
THERMAL EVALUATION OF MONOGLASS IN ACCORDANCE WITH THE CGSB 51-GP-36P DRAFT STANDARD

A Report to: **Monoglass Incorporated**

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ORTECH



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ACCREDITATION

Standards Council of Canada, Registration #101.

REGISTRATION

ISO 9002-1987, registered by QMI, Registration #001109.

INTRODUCTION

Samples of Monoglass were submitted for thermal resistance testing in accordance with section 9.3.7 of the CGSB 51-GP-36 Draft Standard for Spray Applied Cellulosic Fibre. The samples were assigned the ORTECH Sample No. 95-J53-M0255B.

RESULTS

Table 1 - Thermal Resistance Results		
Specimen	mK/W	25 mmK/W
95-J53-M0255B-1	28.334	0.708
95-J53-M0255B-2	28.337	0.708
95-J53-M0255B-3	28.744	0.719
Average	28.472	0.712

Please see attached Table 2 for the detailed thermal resistance results.


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Table 2 - Thermal Transmission Properties (ASTM C-518)

ORTECH Sample : 95-J53-M0255B-1		SI Units	British Units
Specimen thickness	37.84	mm.	1.490 inch
Specimen density	62.87	kg/m ³	3.92 lbs/ft ³
Hot surface temperature	34.99	°C	94.99 °F
Cold surface temperature	12.99	°C	55.38 °F
Temperature differential	22.00	°C	39.60 °F
Mean test temperature	23.99	°C	75.18 °F
Heat flux through the specimen	20.521	W/m ²	6.506 Btu/ft ² .h
Thermal conductance of the specimen	0.933	W/m ² .°K	0.164 Btu/ft ² .h.°F
Thermal resistance of the specimen	1.072	m ² .°K/W	6.088 °F.ft ² .h/Btu
Thermal conductivity at the tested thickness	0.035	W/m.°K	0.245 Btu.in/ft ² .h.°F
Thermal resistance per unit thickness	28.334	m.°K/W	4.086 °F.ft ² .h/Btu.in
ORTECH Sample : 95-J53-M0255B-2		SI Units	British Units
Specimen thickness	37.71	mm.	1.485 inch
Specimen density	62.16	kg/m ³	3.88 lbs/ft ³
Hot surface temperature	35.00	°C	94.99 °F
Cold surface temperature	13.00	°C	55.39 °F
Temperature differential	22.00	°C	39.60 °F
Mean test temperature	24.00	°C	75.19 °F
Heat flux through the specimen	20.589	W/m ²	6.528 Btu/ft ² .h
Thermal conductance of the specimen	0.936	W/m ² .°K	0.165 Btu/ft ² .h.°F
Thermal resistance of the specimen	1.069	m ² .°K/W	6.067 °F.ft ² .h/Btu
Thermal conductivity at the tested thickness	0.035	W/m.°K	0.245 Btu.in/ft ² .h.°F
Thermal resistance per unit thickness	28.337	m.°K/W	4.087 °F.ft ² .h/Btu.in
ORTECH Sample : 95-J53-M0255B-3		SI Units	British Units
Specimen thickness	38.07	mm.	1.499 inch
Specimen density	69.56	kg/m ³	4.34 lbs/ft ³
Hot surface temperature	35.00	°C	95.00 °F
Cold surface temperature	13.02	°C	55.43 °F
Temperature differential	21.98	°C	39.57 °F
Mean test temperature	24.01	°C	75.21 °F
Heat flux through the specimen	20.088	W/m ²	6.369 Btu/ft ² .h
Thermal conductance of the specimen	0.914	W/m ² .°K	0.161 Btu/ft ² .h.°F
Thermal resistance of the specimen	1.094	m ² .°K/W	6.213 °F.ft ² .h/Btu
Thermal conductivity at the tested thickness	0.035	W/m.°K	0.241 Btu.in/ft ² .h.°F
Thermal resistance per unit thickness	28.744	m.°K/W	4.146 °F.ft ² .h/Btu.in