

VIXUM® Intro

Melamine resin foam produced in Korea

2024.09

Dongsung Chemical, VIXUM sales & marketing

Contents

1. VIXUM® performance
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VIXUM[®] performance

- 화재안전성
- 흡음력
- 단열성능
- 시험성적서
- 제품 종류

화재안전성

자기 소화성 보유
(UL94-V0)

흡음력

Absorption Coefficient : > 85%

단열성

0.032~0.035W/m·K

안전성

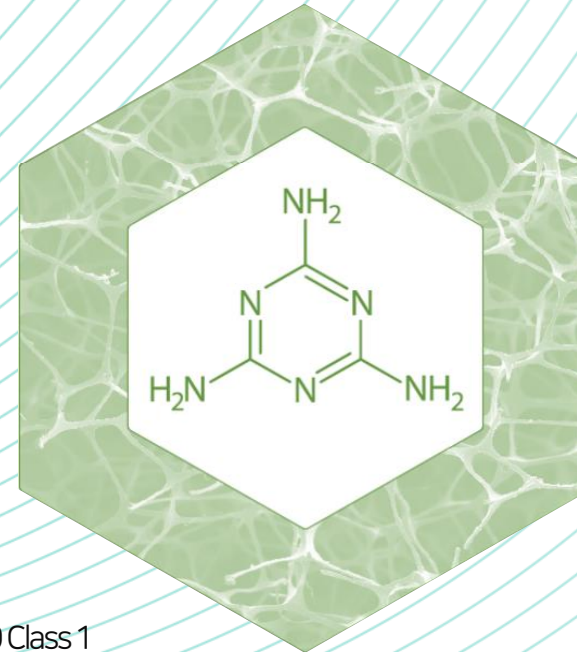
EPD Certificate
OEKO-TEX Standard 100 Class 1

내열성

-200°C~200°C

경량성

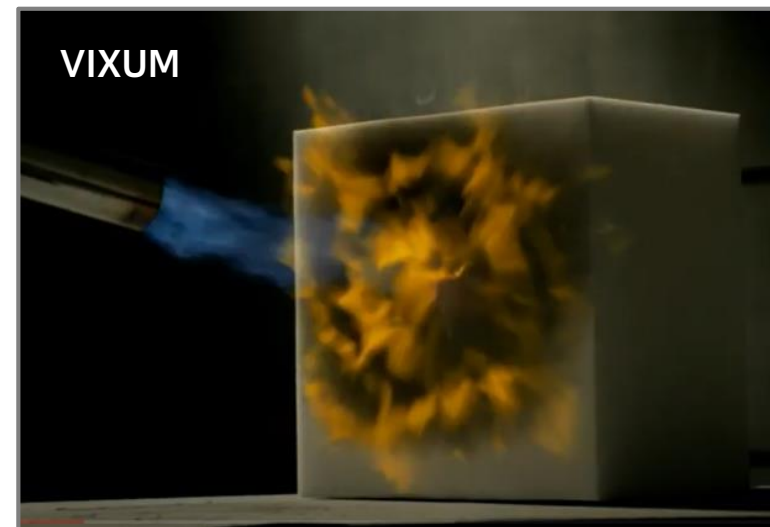
8~11kg/m³



화재 안전성

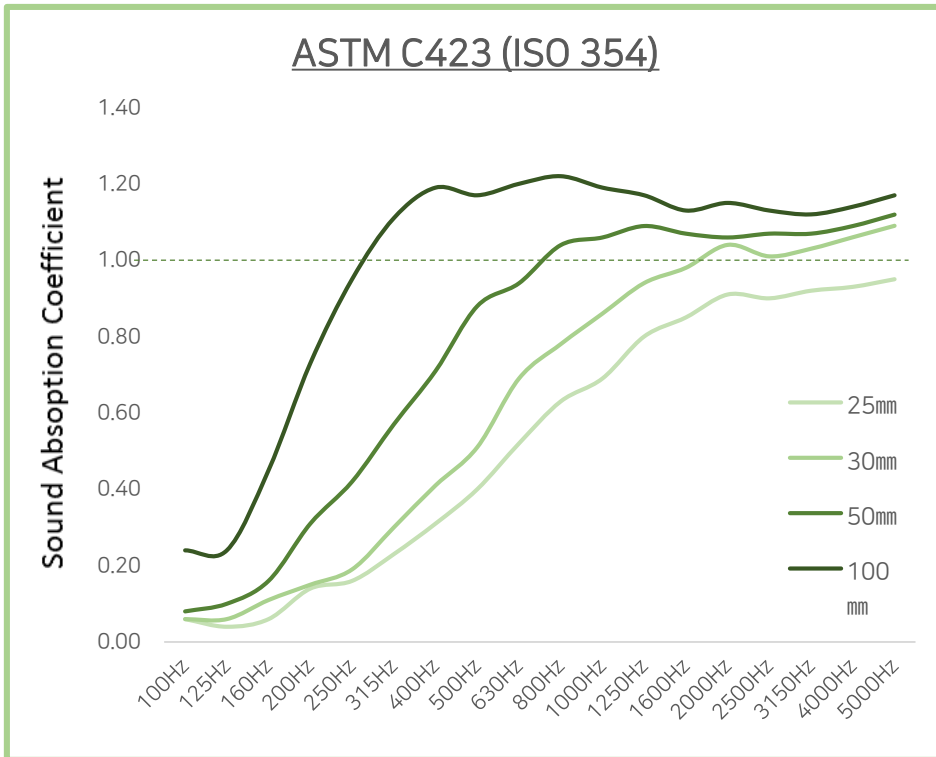
멜라민 폼은 자기소화성으로 인해 화재에 대한 저항력이 뛰어나도록 화학적으로 설계되었습니다. 불에 노출되면 폼의 구조가 탄화 층을 형성하여 화재 확산을 방지합니다. 이 탄화 층은 가연성 가스와 열의 방출을 효과적으로 줄여줍니다. 또한, 멜라민 수지 폼은 질소 함량이 높아 가연성 가스를 희석시키고 불꽃 확산을 억제하는 데 도움을 줍니다. 이러한 화학적 특성 덕분에 멜라민 수지 폼은 엄격한 화재 안전 기준이 필요한 곳에 안전한 선택이 됩니다.

