

**CONSTRUCTION BUILDING MATERIALS
TESTING LABORATORY-RIYADH**


TEST REPORT

**PHYSICAL PROPERTIES OF RIGID, CELLULAR POLYSTYRENE THERMAL INSULATION
SASO (ASTM C578 :2023):2024**

Customer	Alrayyan Building Insulation for Industry Co		Sample Description	Expanded Polystyrene Foam (EPS) / Insulated Concrete Foam (ICF) Density 22-24 kg/m ³ 50 mm Thickness								
Project Name	SQM		Sample Source	Alrayyan Building Insulation for Industry Co								
Project No.	NP		Sampling Method	Not Applicable								
Location	Riyadh, KSA		SASO Sampling Date	NP								
Contractor	NP		Sampled by	Customer								
Consultant	NP		SASO Ref No	NP								
Customer Code	GCS-C003995 / Qt.GCA-SQ26008980		Date Received	22-Jan-26								
CBML Sample No.	CBM-220126-001		Sample Condition	Normal								
CBML Report No.	CBM-220126-001		Environmental Condition	22.7°C & 52.8 %								
Date of Report	26-Jan-26		Date of Test	22-Jan-26		to		2-Feb-26				
Material Grade	SASO (ASTM C578 :2023):2024		Production Date	NP								
Color	White		Sampled Location	Riyadh, KSA								
Nominal Size	NP		Type	XI								
Manufacture	Alrayyan Building Insulation for Industry Co		No of Samples	1								
Batch No	NP		Brand	GWALLS								
Test Results (SASO ASTM C578 Type:XI)												
Clause No.	Test Parameters	Unit	Specification Limits SASO ASTM C578 Type:XI	001	002	003	004	005	Average	Uncertainty	Conclusion	Decision rule
7.1.4 Table-1	Density (ASTM C303)											
	Density	kg/m ³	Min.12	20.59	20.51	20.24	-	-	20.45	-	Pass	Binary
8	Dimensions											
8.2	Thickness ASTM C303	mm	50±59.5 mm/m	49.46	49.35	49.21	49.52	49.37	49.38	-	Pass	Binary
8.3	Edge Trueness ASTM C550	mm/m	Max.2.5	0.005	0.005	0.005	0.005	0.005	0.005	-	Pass	Binary
8.4	Face Trueness ASTM C550	mm/m	Max.2.5	0.005	0.005	0.005	0.005	0.005	0.005	-	Pass	Binary
8.5	Squareness ASTM C550	mm/m	Max.5	0.010	0.010	0.010	0.010	0.010	0.010	-	Pass	Binary
9	Workmanship, Finish, and Appearance											
9.1	Defects	Visual	RCPS thermal insulation shall have no defects that will adversely affect its service qualities. RCPS thermal insulation shall be of uniform texture and free of foreign inclusions, broken edges and corners, slits, and objectionable odors.	RCPS thermal insulation does not have any defects that adversely affect its service quality. RCPS thermal insulation has a uniform structure. It is free from foreign inclusions, broken edges and corners, cracks and unpleasant odors.						-	Pass	-
9.2	Crushing and Depressions	Visual	RCPS thermal insulation shall have no crushed or depressed areas on any surface exceeding 0.13 in. (3.3 mm) in depth on more than 10 % of the total surface area.	RCPS thermal insulation does not contain crushed or pressed areas on any surface greater than 0.13 inches (3.3 mm) deep.						-	Pass	-
9.3	The total number of voids	Visual	The total number of voids on the board surface shall not exceed an average of 1 per square foot with dimensions larger than 0.13 by 0.13 in. (3.3 by 3.3 by 3.3 mm).	The total number of voids on the board surface does not exceed an average of 1 per square foot. The dimensions does not larger than 0.13 x 0.13 x 0.13 inches (3.3 x 3.3 x 3.3 mm).						-	Pass	-
11.5 Table-1	Compressive Resistance at 10 % (ASTM D1621 Cl.6.1 & 8.3)											
	Compressive Resistance @ 10% Deformation	kPa	Min.35	234	285	243	262	254	256	-	Pass	Binary
11.6 Table-1	Flexural Strength (ASTM C203 Method 1 Procedure B)											
	Flexural Strength	kPa	Min.70	276	255	273	244	253	260	-	Pass	Binary
11.8 Table-1	Water Absorption (ASTM C578 & ASTM C272)											
	Water Absorption	%	Max.4	2.62	3.27	3.23	-	-	3.04	-	Pass	Binary



**CONSTRUCTION BUILDING MATERIALS
TESTING LABORATORY-RIYADH**

TEST REPORT													
PHYSICAL PROPERTIES OF RIGID, CELLULAR POLYSTYRENE THERMAL INSULATION													
SASO (ASTM C578 :2023):2024													
Customer	Alrayyan Building Insulation for Industry Co						Sample Description	Expanded Polystyrene Foam (EPS) / Insulated Concrete Foam (ICF) Density 22-24 kg/m ³ 50 mm Thickness					
11.9 Table-1	*Dimensional Stability @ 70°C and 97% RH (ASTM D2126)												
	Change in Length (Δε l)	%	Max.2	-0.08	0.04	-0.29	0.06	0.51	0.05	-	Pass	Binary	
15	Product Marking												
	15.1.1 Insulation specification number		SASO (ASTM C578 :2023) :2024					-	Pass	-			
	15.1.2 Type		Type-XI					-	Pass	-			
	15.1.3 Manufacturer's name or trademark		Alrayyan Building Insulation for Industry Co					-	Pass	-			
	15.1.4 Thermal Properties		R-Value=0.876 m ² /k/w					-	Pass	-			
Tested by	: SB												
Test Variation	: NIL												
Remarks	: Tested parameters are complying to the specification requirements.												
 AUTHORIZED SIGNATORY												<div style="border: 1px solid black; padding: 5px;"> <p>GCC Lab Conformity Assessment Company شركة المختبر الخليجي للتحقق والمطابقة مختبر فحص منتجات مواد البناء و التشييد-الرياض Construction & Building Materials Testing Lab-Riyadh CR No.: 2050115437</p> </div>	

*Test Result is found on the Succeeding Pages for sample as Lab received.
 *Test reports only to the item(s) tested on specific standard test method(s)
 *Test shall not be reproduced, except in full, without written approval of CBMLR GCC Lab Conformity Assessment Co. (GCA)
 *The Customer Has Right during a maximum period of 15 days from the date of issuance of this report, let us know in writing for any error that may take place in this report.
 *Unless requested for return, test item(s) are disposed 90 days after test report date.
 *Test conducted may form into unusable item(s). GCC Lab Conformity Assessment Co. (GCA). CBMLR do not assume liability resulting from the use of the returned item(s).
 *Comply: Meet Standards Requirements, Not Comply: Not Meet Standards Requirements, RA: Result Attached for Reference, NA: Not Applicable Test, NP: Not Provided.
 *Uncertainty Calculation and Decision rule calculation can be submitting, if client requested in test request.
 *Unless otherwise stated in the test request the laboratory uses the Simple acceptance decision rule of ILAC G8 (binary statement for Simple Acceptance Rule (w = 0), where Specific Risk < 50 % PFA (Probability of False Accept).
 *The laboratory is responsible for all information contained in the report.

