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Dubai Central Laboratory

Engineering Materials Laboratory Section – Structural Unit

TEST REPORT

DETERMINATION OF TRUENESS & SQUARENESS OF RIGID BLOCK & BOARD THERMAL INSULATION

REPORT NO.	: 2011074140	DATE	: 20/12/2011
WEB REQUEST NO.	: DCL-12122011-0093	SAMPLE NO.:	2011070266
REQUEST NO.	: 2011055589		
PROJECT NO.	: CF-27		
PROJECT NAME	: STYRO LTD		
CONSULTANT	: NO SPECIFIC CONSULTANT		
CONTRACTOR	: NO SPECIFIC CONTRACTOR		
LOCATION	: STYRO INSULATION MATERIALS IND SHARJAH		
SOURCE	: STYRO INSULATION MAT.IND - SHARJAH		
SAMPLE DESCRIPTION	: MOLDED (EXPANDED) POLYSTYRENE SHEET		
SAMPLE TYPE	: STYRO SF18 INSULATION SHEET		
SUPPORT / FACING	: NIL		
NOM. THICKNESS (mm)	: 50		
NOM. DENSITY (kg/m ³)	: 17 - 18		
Date of Sampling	: 06/12/2011	Time	: 11:00
Date of Receiving Sample	: 12/12/2011	Time	: 12:00
Size of Sample	: 4 pcs	Area No.:	-
		Lot No.	: NG
		Lot Size	: NG
		Sender No.	: LL1171

DATE SPECIMEN RECEIVED	12/12/2011
SPECIMEN NOMINAL LENGTH (mm)	1000
SPECIMEN NOMINAL WIDTH (mm)	500
SPECIMEN NOMINAL THICKNESS (mm)	50
SPECIMEN NOMINAL DENSITY (kg/m ³)	17 - 18
PRE-CONDITIONING TEMP. & HUMIDITY	23°C, 50%RH
TEST CONDITION TEMP. & HUMIDITY	23°C, 50%RH
DATE TESTED	15/12/2011

SPECIMEN NO.	1	2	3
EDGE TRUENESS			
MAX. DEVIATION ALONG LENGTH (mm)	0.0	0.0	0.0
MAX. DEVIATION ALONG WIDTH (mm)	0.0	0.0	0.0
MAX. DEVIATION ALONG THKNNESS (mm)	0.0	0.0	0.0
SQUARENESS			
MAX. DEVIATION ALONG LENGTH (mm)	0.0	0.0	0.0
MAX. DEVIATION ALONG WIDTH (mm)	0.0	0.0	0.0
MAX. DEVIATION ALONG THKNNESS (mm)	0.0	0.0	0.0
BOARD SQUARENESS (mm)	4.0	2.0	2.0
FACE TRUENESS			
MAX. DEVIATION ALONG LENGTH (mm)	0.0	0.0	0.0
MAX. DEVIATION ALONG WIDTH (mm)	0.0	0.0	0.0

SAMPLED BY : RENATO OMILA (DCL) TESTED BY : SUBER DUDDIYANDA
 SAMPLES BROUGHT IN BY : RENATO OMILA (DCL)
 SAMPLING METHOD : - DCL - IC - 99
 SAMPLING REPORT NO. : NG
 TEST METHOD : ASTM C 550-10
 TEST METHOD VARIATION : NIL
 REMARKS : THIS REPORT REPRESENTS THE SUBMITTED SAMPLE ONLY

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HEAD OF UNIT

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TEST REPORT
Water Absorption of Insulation Materials
Dubai Central Laboratory
 Engineering Materials Laboratory Section – Structural Unit

Doc Ref. : F-EM-2057-3

Rev. No. : 1

Issue Date : 01/09/2009

Page : 1 of 1

REPORT NO. : 2011006167 **DATE** : 27/01/2011

WEB REQUEST NO. : -
REQUEST NO. : 2011002542 **SAMPLE NO.** : 2011003600
PROJECT NO. : CF-27
PROJECT NAME : STYRO LTD
CONSULTANT : NO SPECIFIC CONSULTANT
CONTRACTOR : NO SPECIFIC CONTRACTOR
LOCATION : STYRO INSULATION MATERIALS IND. - SHARJAH
SOURCE : STYRO INSULATION MAT.IND - SHARJAH
SAMPLE DESCRIPTION : MOLDED (EXPANDED) POLYSTYRENE SHEET
SAMPLE TYPE : STYRO SF18 INSULATION SHEET. **NOM. THICKNESS (mm)** : 50
SUPPORT / FACING : NIL **NOM. DENSITY (kg/m³)** : 17 - 18