VIXUM® 멜라민 폼은 뛰어난 화재 저항 성능으로 전세계적으로 인증을 받았습니다.



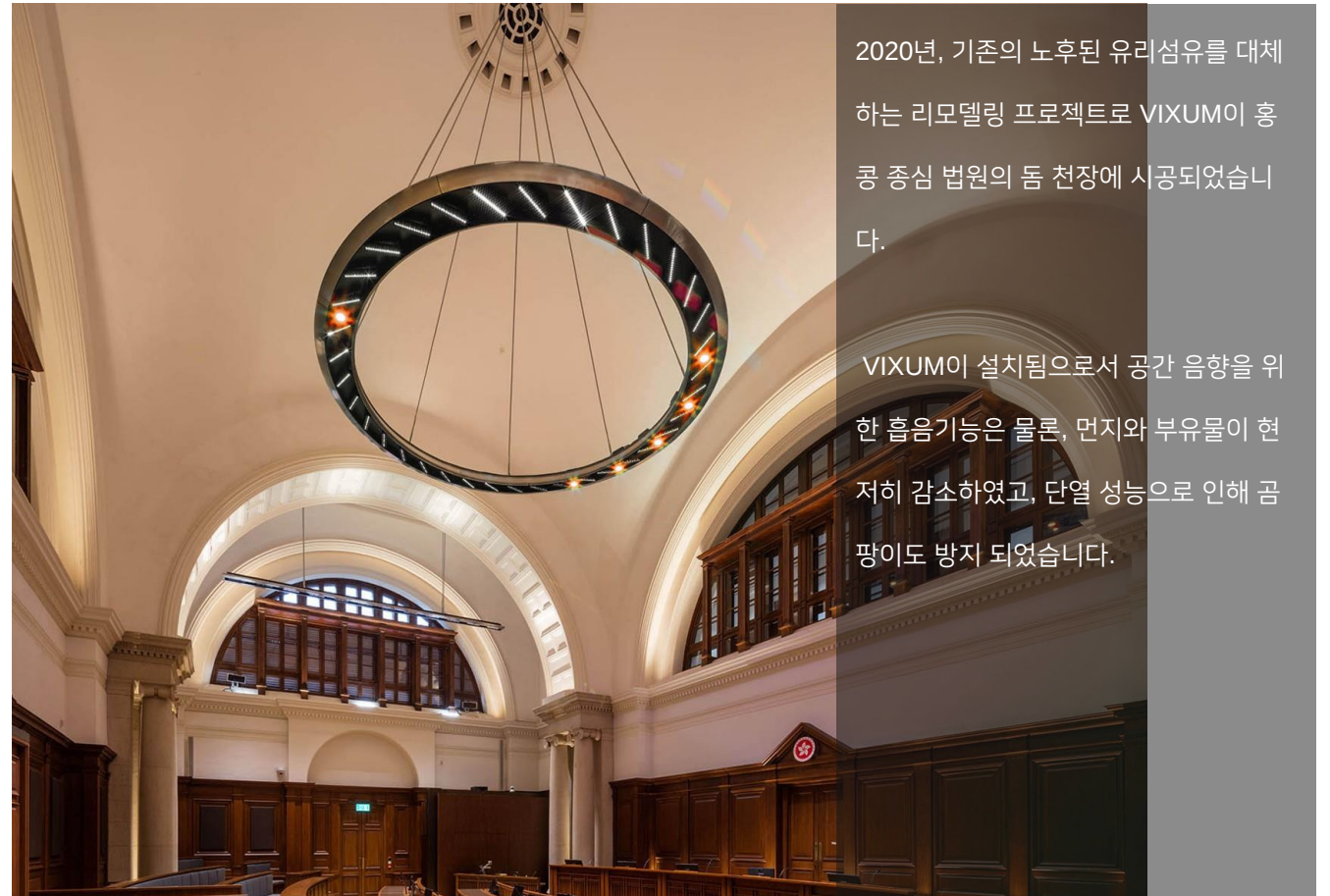
Test Method	Results	Remarks
ASTM E84-18	Class A	Flame / Smoke, EXOVA (US)
CAN/ULC-S102	0 / 15	FSI / SDI (Canada)
EN13501-1 [10,20,30,50mm]	Bs1d0	Flame /, Smoke, SGS (Europe)
DIN 4102	Class B1	Flame Resistance, SGS (Germany)
UL-94	V0	Self Extinguishment, KCL (US)
NFPA-130	Pass	ASTM E162 / E662
MECKEL BURNER	Pass	Flame, smoke, KFI (Korea)

멜라민 폼은 우수한 흡음력을 가지고 있습니다. 멜라민 폼의 오픈셀 구조는 소리 파동을 효과적으로 흡수하여 소음과 잔향을 줄입니다. 이 덕분에 멜라민 폼은 녹음 스튜디오, 극장 및 산업 현장과 같은 다양한 공간에서 적합한 흡음재로 사용 됩니다.

