

Certificate of Registration

This certificate has been awarded to

Duct Excel Co., Ltd.

1622/1 Suthisan Rd., Huaykwang, Bangkok, 10310, Thailand

in recognition of the organization's Quality Management System which complies with

ISO 9001:2015

The scope of activities covered by this certificate is defined below

Manufacture and Distribution of Flexible Air Ducts

Certificate Number 10879/A/0001/UK/En
A certificate number of 0001, confirms the Client has a single site Certified & the site is their Head Office or Main site in relation to the Certified scope with URS. A certificate number of 0002, or greater (e.g.: xxxx/8/0002/UK/En) refers to a client
that has more than one site certified with URS, as such, the following statement shall apply - The validity of this certificate depends on the validity of the main certificate.

Date of Issue of Certification Cycle	Issue Number	Certificate Expiry Date	Certification Cycle
11 May 2022	12	10 May 2025	7
Revision Date	Revision Number	Original Certificate Issue Date	Scheme Number
16 March 2022	0	11 May 2004	n/a

For detailed explanation for the data fields above, refer to http://www.urs-holdings.com/logos-and-regulations

Issued by











DUCT EXCEL CO.,LTD.



ประวัติความเป็นมาของบริษัท

บริษัท ดัคท์ เอ็กเซล จำกัด ได้ก่อตั้งขึ้นเมื่อ วันที่ 16 มกราคม พ.ศ.2538 โดยเป็น ตัวแทนจำหน่ายท่อส่งลมชนิดยืดหยุ่น (Flexible Duct) จาก DEC INTERNATIONAL ซึ่งเป็นผู้ผลิต ท่อลมคุณภาพสูงจากประเทศเนเธอร์แลนด์ แต่เพียงผู้เดียวในประเทศไทย และต่อมาได้มีการผลิต ท่อลมดังกล่าวขึ้นมาเองภายในประเทศ ภายใต้การควบคุมคุณภาพ และนำเข้าเครื่องจักรในการผลิต โดยนำเข้าวัตถุดิบจาก DEC INTERNATIONAL

นโยบายในการดำเนินงานของบริษัทฯ คือผลิตและจำหน่ายสินค้าท่อส่งลมที่มี คุณภาพ และบริการจัดส่งสินค้าด้วยความรวดเร็ว โดยมีวัตถุประสงค์หลักในการดำเนินกิจการของ บริษัทฯ คือ

- 1. เพื่อให้ลูกค้าได้รับสินค้าท่อส่งลมที่มีคุณภาพอย่างแท้จริง
- 2. เพื่อให้ลูกค้าได้รับการบริการจัดส่งอย่างรวดเร็ว
- 3. เพื่อประโยชน์สูงสุดในการใช้งาน โดยให้คำปรึกษา และแนะนำลูกค้าอย่างมือ อาชีพ
- 4. เพื่อให้ลูกค้าได้รับความพึงพอใจสูงสุด โดยสร้างความสัมพันธ์อันดีต่อลูกค้า อย่างใกล้ชิด พร้อมพัฒนาและปรับปรุงการบริการให้ดียิ่งขึ้นอย่างต่อเนื่อง



DUCT EXCEL ALWAYS EXCELLENT!





ISO 9001: 2008



Highly Flexible Insulated
Aluminium Duct

ท่อลมใยสังเคราะท์



Highly Flexible Insulated Aluminium Duct Technical Specifications

Innercore

: 2 Plies with 5 Layers and Spiral Wire

: Thickness of 51 Microns

Insulation

: 1.5" thickness of highly efficient Polyester Fiber with density of 10 Kg/m³ (400g)

Vapour barrier

: A durable, scuff resistant, polyester aluminium foil with Spirally glass yarn reinforced and without joint stripe

Fire Safety

BS 476 Part 6,7;

BS 5852 part 2 :1982 Smoke Developed =0, CALIFORNIA TECHNIC BULLETIN NO. 117-2013

Environment

: ABSENCE OF FORMALDEHYDE

Size Availability

: Diameter ranges from 76 mm. to 508 mm. (3 inch. to 20 inch.)

Temperature range

: $-30C^{\circ}$ to $+140C^{\circ}$

Maximum Working Pressure

: 500 mm. W.G. {5000 Pa of 20" W.G.}

Maximum Air Velocity

: 20 meters/sec.

