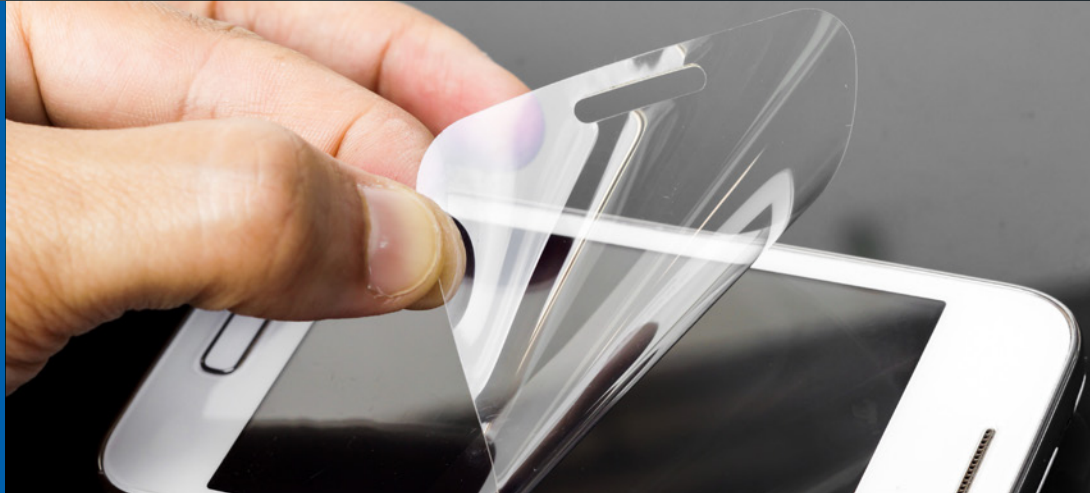


Rhopoint ID Application Notes

DISTANCE RELATED HAZE



Quantifying the change in distance related haze of transparent packaging materials using Rhopoint ID

Overview

Optimising the optical properties of a packaging film for food applications is essential to ensure the food product underneath can be clearly seen. Many materials have transmission properties which vary dependent on whether the material is in contact with or at variable distance to a viewed object. As consumers are very selective concerning their choice and eventual selection of a packaged food any distortion or hazy effect in the packaging film will make the product less appealing having an effect as to whether the item is purchased.

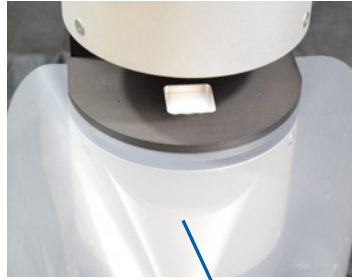


So that the item can be viewed clearly and with good sharpness the film should have minimal haze at the viewing distance set by the packaging container. To the right it can be observed that without a film covering the food in the left half of the packaging can be seen very clearly, whilst on the right the food with the film appears milky indicating that haze is present.

Measurement using traditional hazemeters according to the ASTM D1003 test method quantifies haze at a fixed distance, therefore any distance related haze effects cannot be detected or evaluated. Thanks to the imaging- based system of the Rhopoint ID, measurements can now be easily and accurately made to determine distance related haze properties of the film. To match any user specific application the Rhopoint ID can measure HID at any distance from 0-30mm allowing the peak obfuscation distance to be determined which is usually between 0.7 and 25mm.

OTHER APPLICATION NOTES:

- Surface roughness and bulk scatter
- Taber Abrasion
- PET bottles

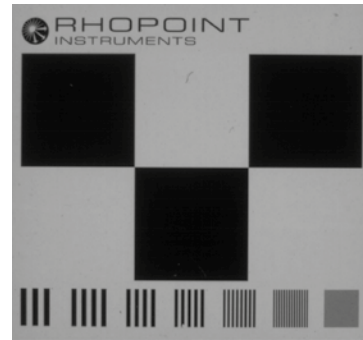


BOPP Film

A customer supplied sample of BOPP film was tested. A range of spacer mounts available as optional accessories can be used allowing the measured height of the film to be adjusted over the range 0 - 30mm in steps of 2mm. As some mounts are magnetised they conveniently locate and hold the sample at each measurement height.