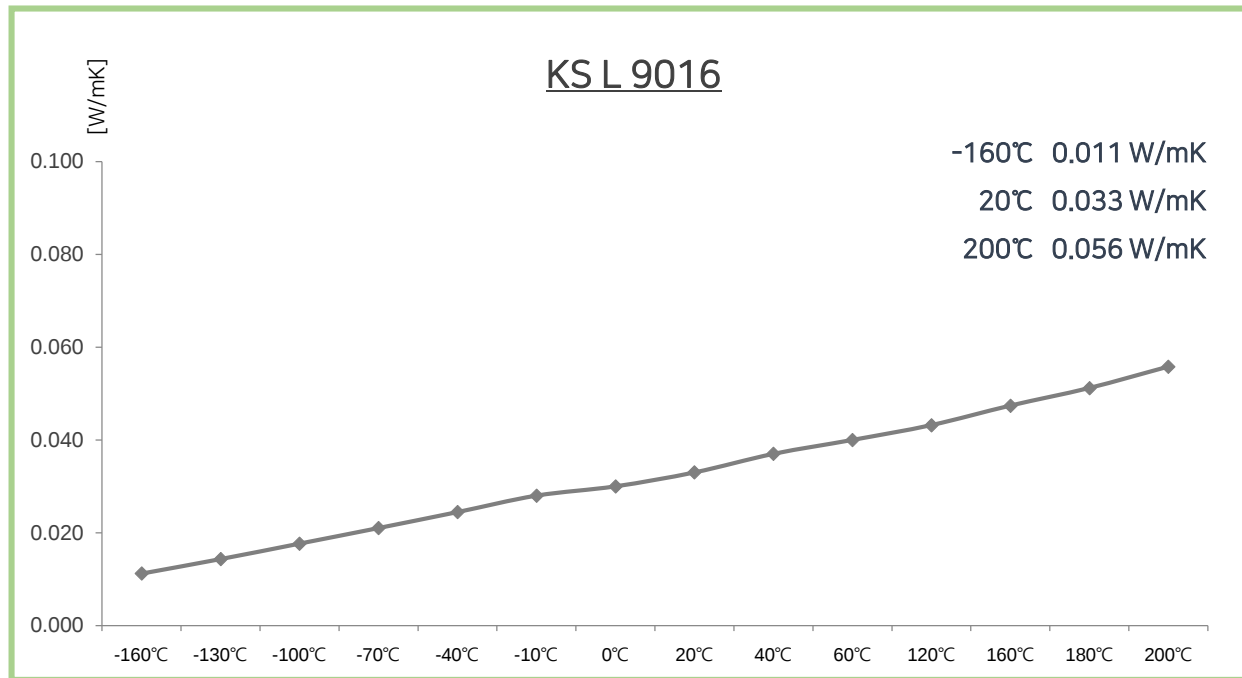


ASTM C423 (ISO 354)

Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method



멜라민 폼은 다른 많은 재료들에 비해 우수한 단열 성능을 제공합니다. 독특한 오픈셀 구조는 높은 수준의 열 저항을 제공하여 효과적으로 열 전달을 감소시킵니다. 전통적인 단열 재료들과 비교했을 때, 멜라민 폼은 더 나은 단열 성능을 제공할 뿐만 아니라 고온과 저온 모두에서 그 성능을 유지합니다. 이는 까다로운 환경에서 신뢰할 수 있는 단열이 필요한 응용 분야에 탁월한 선택이 됩니다.



Test Method	Results	Remarks
KSL 9016	0.033 W/mK	KCL



성적서 및 인증서 - 화재 안전성



UL 94 V0

Component - Plastics

Guide Information

DONGSUNG CHEMICAL CO LTD

Shinsanro 99, Saha-gu., Busan 49421 KR

VIXUM SW®, VIXUM SG®

Melamine Formaldehyde (MF) "VIXUM®", furnished as sheets

View Certificate of Compliance

E520844

Color	Min_Thk (mm)	Flame Class	HWI	HAI	RTI Elec (°C)	RTI Elong	RTI Str (°C)
NC, GY	3.0	V-0, HF-1	-	-	-	130	130
	6.0	V-0, HF-1	-	-	-	130	130
	13.0	V-0, HF-1	-	-	-	130	130

Comparative Tracking Index (CTI): -

Dielectric Strength (kV/mm): -

High-Voltage Arc Tracking Rate (HVRT): -

Dimensional Change (%): -

Inclined Plane Tracking (IPT) kV: -

Volume Resistivity (10^x ohm-cm): -

Surface Resistivity (10^x ohms/square): -

High Volt, Low Current Arc Resis (D495): -

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 2021-04-30

Last Revised: 2024-02-22

CALUS

ALSO CERTIFIED TO
IEC603 REQUIREMENTS

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ASTM E 84-18

VTIC #100-6779-1

DONGSUNG CHEMICAL VIXUM TEAM

ASTM E84

IX. TEST RESULTS

Test results calculated on the basis of the area under the curves of flame spread distance, temperature, and smoke density vs time are provided in the table below for calibration materials and for:

AGN-380 (50mm)

Material Description	Flame Spread Index	Smoke Developed Index
Fiber-Reinforced Cement Board, Grade II	0	0
Red Oak Flooring	100	-
Heptane, (ULFC) Grade	-	100
AGN-380 (50mm)	10	70

OBSERVATIONS:

The sample was completely consumed to 4.0", char length was noted to 9.0", and smoke disorientation was noted to 24.0'

REMARKS:

The sample consisted of 3 pieces, 2ft by 8ft. The panels were laid end to end make up the necessary 24ft sample. The panels were blue foam.

CONCLUSIONS:

Based upon one test, this sample, calculated according to ASTM E84, this material meets Class A classification.