Standard Length

: 10 meters per pack



DUCT EXCEL CO.,LTD.



MODEL: A2G 1.5"- 10 Kg/m3

Highly Flexible Insulated Aluminium Ducting

Technical Specification

Innercore : 2 Plys And Spiral Wire

Insulation : 1.5" thickness of highly

efficient Polyester Fiber with a density

- <mark>10 Kg/m³</mark>

Vapour barrier : A durable, scuff resistant,

made of polyester aluminium foil with spirally glass yarn reinforced and

without joint stripe.

Fire Safety: BS 5852 part 2:1982 Smoke Developed = 0,

CALIFORNIA TECHNIC BULLETIN NO. 117-2013

Environment: ABSENCE OF FORMALDEHYDE

Size Availability: Diameter ranging from 76 mm. to 508 mm.

(3 inch. to 20 inch.)

Temperature range : - 30°C to +140°C

Maximum Working Pressure : 5Kpa or 20" W.G.

Maximum Air Velocity : 20 meters/sec.

Standard Length : 10 meters packed

Technical specifications are subject to change without notice.

CHECK IT'S DEC THE HIGH TECH

World leader in flexible ducting system



DUCT EXCEL CO.,LTD.



<u>โครงการที่ใช้ท่อลมหุ้มฉนวนใยสังเคราะห์</u>

สนามบินดอนเมือง
 ดอนเมือง

ไบเทค
 บางนา

- โรงงาน CPLI โคราช

แมกโนเลียส์ ราชดำริ บูเลอวาร์ด
 ราชดำริ

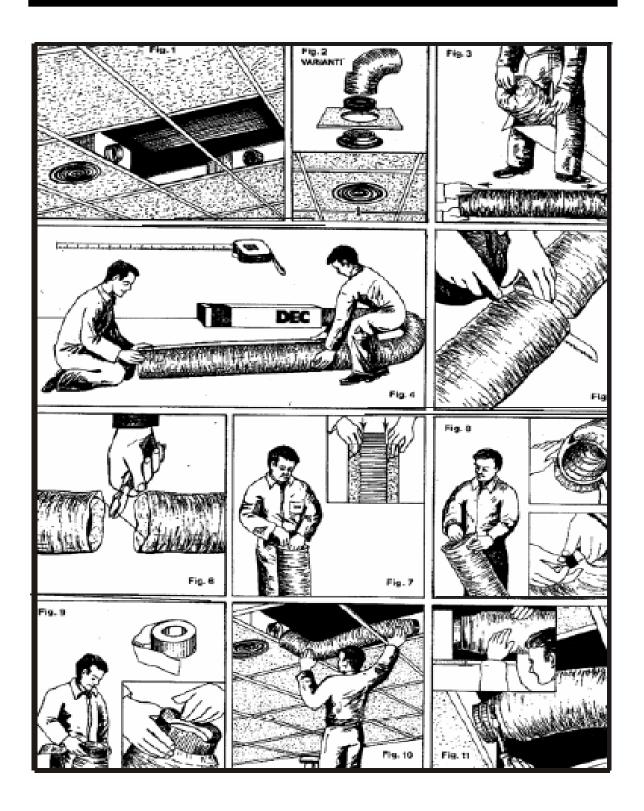
- ICON SIAM เจริญนคร

THE FORESTTIAS บางนา

ที่อยู่อาศัยใช้สำหรับระบายอากาศ ท่อลดเสียง

- หมู่บ้านนั้นทวัน
- หมู่บ้านลัดดาวัล
- หมู่บ้านมัณฑนา
- หมู่บ้านชัยพฤกษ์
- หมู่บ้านชลลดา
- หมู่บ้านพฤกษ์ลดา
- หมู่บ้านปาริชาติ
- บ้านใหม่ ทาวน์ โฮม
- เดอะรูม คอนโดมิเนียม
- ศุภาลัย วิลล์
- พาร์คเวย์ ซาเลย์
- เดอะปาร์คแลนด์
 ศรีนครินทร์

MOUNTING ACOUSTIC DUCTS WITH BARRIER



The information contained in this brochure was current on the publication date. The Company reserves the right to make changes in details at any time without prior notice. In order to avoid misunderstandings, any interested party is advised to contact the Company checking for any changes in materials and/or information after this brochure was published.

