Thermal Conductivity Report

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Accredited for compliance with ISO/IEC 17025 - Testing

NATA
WORLD RECOGNISED ACCREDITATION

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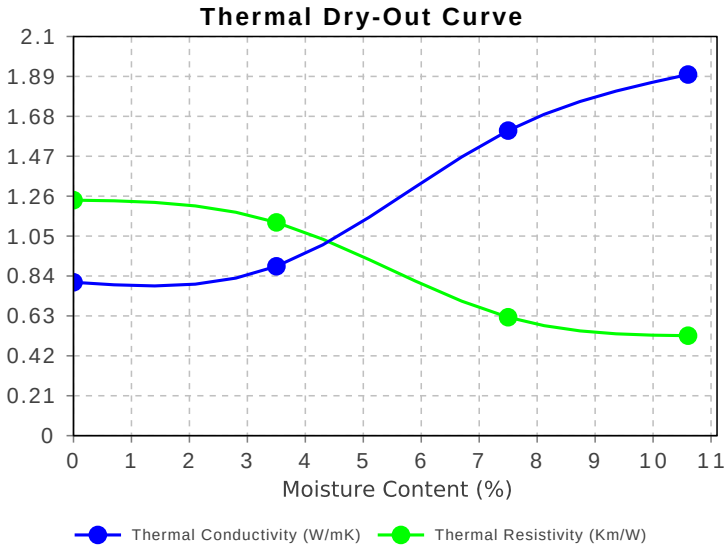
Report Number: **P244010-6**
Issue Number: 1
Date Issued: 13/06/2024
Client: P. F. Formation
1 Patricia Fay Drive, Maroota NSW 2765
Contact: Joshua Graham
Project Number: P244010
Project Name: Laboratory Testing - Maroota
Project Location: 1 Patricia Fay Drive, Maroota
Work Request: 35193
Sample Number: 24-35193A
Date Sampled: 22/05/2024
Dates Tested: 24/05/2024 - 07/06/2024
Sampling Method: Sampled by Client
The results apply to the sample as received
Preparation Method: In accordance with the test method
Sample Location: **TR Sand**
Material: Clayey SAND; orange-brown

Determination of Thermal Conductivity (ASTM D5334)	
Specimen Type	Remoulded
Maximum Dry Density (t/m^3)	2.027
Optimum Moisture Content (%)	10.6
Method of Compactive Effort	Standard
Target Density Ratio (%)	95
Target Moisture Ratio (%)	100
Achieved Density Ratio (%)	95
Achieved Moisture Ratio (%)	103
Field Moisture Content (%)	9
Placement Moisture Content (%)	11
Material Retained on 37.5 mm (%)	0
Material Retained on 19 mm (%)	0
Oversize Material Included	N/A
Diameter of Needle (mm)	2.4
Length of Needle (mm)	100
Method of Needle Insertion	Pushed
Type of Grease Used	Thermal



Sample Remoulding				
Point	OMC	2	3	Zero
Target Moisture Content (%)	10.6	7.5	3.5	0
Mass of Soil (g)	3581.0	3472.0	3350.0	3227.0
Wet Density (t/m^3)	2.13	2.07	2.00	1.92
Dry Density (t/m^3)	1.92	1.92	1.93	1.92
Average Specimen Diameter (mm)	102	102	102	102
Average Specimen Length (mm)	200	200	200	200
Time (s)	300.0	300.0	300.0	300.0
Start Temperature (^{o}C)	18.20	18.23	16.56	18.51
Thermal Conductivity (W/mK)	1.90	1.60	0.89	0.81
Thermal Resistivity (mK/W)	0.526	0.623	1.122	1.239