Neil Schultz

Executive Director

A. Rahman

Assistant Sales
Technical Director

6

CAN/ULC-S 102

Exova

Testing, certification, advising

CAN/ULC-S102 Surface Burning Characteristics of "VIXUM IGN-380"

A Report To:

Dongsung Chemical Co., Ltd.
19, Haeinsa-ro, Saha-gu
Busan 49470
Korea

Phone:

+82-(0) 1092045676

Attention:

Brown Gwack
yungu@dongsung.com

Submitted by:

Exova Warrington/Ex North America

Report No.:

19-002-300(B)
4 Pages

Date:

July 20, 2016

EN 13501-1

SGS

Test Report

No. A/F81910705849FF

Date: JUL 21, 2019

Page 1 of 6

DONGSUNG CHEMICAL CO., LTD.

99, SINSANRO, SAHA-GU, BUSAN, 49421 KOREA

The following sample(s) was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion: results apply to the sample as received.

Sample Name: VIXUM (DST)

SGS Ref No.: SHN18072108CCM

Material and Mark: MELAMINE RESIN

Product Identification: MELAMINE FOAM

Manufacturer: DONGSUNG CHEMICAL

Station No.: /

Test Requested:

EN 13501-1:2007+A1:2009 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests, Class B

Test Results:

See attached sheet -

Test Period:

Sample Receiving Date: JUL 17, 2019

Test Performing Date: JUL 17, 2019 TO JUL 28, 2019

Signed for and on behalf of:

SGS-CSTC Co., Ltd. Asia Branch

Allen Zhu

Lab Manager

SGS

SGS-CSTC Co., Ltd. Asia Branch

EN 45545-2

SGS

Test Report

No. A/F8211008849FF

Date: NOV 03, 2021

Page 1 of 11

DONGSUNG CHEMICAL CO., LTD.

99, SINSANRO, SAHA-GU, BUSAN, 49421 KOREA

Sample Name: VIXUM AGN

SGS Ref No.: SHN11100720CCM

Material and Mark: MELAMINE FOAM

Manufacturer: DONGSUNG CHEMICAL

The above sample(s) was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion among themselves. Results apply to the sample as received.

Test Requested:

EN 45545-2:2020 Railway applications—Fire protection on railway vehicles Part 2: Requirements for the behaviour of materials and components, and testing according to Table 6—Material requirement sets (RTI).

Test Results:

See attached sheet -

Test Period:

Sample Receiving Date: OCT 22, 2021

Test Performing Date: OCT 22, 2021 TO NOV 02, 2021

Signed for and on behalf of:

SGS-CSTC Standards Technical Services Co., Ltd. Asia Branch

Allen Zhu

Approved Signature

SGS

SGS-CSTC Co., Ltd. Asia Branch

DIN 4102-1

SGS

TEST REPORT

No. : SHN17080808CCM

Date: Sep. 07, 2017

Page: 1 of 7

CUSTOMER NAME:

DONGSUNG CHEMICAL CO., LTD.

ADDRESS:

475, SINSANRO, SAHA-GU, BUSAN 49421, KOREA

Sample Name:

VIXUM

Product specification:

Melamine Foams

Manufacturer:

Dongsung Chemical Co., Ltd.

Below information and samples were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Test Requested:

To determine the flammability (building materials class B1) in accordance with DIN 4102-1 (May 1998) Fire behaviour of building materials and elements Part 1: Classification of building materials, Requirements and testing

Date of Receipt:

Aug. 10, 2017

Testing Start Date:

Aug. 10, 2017

Testing End Date:

Aug. 10, 2017

Test results:

For further details, please refer to the following pages:
Corrected information signed the results shown in this test report refer only to the sample(s) tested.

Signed for:

SGS-CSTC Standards Technical Services Co., Ltd. (Shanghai) Co., Ltd.

Allen Zhu

Authorized Signature

SGS

SGS-CSTC Co., Ltd. Asia Branch

DIN 5510-2

SGS

Test Report

No. A/F820049214FF

Date: APR 24, 2020

Page 1 of 4

DONGSUNG CHEMICAL CO., LTD.

99, SINSANRO, SAHA-GU, BUSAN, 49421 KOREA

The following sample(s) was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion: results apply to the sample as received.

Sample Name: VIXUM

SGS Ref No.: SHN2004091888CCM

Material and Mark: MELAMINE RESIN

Manufacturer: DONGSUNG CHEMICAL

Product Identification: MELAMINE FOAM

Test Requested:

DIN 5510-2:2020 Preventive fire protection in railway vehicles Part 2: Fire behaviour and fire side effects of materials and parts, Classification, requirements and test methods, Clause 4.2.3 Flammability classes S2a-S5

Test Results:

See attached sheet -

Classification:

In accordance with the class definitions given in DIN 5510-2:2020, the tested sample is classified as following:
Burning Class: S4
Smoke Class: S02
Dripping Class: R12

Test Period:

Sample Receiving Date: APR 20, 2020

Test Performing Date: APR 20, 2020 TO APR 24, 2020

Signed for and on behalf of:

SGS-CSTC Co., Ltd. Asia Branch

Allen Zhu

Lab Manager

SGS

SGS-CSTC Co., Ltd. Asia Branch

MECKEL BURNER

KFI

의뢰시험성적서

제2201118호

1. 신청자

- 신청자 (의뢰기관명)

- 주 소 : 우암벤처스 사옥구 신원로 99 (의뢰명)

2. 시험 품명

VIXUM

3. 접수일 및 발령일

2022. 3. 30. / 제2201118호

4. 시험결과

시험항목	시험기준	1	2	3	비고
한 방 시 간	5.0 ~ 9.0	9.0	9.0	9.0	0.0
45도 한 방 시 간	30.0 ~ 40.0	30.0	30.0	30.0	0.0
45도 한 방 방 계	40.0 ~ 45.0	32.1	32.1	32.1	21.0
한 방 방 계	30.0 ~ 40.0	5.7	5.0	5.0	0.0

주 소 : 자체인증시험 의뢰(시험항목)는, 소방안전관리법 제30조 제1항 제2호에 따른 시험(제1호)에 해당하며, 시험결과에 따라 시험대상품의 성능, 안전성, 신뢰성 등을 평가합니다.