Version 2003_WWW.DECINTERNATIONAL.COM





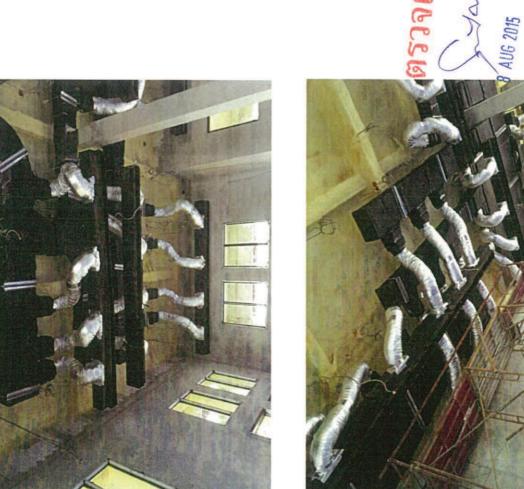


ตรวจแล้ว













Test Report No. 2048863

Date: 16-Jul-2011

Page 1 of 1

Client: Wadding Nonwoven Co., Ltd.

24/2, Saiyai,

Sainoi, Nonthaburi 11150 Thailand

The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description

: One sample of non-woven 500 grams, 100% polyester in White colour.

Country of Destination

: Europe

Test Performed

: Selected test(s) as requested by applicant.

Sample Receiving Date

: 12-Jul-2011

Testing Period

: 12-Jul-2011 To 16-Jul-2011

SGS Order No.

: 1041065

SGS Sample No.

SGS Application No.

: 2099638 : 646955

TEST RESULT(S)

Formaldehyde Content

(BS EN ISO 14184-1: 1999; Water extraction method)

Free Formaldehyde content

N.D.

Note: 1 ppm (part per million) = 1 mg/kg =0.0001%.

: Detection limit = 20 mg/kg.

: N.D. = Not Detected.

Signed for and on behalf of SGS (Thailand) Limited

Mali Jattawong

Softlines Testing Manager

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request.
Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's film at the time of its intervention only and within the limits of Client's instructions, if any. He Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alter forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."

WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party act no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.



NUMBER: BKKT10015452

DATE: AUG 31, 2010

APPLICANT: WADDING NONWOVEN CO., LTD.

24/2 M00 3 SAIYAI SAINOI, NONTABURI 11150, THAILAND

ATTN: SOMPOTE

SAMPLE DESCRIPTION:

ONE (1) PIECE OF SUBMITTED SAMPLE SAID TO BE POLYESTER FIBER PADDING DENSITY 400 G X 67" IN WHITE

FINISHING : WITHOUT FLAME RETARDANT

END USE : EXPORT FURNITURE DATE RECEIVED/DATE TEST STARTED: AUG 20, 2010

TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

CONCLUSION:

ON THE BASIS OF THE TESTS CARRIED OUT AS DESCRIBED, IT IS INTERPRETED THAT THE SAMPLE WOULD MEET THE REQUIREMENTS OF SCHEDULE 2 PART I OF THE FURNITURE AND FURNISHINGS (FIRE) (SAFETY) REGULATIONS 1988 (AS AMENDED).

PREPARED AND CHECKED BY:
FOR INTERTEK TESTING SERVICES

LADTAKA WONGWIBOONPORN DIVISION MANAGER

TEXTILE & FOOTWEAR DIVISION

Intertek Testing Services (Thailand) Ltd.



TEST CONDUCTED:

FLAMMABILITY TEST (BS 5852 PART 2: 1982, BUTANE FLAME TEST):

BS 5852: PART 2: 1982 AS MODIFIED BY SCHEDULE 2 PART I (IGNITABILITY TEST FOR NON-FOAM FILLING MATERIALS SINGLY) OF THE FURNITURE AND FURNISHINGS (FIRE) (SAFETY) REGULATIONS 1988 (AS AMENDED) AND USING THE COVER FABRIC DETAILED BELOW

THE TESTS WERE CARRIED OUT USING A 220G/M2 FLAME RETARDANT POLYESTER FABRIC WHICH DEVIATES IN PART FROM THE SPECIFICATION STATED IN SCHEDULE 1 PART 1 OF THE REGULATIONS. ALTHOUGH THIS FABRIC DOES NOT FULLY MEET THE SPECIFICATION LAID DOWN IN THE REGULATIONS THIS WAS REGARDED AS HAVING NO SIGNIFICANT EFFECT ON THE TEST.

