ✓ Low cost compared with conventional instruments
- ✓ Robust design, with small weight and footprint
- ✓ Rapid data acquisition; no moving parts – suitable for (in-line) process and quality control
- ✓ Intuitive software for data management and image analysis

View product online

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TRY BEFORE YOU BUY

We offer two options for you to try out the Novo Haze TX before buying

1. **Online demonstration:** Online presentation of the Novo Haze TX with your samples measured LIVE on Zoom, Microsoft Teams or Skype. Includes a consultation with an application specialist.

2. **Factory sample testing:** Send in samples of your material for testing and receive a comprehensive test report.

Arrange a demo

Ready to receive a quote? **Click here**

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ISO 14001 Environmental Management CERTIFIED EMS 741433

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