시험결과 : 시험대상품의 성능, 안전성, 신뢰성 등을 평가합니다.

5. 시험결과

시험결과에 따른 시험결과 : 시험대상품의 성능, 안전성, 신뢰성 등을 평가합니다.

2022년 3월 29일

한국소방산업기술원

비고

1. 시험대상품의 성능, 안전성, 신뢰성 등을 평가합니다.

2. 시험대상품의 성능, 안전성, 신뢰성 등을 평가합니다.

3. 시험대상품의 성능, 안전성, 신뢰성 등을 평가합니다.

SGS

SGS-CSTC Co., Ltd. Asia Branch

성적서 및 인증서 - 흡음성능

ISO 354

TEST REPORT

1. NO : CT21-073308E
2. Client
○ Name : Dongsung chemical Co.,Ltd
○ Address : 99, Sinsan-ro, Saha-gu, Busan, Republic of Korea
3. Date of Test : 2021.07.01 ~ 2021.07.22
4. Use of Report : For quality control
5. Test Sample : VIXUM
6. Test Method
(1) ISO 354:2003

Affirmation
Tested By : Soyoung Kim
Technical Manager : Yoon Jin Yoon

This report is related with KOLAS and KS Q ISO/IEC 17025.
Our report apply only to the standards or procedures identified and to the sample(s) tested unless otherwise specified. The test results are not indicative of representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products. The results of using only a portion of this report cannot be guaranteed. The authenticity of this test report can be checked on KCL website(www.kcl.re.kr).

The above test certificate is the accredited test results by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA.

2021.07.22
Korea Conformity Laboratories President Yoon, Kap Seok
Accredited by KOLAS, Republic of KOREA

Result Inquiry : 73, Yangcheong 3-gil, Ochang-eup, Cheongwon-gu, Cheongju-si, Chungbuk, Korea 82-43-210-6978

KS F 2805 : 2014

TEST REPORT

1. NO : CT23-024074E
2. Client
○ Name : Dongsung Chemical Co., Ltd
○ Address : 99, Sinsan-ro, Saha-gu, Busan, Korea
3. Date of Test : 2023.03.07 ~ 2023.03.31
4. Use of Report : Quality Control
5. Test Sample : VIXUM @ DEC0 TILE
6. Test Method
(1) KS F 2805:2014

Affirmation
Tested By : Soyoung Kim
Technical Manager : Yoon Jin Yoon

This report is related with KOLAS and KS Q ISO/IEC 17025.
Our report apply only to the standards or procedures identified and to the sample(s) tested unless otherwise specified. The test results are not indicative of representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products. The results of using only a portion of this report cannot be guaranteed. The authenticity of this test report can be checked on KCL website(www.kcl.re.kr).

The above test report provides test result(s) under the scope accredited by Korea Laboratory Accreditation Scheme (KOLAS), which signed the ILAC-MRA.

2023.03.31
Korea Conformity Laboratories President Jo, Yung Tae
Accredited by KOLAS, Republic of KOREA

Result Inquiry : 73, Yangcheong 3-gil, Ochang-eup, Cheongwon-gu, Cheongju-si, Chungbuk, Korea 82-43-210-6978

GB/T 20247-2006 (ISO354)

TEST REPORT

No. : SHIN2007041069CM
Date : Aug 20, 2020
Page: 1 of 4

CUSTOMER NAME: DONGSUNG CHEMICAL CO., LTD.
ADDRESS: 99, SINSAN-RO, SAHA-GU, BUSAN, 49421 KOREA

Sample Name : VIXUM
Product Specification : Melamine foam
Manufacturer : Dongsung Chemical
Material and Mark : Melamine resin

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Test Required : Sound absorption coefficient
Ref. Standard : GB/T 20247-2006 & GB/T 16731-1997
Date of Receipt : Jul 08, 2020
Testing Start Date : Jul 08, 2020
Testing End Date : Aug 20, 2020
Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical Service (Shanghai) Co., Ltd.
Erin Huang
Authorized signatory

Result Inquiry : 73, Yangcheong 3-gil, Ochang-eup, Cheongwon-gu, Cheongju-si, Chungbuk, Korea 82-43-210-6978

Dongsung

GB/T 10295-2008

the way to trust

KCL

2040-1515-3078-1030

TEST REPORT

1. NO : C122-083750E

2. Client

○ Name : Dongsung chemical

○ Address : 99, Sinsan-ro, Saha-gu, Busan, Republic of Korea

3. Date of Test : 2022.08.31 ~ 2022.10.11

4. Use of Report : Quality control

5. Test Sample : Std

6. Test Method

(1) KS L-ISO 8301:1991

7. Test Results

1) Std

Test Item(s)	Unit	Test Method	Test Results	Remark	Loc.
Thermal conductivity (mean temperature : 10 °C)	W/m·K	(1)	0.033	(20±2) °C (50±5) % R.H.	A
* Measuring method's type : Flat plate heat current thermometer method(Square)					
* Drying method : (40±5) °C					
* Calibration plate's type : 1450e (Mean temperature : 20 °C, 0.032 W/(m·K))					
* Test item's temperature difference : 20 °C					
* Location					
A : 73, Yangcheon 3-gil, Ochang-eup, Cheongju-si, Chungbuk, Korea					

— End of Report —

Affirmation	Tested By Name : Jung Chul Kim	Technical Manager Name : Park, Young Hwi
-------------	-----------------------------------	---

This report is not accredited by KLAS.