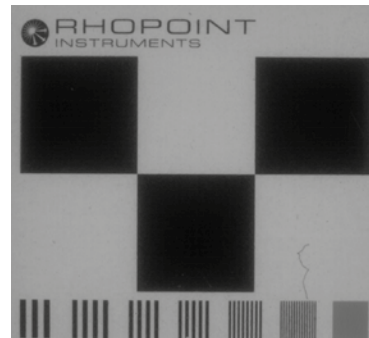
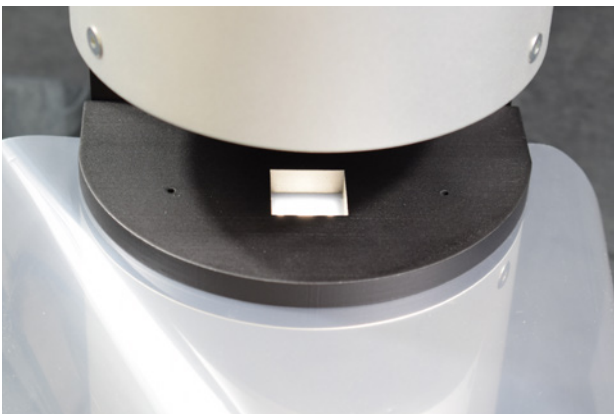
STEP 1: The abraded sample was mounted onto the table and a measurement taken.



Contact with the graticule



STEP 2: Then 2mm spacers were placed underneath the film to sequentially increase the measurement distance.

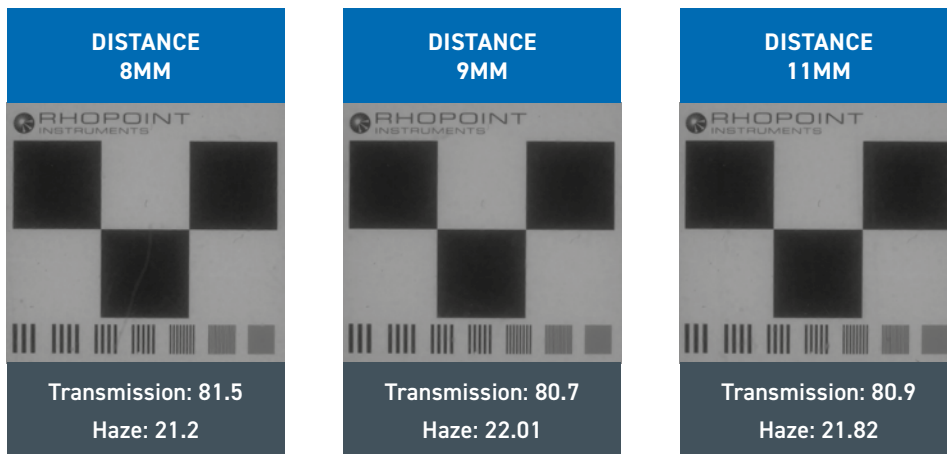
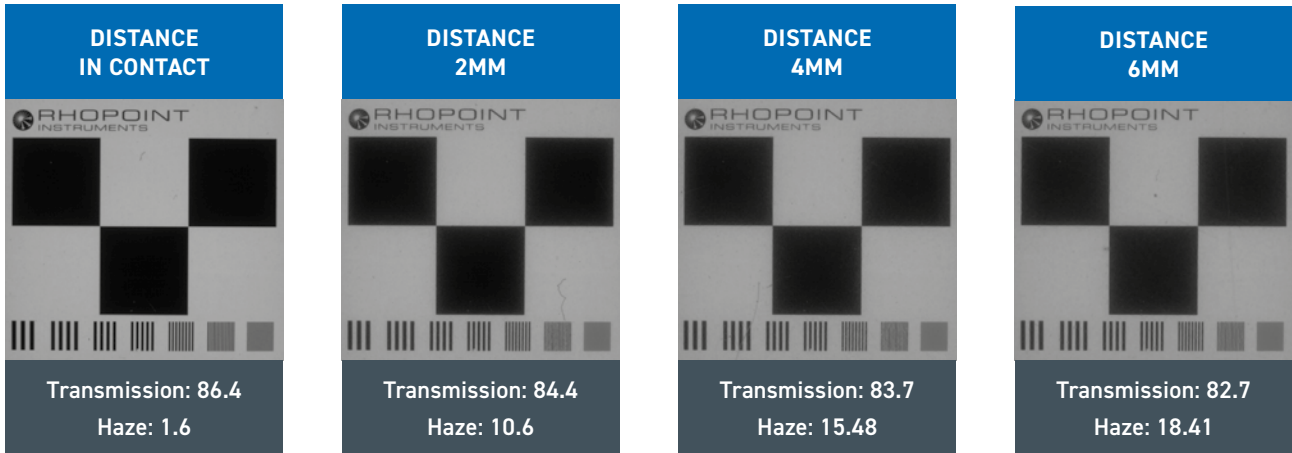