Date of Sampling : 28/12/2010	Time : 11:00	Lot No. : NG
Date of Receiving Sample : 16/01/2011	Time : 10:00	Lot Size : NG
Size of Sample : 6 pcs.	Area No. : -	Sender No. : TX-0036

DATE SPECIMEN RECEIVED	16/01/2011
DATE TESTED	25/01/2011
TEST DURATION (h)	24 h
NOM. LENGTH (mm)	300
NOM. WIDTH (mm)	300
NOM. THICKNESS (mm)	50
NOM. DENSITY (kg/m³)	17 - 18
CONDITIONING TEMP. & DURATION	50°C & 24h

SPECIMEN NO.	A	B	C	D	E
WATER ABSORPTION BY WT. (%)	44.9	44.1	43.1	43.1	43.6
WATER ABSORPTION BY VOL. (%)	0.69	0.69	0.68	0.67	0.69
AVG. WATER ABSORPTION BY WT. (%)	43.8				
AVG. WATER ABSORPTION BY VOL. (%)	0.68				

SAMPLED BY : ISMAIL ALMASS (DCL) **TESTED BY** : ABDUL JALIL
SAMPLES BROUGHT IN BY : M.MANSOOR (Manufacturer)
SAMPLING METHOD : - DCL - IC - 99
SAMPLING REPORT NO. : NG
TEST METHOD : ASTM C272 : 2001 (Reapproved 2007)
TEST METHOD VARIATION : NIL
REMARKS : THIS REPORT REPRESENTS THE SUBMITTED SAMPLE ONLY

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TEST REPORT
Apparent Density of Rigid Cellular Plastics
Dubai Central Laboratory
 Engineering Materials Laboratory Section – Structural Unit

Doc Ref. : F-EM-2102-3
 Issue Date : 01/09/2009
 Rev. No. : 1
 Page : 1 of 1

REPORT NO. : 2011005650 **DATE** : 26/01/2011

WEB REQUEST NO. : -
REQUEST NO. : 2011002542 **SAMPLE NO :** 2011003600
PROJECT NO. : CF-27
PROJECT NAME : STYRO LTD
CONSULTANT : NO SPECIFIC CONSULTANT
CONTRACTOR : NO SPECIFIC CONTRACTOR
LOCATION : STYRO INSULATION MATERIALS IND. - SHARJAH
SOURCE : STYRO INSULATION MAT.IND - SHARJAH
SAMPLE DESCRIPTION : MOLDED (EXPANDED) POLYSTYRENE SHEET
SAMPLE TYPE : STYRO SF18 INSULATION SHEET **NOM. THICKNESS (mm) :** 50
SUPPORT / FACING : NIL **NOM. DENSITY (kg/m³) :** 17 - 18

Date of Sampling	: 28/12/2010	Time	: 11:00	Lot No.	: NG
Date of Receiving Sample	: 16/01/2011	Time	: 10:00	Lot Size	: NG
Size of Sample	: 6 pcs.	Area No. :	-	Sender No.	: TX-0036

DATE SPECIMEN RECEIVED	16/01/2011
NOMINAL THICKNESS (mm)	50
NOMINAL DENSITY (kg/m³)	17 - 18
PRE-CONDITIONING TEMP. & HUMIDITY	23°C, 50%RH
TEST CONDITION TEMP. & HUMIDITY	23°C, 50%RH
DATE TESTED	23/01/2011

SPECIMEN NO.	1	2	3
AVG. LENGTH (mm)	999.0	1000.0	999.0
AVG. WIDTH (mm)	500.0	501.0	500.0
AVG. THICKNESS (mm)	50.4	50.6	50.6
DENSITY (kg/m³)	15.4	15.2	15.5
AVERAGE DENSITY (kg/m³)	15.4		
STANDARD DEVIATION	0.15		

SAMPLED BY : ISMAIL ALMASS (DCL) **TESTED BY** : ABDUL JALIL
SAMPLES BROUGHT IN BY : M.MANSOOR (Manufacturer)
SAMPLING METHOD : - DCL - IC - 99
SAMPLING REPORT NO. : NG
TEST METHOD : ASTM D 1622 : 03
TEST METHOD VARIATION : NIL
REMARKS : THIS REPORT REPRESENTS THE SUBMITTED SAMPLE ONLY

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TEST REPORT
Flexural Strength of Thermal Insulation
Dubai Central Laboratory
 Engineering Materials Laboratory Section – Structural Unit

