

MP-2 | Economical

Economical thermal conductivity meter for solids, liquids, pastes, and powders.

ASTM D7896, ASTM D5334, IEEE 442, ASTM D7984.



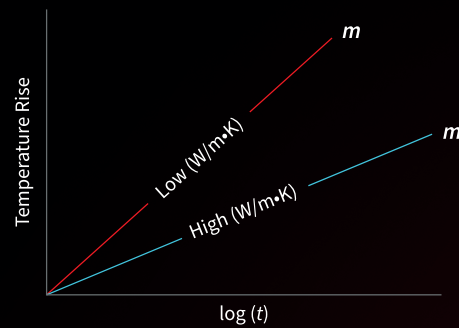
FEATURES



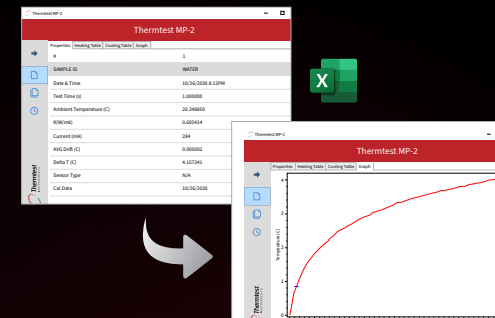
The MP-2 is an economical meter with a unique selection of transient thermal conductivity sensors for a variety of applications, with a focus on primary measurements.

The controller auto-detects the connected sensor and loads corresponding testing parameters. Measurements are easily performed with the smart on-board software and can be transferred to a computer with the included data utility program.

For convenience, the auto-testing function can be setup directly on the controller or on a computer. Additional features include the ability to review, save or delete and export results to Excel. To maximize portability, power can be supplied by battery or USB cable. Informative screen icons showcase power status and testing progress.



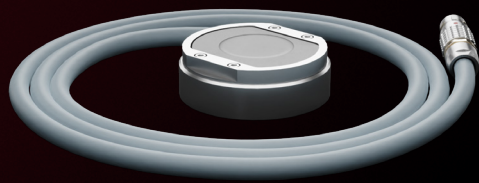
Intelligent



Export

METHODS

Modified Transient Plane Source (MTPS) Sensor



Solids



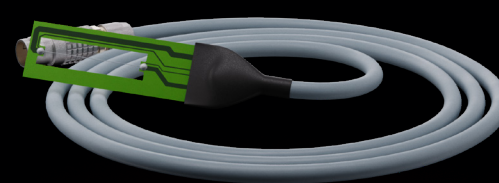
Pastes



Powders

For testing the thermal conductivity of solids, pastes, and powders. Only one sample piece is needed for this asymmetric (single-sided) sensor.

Transient Hot Wire (THW) Sensor



Liquids

For testing the thermal conductivity of liquids following ASTM D7896.

METHODS

Transient Line Source (TLS-50 mm) Sensor



Concrete



Rock



Polymers

For testing concrete, rock, and polymers. This sensor can be used on any sample size.

Transient Line Source (TLS-100 mm) Sensor



Soil



Polymers

For use on soil and polymers. This sensor conforms to industry standards and can be used on any sample size following ASTM D5334.

METHODS

Transient Line Source (TLS-150 mm) Sensor



Soil



Polymers

For testing soil and polymers. This sensor can be used on any sample size while conforming to industry standards following ASTM D5334 and IEEE 442.

Transient Plane Source (TPS-EFF) Sensor



Fabrics



Solids

For testing warmth or coolness of fabrics and textiles. Conforms to industry standards following ASTM D7894.

SPECIFICATIONS

Method	MTPS	THW	TLS-50	TLS-100	TLS-150	TPS-EFF
Materials	Solids, pastes, and powders	Liquids	Concrete, rock, and polymers	Soil and polymers	Soil and polymers	Fabrics and solids
Thermal conductivity (W/m-K)	0.029 to 20	0.01 to 1	0.03 to 5	0.1 to 5	0.1 to 3	N/A
Thermal effusivity ($W\sqrt{s}/m^2K$)	N/A	N/A	N/A	N/A	N/A	35 to 1700
Thermal resistivity (mK/W)	N/A	N/A	0.2 to 3.3	0.2 to 10	0.3 to 10	N/A
Sample size (mm mL)	25 diameter or square	15 mL	50 length, 50 diameter	100 length, 50 diameter	150 length, 50 diameter	30 diameter
Largest sample size	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
Test time (seconds)	10, 20 and 40	1	180	180	180	2 and 10
Accuracy (Thermal conductivity)	5%	5%	5%	5%	5%	5%
Repeatability (Thermal conductivity)	2%	2%	2%	2%	2%	2%
Temperature range (°C)	0 to 80	0 to 80	-40 to 100	-40 to 100	-40 to 100	-10 to 50
Moisture range	N/A	N/A	N/A	N/A	N/A	0 to 90% (non-condensing)
Standard	N/A	ASTM D7896-19	N/A	ASTM D5334-22a, IEEE 442-1981	ASTM D5334-22a, IEEE 442-2017	ASTM D7984



info@thermtest.com
Thermtest.com



Thermtest™
INSTRUMENTS - EUROPE

info@thermtest.se
Thermtest.com/europe



asia@thermtest.com
Thermtest.com/asia



latam@thermtest.com
Thermtest.com/latinamerica

Headquarters

Thermtest Inc.
Fredericton, NB Canada
+1 (506) 458-5350
info@thermtest.com | Thermtest.com

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Qi srl
t +39 06 9105461
www.qitech.it | sales@qitech.it