Our report apply only to the standards or procedures identified and to the sample(s) tested unless otherwise specified. The test results are not indicative of representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products. The results of using only a portion of this report cannot be guaranteed. The authenticity of this test report can be checked on KCL website(www.kcl.co.kr).

2022. 10. 11

Korea Conformity Laboratories

President Jo, Yung Tae

Result Inquiry : 99, Centum dong-ro, Haeundae-gu, Busan, Republic of Korea (82-55-717-7823)

Page 1 of 1

TQM-12-01-04(1)

	 170900340938			中国认可 国际互认 检测 TESTING CNAS L0599
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TEST REPORT

No. : SHIN2006031982CM
Date : Jun 16, 2020
Page: 1 of 3

Scan to visit the report
www.sgs.com.cn

CUSTOMER NAME: DONGSUNG CHEMICAL CO., LTD.
ADDRESS: 99, SINSAN-RO, SAHA-GU, BUSAN, 49421 KOREA

Sample Name : VIXUM
Product Specification : Melamine Foam
Manufacturer : Dongsung Chemical
Material and Mark : Melamine resin

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Test Required : Thermal Conductivity and Thermal Resistance
Ref. Standard : GB/T 10295-2008
Date of Receipt : Jun 05, 2020
Testing Start Date : Jun 05, 2020
Testing End Date : Jun 16, 2020
Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Service (Shanghai) Co., Ltd.

Erin Huang
Authorized signatory

我们愿意在签订本证书时，由本公司承担以下条款：本公司将遵守所有适用的法律法规，并遵守其客户的要求。本公司对客户提供的样品进行检验，并对检验结果负责。本公司对客户提供的样品进行检验，并对检验结果负责。本公司对客户提供的样品进行检验，并对检验结果负责。

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성적서 및 인증서 - 유해 물질 안전 관리



OEKO-TEX STANDARD 100

DONGSUNG CHEMICAL CO., LTD.
99, Sinsan-ro
Saha-gu, Busan 49A21
Republic of Korea

TESTEX AG, Swiss Textile Testing Institute
Göthardstrasse 61
8002 Zurich
Switzerland

Certificate

OEKO-TEX® STANDARD 100

DONGSUNG CHEMICAL CO., LTD.
is granted the OEKO-TEX® STANDARD 100 certification
and the right to use the trademark.

SCOPE
Thermosetting melamine resin foam, white and light gray (maximum tested thickness: 5cm)

PRODUCT CLASS
I (baby articles) - Annex 4

STANDARD 100
SE002 139786
TESTEX

This certificate SE002 139786 is valid until 15.05.2025.

SUPPORTING DOCUMENTS

- ✓ Test report : SE002 240691.3
- ✓ Declaration of conformity in accordance with EN ISO 17050-1 as required by OEKO-TEX®
- ✓ OEKO-TEX® Terms of Use (ToU)

M. Bachmann
Matz Bachmann
Managing Director

S. V. Jey
Faisal Rizal
Ecology Team Leader

Further compliance information (REACH, SVHC, POP, GB18401 etc.) can be found on oeko-tex.com/en/faq.
The certificate is based on the test methods and requirements of the OEKO-TEX® STANDARD 100 that were in force at the time of evaluation.

Zurich, 2024-07-04

OEKO-TEX Service GmbH · Gerthnerstrasse 23, CH-8002 Zurich

EPD International

THE INTERNATIONAL EPD® SYSTEM

CERTIFICATE

EPD REGISTRATION

This document is to confirm that

DONGSUNG CHEMICAL CO., LTD

has published an Environmental Product Declaration for

VIXUM

with registration number S-P-02287
in the International EPD® System.

The EPD has been developed in accordance with ISO 14025, the General Programme Instructions for the International EPD® System and the reference PCR 2019:14. Verification was performed by IK Kim.

This document is valid until 2025-09-30, or until the EPD is de-registered and no longer published at www.envirodec.com.

Sebastian Welling
Sebastian Welling
Secretariat of the International EPD® System
Stockholm, Sweden, 2020-11-21

Test Report No. F680101/LF-CTSAVG023-05041

DONGSUNG CHEMICAL CO., LTD.
99, Sinsan-ro
Saha-gu, Busan
Korea

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

SGS File No. : A19023-05041
Product Name : VIXUM
Item No./Part No. : N/A
Received Date : 2023. 05. 14
Test Period : 2023. 05. 14 to 2023. 05. 21
Test Requested : As requested by client, SVHC screening is performed.
- Two (2) substances newly included in the Conf Very High Content (CVHC) published by ECHA on February 17, 2023 regarding Regulation (EC)

Test Method : Please refer to next page(s).
Test Result(s) : Please refer to next page(s).

Industry & Environment Research Center

TEST REPORT

APPLICANT : Dongsung Chemical Co., Ltd.
BUYER :
APPLICANT'S PROVIDED SAMPLE DESCRIPTION : ONE(1) SAMPLE OF MATERIAL
STYLE NO. : VIXUM

TEST ITEM

Formaldehyde Content (mg/kg) : KS K ISO 14184-1:1998 (Water Extract)

Notes: 1. S.D. : Not Detected/Less than 20 mg/kg)
2. Instrument : UV/VIS Spectrophotometer

[Image was attached.]