Doc Ref. : F-EM-2107-3
 Issue Date : 01/09/2009
 Rev. No. : 1
 Page : 1 of 1

REPORT NO.	: 2010003651	DATE	: 11/01/2010
WEB REQUEST NO.	: -	SAMPLE NO.	: 2009170305
REQUEST NO.	: 2009133445		
PROJECT NO.	: CF-27		
PROJECT NAME	: STYRO LTD		
CONSULTANT	: NO SPECIFIC CONSULTANT		
CONTRACTOR	: NO SPECIFIC CONTRACTOR		
LOCATION	: STYRO INSULATION MATERIALS INDUSTRY - SHARJAH		
SOURCE	: STYRO INSULATION MAT.IND - SHARJAH		
SAMPLE DESCRIPTION	: MOLDED (EXPANDED) POLYSTYRENE SHEET	NOM. THICKNESS (mm)	: 50
SAMPLE TYPE	: STYRO SF18 INSULATION SHEET	NOM. DENSITY (kg/m³)	: 17 - 18
SUPPORT / FACING	: NIL		
Date of Sampling	: 04/11/2009	Time	: 11:00
Date of Receiving Sample	: 22/12/2009	Time	: 08:34
Size of Sample	: 5 pcs.	Area No.	: -
		Lot No.	: NG
		Lot Size	: NG
		Sender No.	: RO-9972

DATE SPECIMEN RECEIVED	22/12/2009
NOM. LENGTH (mm)	300
NOM. WIDTH (mm)	100
NOM. THICKNESS (mm)	25
PRE-CONDITIONING TEMP, RH, & DURATION	23±2°C, 50±5% RH
TEST CONDITION	23±2°C, 50±5% RH
DATE TESTED	30/12/2009

SPECIMEN NO.	1	2	3	4
MEASURED DENSITY (kg/m³)	21.0	20.2	19.7	20.1
SUPPORT SPAN LENGTH (mm)	250			
CROSSHEAD SPEED (mm/min)	4.1			
DEFLECTION CORRESPONDING TO MAX. FORCE (%)	3.99	4.02	3.79	4.07
FLEXURAL STRENGTH (kPa)	217.2	208.7	198.9	209.5
AVG. FLEXURAL STRENGTH (kPa)	209.0			
STANDARD DEVIATION	7.50			

SAMPLED BY	: RENATO OMILA(DCLD)	TESTED BY	: JAI GOVIND
SAMPLES BROUGHT IN BY	: RENATO OMILA(DCLD)		
SAMPLING METHOD	: - DCL - IC - 99		
SAMPLING REPORT NO.	: NG		
TEST METHOD	: ASTM C203.2005a		
TEST METHOD VARIATION	: NIL		
REMARKS	: THIS REPORT REPRESENTS THE SUBMITTED SAMPLE ONLY.		

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TEST REPORT

Water Vapor Transmission of Insulation Materials

Dubai Central Laboratory

Engineering Materials Laboratory Section – Structural Unit

Doc Ref. : F-EM-2053-3

Issue Date : 01/09/2009

Rev. No. : 1

Page : 1 of 1

REPORT NO. : 2010003649 DATE : 11/01/2010

WEB REQUEST NO. : -
 REQUEST NO. : 2009133445 SAMPLE NO. : 2009170305
 PROJECT NO. : CF-27
 PROJECT NAME : STYRO LTD
 CONSULTANT : NO SPECIFIC CONSULTANT
 CONTRACTOR : NO SPECIFIC CONTRACTOR
 LOCATION : STYRO INSULATION MATERIALS INDUSTRY - SHARJAH
 SOURCE : STYRO INSULATION MAT.IND - SHARJAH
 SAMPLE DESCRIPTION : MOLDED (EXPANDED) POLYSTYRENE SHEET
 SAMPLE TYPE : STYRO SF18 INSULATION SHEET NOM. THICKNESS (mm) : 50
 SUPPORT / FACING : NIL NOM. DENSITY (kg/m³) : 17 - 18

Date of Sampling : 04/11/2009 Time : 11:00 Lot No. : NG
 Date of Receiving Sample : 22/12/2009 Time : 08:34 Lot Size : NG
 Size of Sample : 5 pcs. Area No. : - Sender No. : RO-9972

DATE OF SPECIMEN RECEIVED	22/12/2009
NOMINAL THICKNESS OF SPECIMEN (mm)	50
TEST METHOD USED	DESICCANT METHOD
TEST ROOM TEMPERATURE & RH	23±1°C, 50±2% RH
TEST STARTED DATE & TIME	28/12/2009 @ 10:00Hr.
TEST DURATION (h)	240