THE FOLLOWING TEST RESULTS RELATE ONLY TO THE IGNITABILITY OF THE COMBINATION OF UPHOLSTERY COMPOSITES UNDER THE PARTICULAR CONDITIONS OF TEST; THEY ARE NOT INTENDED AS A MEANS OF ASSESSING THE FULL POTENTIAL FIRE HAZARD OF THE MATERIALS IN USE.

CRITERION OF IGNITION: IGNITION SOURCE 2 - BUTANE FLAME TEST FOR 40 SECONDS CONDITIONING: 72 HOURS INDOOR AMBIENT AND AT LEAST 16 HOURS OF 20±5°C, 50±20% RELATIVE HUMIDITY.

TESTING ATMOSPHERE : $15-30\,^{\circ}\text{C}$, $20-70\,^{\circ}$ RELATIVE HUMIDITY PERFORMANCE REQUIREMENT : CLAUSE 4.1-4.2 OF BS 5852 PART 2:1982

TEST RESULT:

PRO	GRESSIVE SMOLDERING FAILURE	1ST TEST	
(A)	ANY COMPOSITE THAT PRODUCES EXTERNALLY DETECTABLE AMOUNTS OF SMOKE, HEAT OR GLOWING 30 MINUTES AFTER THE REMOVAL OF THE BURNER TUBE;	NO	NO
(B)	ANY COMPOSITE THAT DISPLAYS ESCALATING COMBUSTION BEHAVIOUR;	NO	NO
(C)	ANY COMPOSITE THAT SMOULDERS UNTIL IT IS ESSENTIALLY CONSUMED WITHIN THE TEST DURATION;	NO	NO
(D)	ANY COMPOSITE THAT SMOULDERS TO THE EXTREMITIES OF THE SPECIMEN VIZ UPPER OR LOWER MARGINS, EITHER SIDE OR TO ITS FULL THICKNESS, WITHIN THE DURATION OF THE TEST;#	NO	NO
(E)	ANY COMPOSITE THAT, ON FINAL EXAMINATION, SHOWS EVIDENCE OF CHARRING OTHER THAN DISCOLOURATION, MORE THAN 100 MM IN ANY DIRECTION APART FROM UPWARDS FROM THE NEAREST PART OF THE ORIGINAL POSITION.#	NO	NO

NUMBER: BKKT10015452



TEST CONDUCTED:

1 FLAMMABILITY TEST (BS 5852 PART 2: 1982, CRIB TEST):

FLA	MING FAILURE	1ST TEST	RETEST	
(A)	ANY COMPOSITE THAT CONTINUES TO FLAME FOR	NO	NO	
	MORE THAN 120 SECONDS AFTER THE IGNITION OF			
	THE CRIB;			
(B)	ANY COMPOSITE THAT DISPLAYS ESCALATION	NO	NO	
	COMBUSTION BEHAVIOUR;			
(C)	ANY COMPOSITE THAT BURNS UNTIL IT IS	NO	NO	
	ESSENTIALLY CONSUMED WITHIN THE TEST DURATION;			
(D)	ANY COMPOSITE ON WHICH ANY FLAME FRONT REACHES	YES	YES	
	THE LOWER MARGIN, EITHER SIDE OR PASSES THROUGH			
	THE FULL THICKNESS OF THE SPECIMEN WITHIN THE	300 × 1000		
	DURATION OF THE TEST.	18 30 N SOLE		

NON-FOAM IGNITION FILLING SOURCE		TIME TO EXTINCTION AFTER OF BURNER				
		FLAMING (CEASED TIME	SMOKING CE.	ASED TIME	
		MIN	SEC	MIN	SEC	
	3 3 2 3 3	0	0.00	00000	13	
RETEST	26.5	0	0	0 0	19	
IGNITABILIT	Y PERFORMANCE	INDEX	Mark Nava	P2		

REMARK: YES = WAS OBSERVED

NO = WAS NOT OBSERVED.