Tested by Name : In Seung Hyeo
Location of Test : 19, Daejeon-ro 48-beon-gil, Manan-gu, Anyang-si

TEST REPORT

1. NO : CT17-10278
2. Client :
○ Name : Dongsung Chemical Co., Ltd.
○ Address : 99, Sinsan-ro, Saha-gu, Busan, Korea
3. Date of Test : 2017.10.11 ~ 2017.11.06
4. Use of Report : Quality management
5. Test Sample : VIXUM
6. Test Method :
(1) KS K ISO 15000-9:2014
7. Test Results
1.) VIXUM

Test Item(s)	UNIT	Test Method	Test Results	Remarks
Total Volatile Organic Compounds(TVOC)	mg/L ^a - (1)	(1)	0.001	Refer to the attached sheets.
Toluene	mg/L ^a - (1)	(1)	Not Detected	Refer to the attached sheets.
Formaldehyde	mg/L ^a - (1)	(1)	Not Detected	Refer to the attached sheets.

Our report is only for the compound or compounds specified and for the sample(s) tested unless otherwise specified. The test results are not indicative of representativeness of the quality of the quality of the lot from which the sample was taken or of apparently identical or similar products.

2017. 11. 06

Korea Conformity Laboratories - President Kyung Sik Kim
Address : 46140 Testing and Manufacturing Building Techno park 31, Seobuk-ro 116, Gyeonggi-do, Gyeonggi-gu, Busan, Korea 605-0194/090
Result Inquiry : Busan, Ulsan and Gyeongnam branch 02-51-749-1024

Page 1 of 1
QP-23-01-01

Water Extraction (ISO 14184-1)

CDPH/EHLB/Standard Method V1.2 CA01350(ISO 16000-9/USA)

German ChemVerbotsV (EN 717-1/Europe)

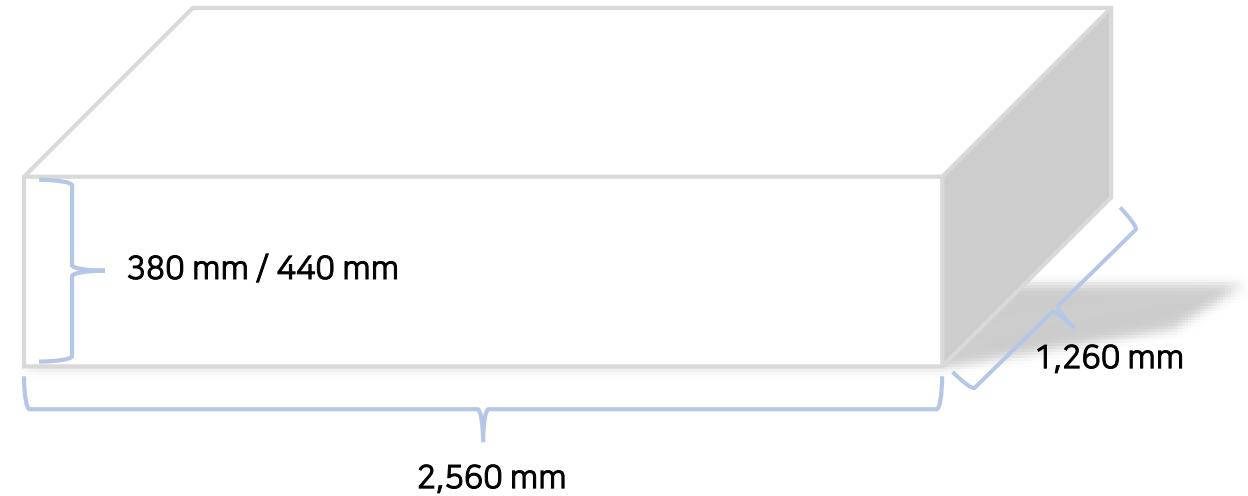
Product grades

Test parameter	VIXUM® SW	VIXUM® SG	VIXUM® L	VIXUM® HW	Remarks
Color	White	Gray	-	White	-
Density (kg/m ³)	9.5 ± 1.5	9.5 ± 1.5	6 ± 1.0	16 ± 4.0	ISO 845
Hardness (F0 type)	Ave. ≥ 60	Ave. ≥ 60	Ave. ≥ 30	-	-
Tensile Strength (KPa)	Ave. ≥ 110	Ave. ≥ 110	Ave. ≥ 50	Ave. ≥ 120	ISO 1798
Tear Strength (N/m)	40	40	-	-	
Elongation (%)	Ave. ≥ 15	Ave. ≥ 15	Ave. ≥ 15	Ave. ≥ 10	ISO 1798
Sound Absorption Coefficient (50mm)	NRC ≥ 0.85	NRC ≥ 0.85	NRC ≥ 0.75		ISO 354
Thermal Conductivity (W/m·K)	Max. ≤ 0.035	Max. ≤ 0.035	Max. ≤ 0.037	Max. ≤ 0.033	KS L 9016
Compression Force Deflection (Kpa) 25 ° C/50%	28.7	28.7	-	50.6	
Compression Set (%) 75%/100 ° C/2Hrs	7.4	7.4	-	7.7	
Hazardous Substances / Formaldehyde Emission	Class I Pass Max. ≤ 40mg/kg Pass Pass	Class I Pass Max. ≤ 40mg/kg Pass Pass	- - Max. ≤ 40mg/kg - -		OEKO-TEX 100 REACH SVHC ISO 14184-1 ISO 16000-9 (CA 01350) EN 717-1
Fire Behavior	V-0 Class A FSI 0 / SDI 15 B-s1d0 -	V-0 Class A FSI 0 / SDI 18 B-s1d0 Class B1	V-0 Class A(SDI 25) - - -	V-0	UL-94 ASTM E84-16 CAN/ULC-S102 EN 13501-1 DIN 4102-1
Certification for Train	-	HL2 S-4, ST-2, SR-2, Pass	HL3	-	EN 45545-2 DIN 5510-2