SPECIMEN NO.	A	B	C
MEASURED THICKNESS (mm)	50.8	50.8	50.8
MEASURED DENSITY (kg/m ³)	19.8	19.1	19.9
WATER VAPOR TRANSMISSION (g/h· m ²) - *METRIC UNIT	0.681	0.638	0.702
PERMEANCE (g/Pa· s· m ²) - *METRIC UNIT	1.35E-07	1.26E-07	1.39E-07
WATER VAPOR TRANSMISSION (grains/h· ft ²) - *INCH-POUND UNIT	0.98	0.91	1.01
PERMEANCE (perms) - *INCH-POUND UNIT	2.36	2.21	2.43
AVG. WATER VAPOR TRANSMISSION (grains/h· ft ²) - *INCH-POUND UNIT	0.97		
AVG. PERMEANCE (perms) - *INCH-POUND UNIT	2.33		

SAMPLED BY : RENATO OMILA(DCLD) TESTED BY : JAI GOVIND
 SAMPLES BROUGHT IN BY : RENATO OMILA(DCLD)
 SAMPLING METHOD : - DCL - IC - 99
 SAMPLING REPORT NO. : NG
 TEST METHOD : ASTM E96-00 ε¹
 TEST METHOD VARIATION : NIL
 REMARKS : THIS REPORT REPRESENTS THE SUBMITTED SAMPLE ONLY.

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TEST REPORT
Compressive Strength of Rigid Cellular Plastics
Dubai Central Laboratory

Engineering Materials Laboratory Section – Structural Unit

Doc Ref : F-EM-2101-3
Issue Date : 01/09/2009

Rev. No. : 1
Page : 1 of 1

REPORT NO. : 2010053073 **DATE** : 01/07/2010

WEB REQUEST NO. : -

REQUEST NO. : 2010034333 **SAMPLE NO.** : 2010044147

PROJECT NO. : CF-27

PROJECT NAME : STYRO LTD

CONSULTANT : NO SPECIFIC CONSULTANT

CONTRACTOR : NO SPECIFIC CONTRACTOR

LOCATION : STYRO INSULATION MATERIALS IND. - SHARJAH

SOURCE : STYRO INSULATION MAT.IND - SHARJAH

SAMPLE DESCRIPTION : MOLDED (EXPANDED) POLYSTYRENE SHEET

SAMPLE TYPE : STYRO SF18 INSULATION SHEET **NOM. THICKNESS (mm)** : 50

SUPPORT / FACING : NIL **NOM. DENSITY (kg/m³)** : 16 - 18

Date of Sampling	: 19/05/2010	Time	: 11:00	Lot No.	: NG
Date of Receiving Sample	: 27/05/2010	Time	: 12:00	Lot Size	: NG
Size of Sample	: 5 pcs.	Area No.	: -	Sender No.	: LL1036

DATE SPECIMEN RECEIVED	27/05/2010
NOM. LENGTH (mm)	150
NOM. WIDTH (mm)	150
NOM. THICKNESS (mm)	50
NOM. DENSITY (kg/m³)	16 - 18
PRE-CONDITIONING (TEMPERATURE & HUMIDITY)	23±2°C, 50±5% RH
TEST CONDITION (TEMPERATURE & HUMIDITY)	23±2°C, 50±5% RH
DATE TESTED	13/06/2010

SPECIMEN NO.	1	2	3	4	5
AREA OF SPECIMEN (mm²)	22626	22649	23047	22608	22712
CROSSHEAD SPEED (mm/min)	5.00				
SPECIFIED DEFORMATION (%)	10	10	10	10	10
LOAD at SPECIFIED DEFORMATION (N)	2488.6	2528.5	2482.9	2530.9	2556.0
COMPRESSIVE STRENGTH at SPECIFIED DEFORMATION (kPa)	110	111.6	107.7	111.9	112.5
AVG. COMPRESSIVE STRENGTH at SPECIFIED DEFORMATION (kPa)	110.7 (69.9) ✓				
STANDARD DEVIATION	1.9				

SAMPLED BY : LINO M. LINGAO (DCL) **TESTED BY** : JAI GOVIND

SAMPLES BROUGHT IN BY : LINO M. LINGAO (DCL)

SAMPLING METHOD : - DCL - IC - 99

SAMPLING REPORT NO. : NG

TEST METHOD : ASTM D 1621:00

TEST METHOD VARIATION : NIL

REMARKS : THIS REPORT REPRESENTS THE SUBMITTED SAMPLE ONLY.

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