NUMBER: BKKT10015452





Department of Science Service

Sample's name

POLYESTER 400 gm/m

Mark / Brand

Laboratory No.

L58/05038.1e Service

Test Results

Departme	nt of Science Service Mean temperature, °C	Thermal Conductivity, W/m-K	Thermal Resistance, m ² -K/W	_
	23.8	0.056 Service	0.738	

Customer's name

WADDING NONWOVEN CO., LTD.

Department of Science Service

Customer's address

24/2 Saiyai, Sainoi, Nontaburi 11150 Thailand.

Sample's description

White polyester sheet, size: 311 mm x 315 mm x 42 mm

Test date Science Se22-23 September 2015

Departest method

ASTM C518-10

Department of Science Service

Approved by

(Sgd.) Surin Athakitkarnka

(Mr. Surin Athakitkarnka)

Scientist, Senior Professional Level

Reported by

(Sgd.) Krongtipt Termkoa Science Service

(Ms. Krongtip Termkoa)

Scientist, Professional Level

Department of Science Service

Certified True Translation O. Sul te

Department of Science Service

(Miss Chutima Sucharitakul) Chief, Registration Sub-Division

Department of Science Service





TEST REPORT Department of

Sample's name

Mark / Brand

Department of Laboratory No.

POLYESTER

L58/02727.1

Test Result

Moisture sorption, %

0.68

Customer's name

WADDING NONWOVEN CO., LTD.

Customer's address

24/2 Saiyai, Sainoi, Nontaburi 11150

Sample's description

White thickness plate

Test date

15 - 19 June 2015

Test method

ASTM C1104: Standard Test Method for Determining the Water Vapor

Sorption of Unfaced Mineral Fiber Insulation

Department of Science Service Approved by

Reported by

Department of Science Service

(Sgd.) Komson Tanyuenyong

(Mr. Komson Tanyuenyong) Scientist, Senior Professional Level (Sgd.) Anucha Sinthusarn

(Mr. Anucha Sinthusarn) Service

Scientist, Senior Professional Level

Fee: 1,000.00 Baht (One thousand Baht Only)

Certified True Translation O.S. Lite

(Miss Chutima Sucharitakul) epartment of Science Service Chief, Registration Sub-Division





TEST REPORT Department of

Sample's name

Mark / Brand

Department of Laboratory No.

POLYESTER

L58/02727.1

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Department of Science Service

Reported by

Department of Science Service

(Sgd.) Komson Tanyuenyong

(Mr. Komson Tanyuenyong) Scientist, Senior Professional Level (Sgd.) Anucha Sinthusarn

(Mr. Anucha Sinthusarn) Service

Scientist, Senior Professional Level

Fee: 1,000.00 Baht (One thousand Baht Only)

Certified True Translation O.S. Lete

(Miss Chutima Sucharitakul) epartment of Science Service Chief, Registration Sub-Division





TEST REPORT Department of

Sample's name

Mark / Brand

Department of Laboratory No.

POLYESTER

L58/02727.1

Test Result

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Customer's name

WADDING NONWOVEN CO., LTD.

Customer's address

24/2 Saiyai, Sainoi, Nontaburi 11150

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Department of Science Service

Sample's name

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Mark / Brand

Laboratory No.

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ASTM C518-10

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(Ms. Krongtip Termkoa)

Scientist, Professional Level

Department of Science Service

Certified True Translation

O. Sul te

Department of Science Service

(Miss Chutima Sucharitakul) Chief, Registration Sub-Division

Department of Science Service





Sample's name

Mark / Brand

Department of SLaboratory No.

POLYESTER.

158/02728.1

Test Result

Total Phosphorus (calculated PO₄), %

0.05

Customer's name

WADDING NONWOVEN CO., LTD.

Customer's address

Department of Science Service 24/2 Saiyai, Sainoi, Nontaburi 11150

Sample's description

White thickness plate

Test date

5 June 2015

Test method

AOAC Official Method 958.01 : Phosphorus (Total) in Fertilizers Official

Methods of Analysis of AOAC International, 18th edition, Revision 3, 2010

Department of Science Service Approved by

Reported by

(Sgd.) Komson Tanyuenyong

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