Distance - 2mm

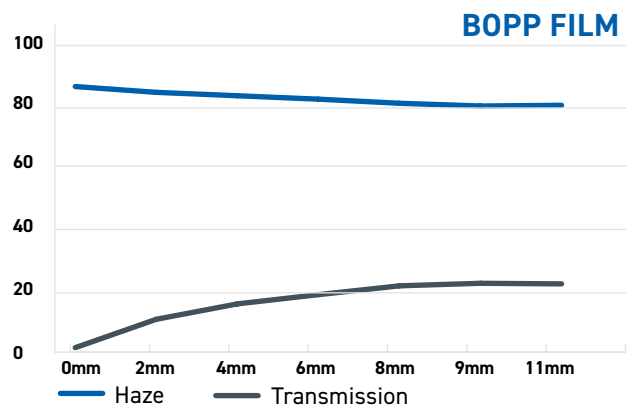


STEP 3 TO 7: This process was repeated until there was no noticeable change in the measured haze value.

MEASUREMENT RESULTS



Transmission	Haze	Distance
86.4	1.6	0
84.7	10.6	2
83.7	15.48	4
82.7	18.41	6
81.5	21.2	8
80.7	22.01	9
80.9	21.82	11



Observations of results

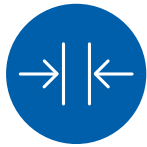
The measurement results provide valuable data to determine the haze variation and the maximum peak haze value of the film over a distance range. The addition of images allows visual comparison of each measurement due to the change in distance. Matching the material exactly to the application allows quality improvements and cost savings.

Features of the Rhopoint ID



No moving parts

Eliminates risk of mechanical failure



Stand-alone instrument

Small footprint reduces space required in laboratory



Lightweight

Easy to move in the laboratory or production line



Resistant and durable

Made from durable, recyclable materials



Touch screen

Single measurement time of 2 seconds to measure ALL parameters (up to 15 seconds on a comparable sphere instrument)

Large mounting area

Minimal sample preparation required possible to measure non flat samples without bending or deforming.

Fully sealed optics

Ideal for measuring liquid samples and solid materials impervious to damage through accidental spillage

KEY FEATURES

- ✓ Measure and understand distance related haze
- ✓ Compare changes in haze values according to ASTM D1003 to application distance
- ✓ Simple sample mounting. Fast, accurate and repeatable measurement
- ✓ Measured data and images allow visual comparison of haze change
- ✓ Rhopoint ID is the only instrument that can fully characterise the variation in haze values over distance
- ✓ Measured on same scale as ASTM D1003- Compare the Haze at the application distance to quoted ASTM value
- ✓ Magnetised spacer mounts conveniently locate and hold the sample at each measurement height
- ✓ Extensive information available for detection and analysis

[FULL PRODUCT DETAILS](#)

[VIEW DATA SHEET](#)



TRY BEFORE YOU BUY

We offer two options for you to try out the Rhopoint ID before buying.

- 1 Online demonstration:** Online presentation of the Rhopoint ID with your samples measured LIVE on Zoom, TEAMS or Skype. Includes 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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