Product appearance

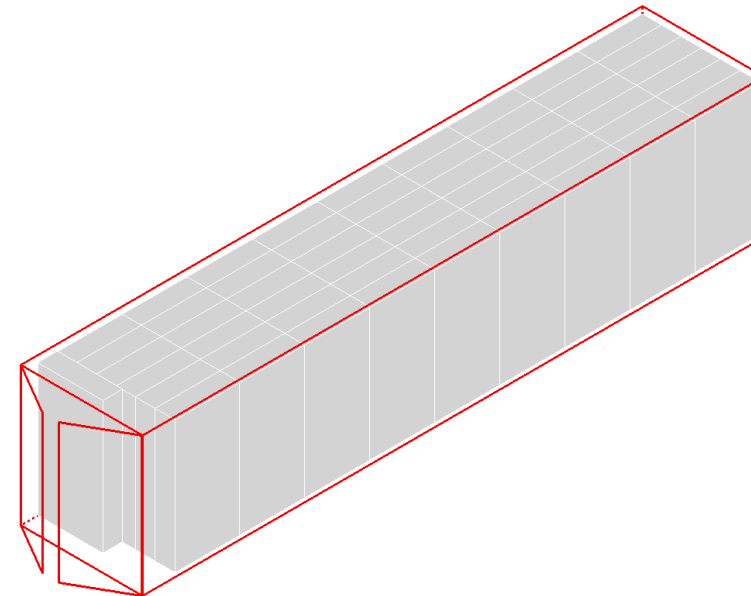
VIXUM®SW380/440

- Color : White
- Size : 1260mm x 2560mm x (380mm or 440mm)
- 1 Block : 1.22 CBM / 1.41 CBM
- 1 FCL(40 Feet high cube) : 55 Blocks / 46 Blocks



Container loading quantity (40HC FCL)

- VIXUM®380 : 55 Blocks
- VIXUM®440 : 46 Blocks
- VIXUM®440 + SKIN : 42 Blocks



VIXUM® 가공

- 수평&수직 가공
- 발수&발유 코팅
- CNC 가공, 파이프 커버 단열재
- 3D 형상 가공
- UV 프린팅, 스프레이 페인팅

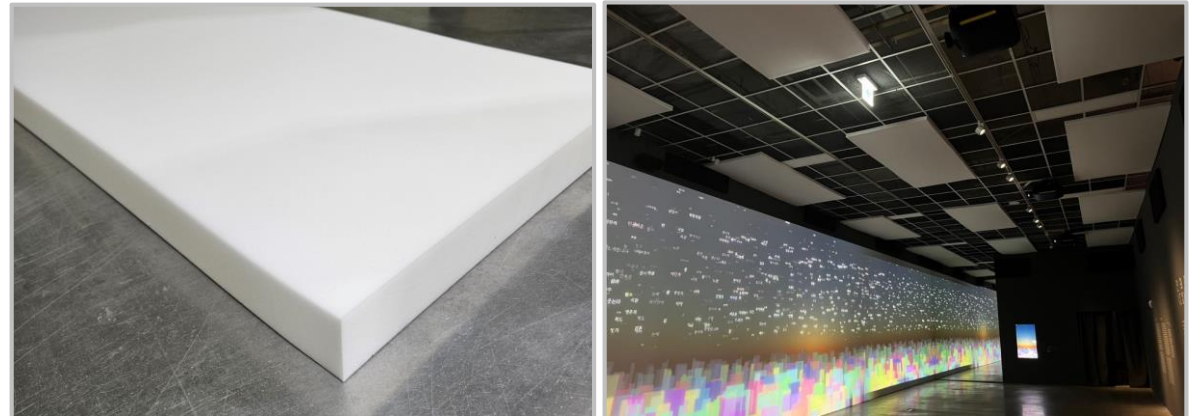
1. VIXUM®SW/SG series

- Color : White
- Size : 1260mm x 2560mm x a
- MOQ : (규격 별 협의)
 - VIXUM®SW001
 - VIXUM®SW010
 - VIXUM®SW036
 - VIXUM®SW050
 - VIXUM®SW075
 - VIXUM®SW100



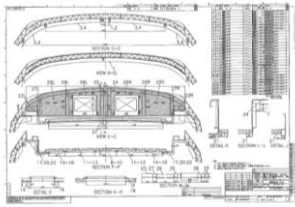
2. VIXUM® 수평 & 수직 가공

- 수평 가공 : 2560mm 이내 가능
- 수직 가공 : 1260mm 이내 가능
- 두께 : 1T ~ 100T
- 적용 분야 : 자동차 (선바이저 내장재), 클리너, 방화문 심재, 흡음 배플 등

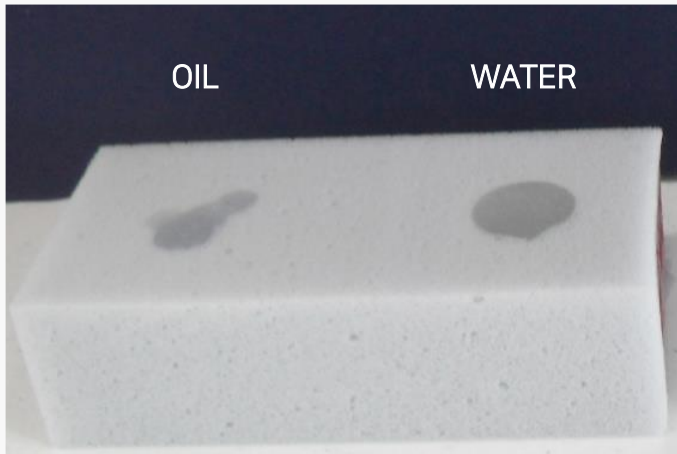


발수 & 발유 코팅

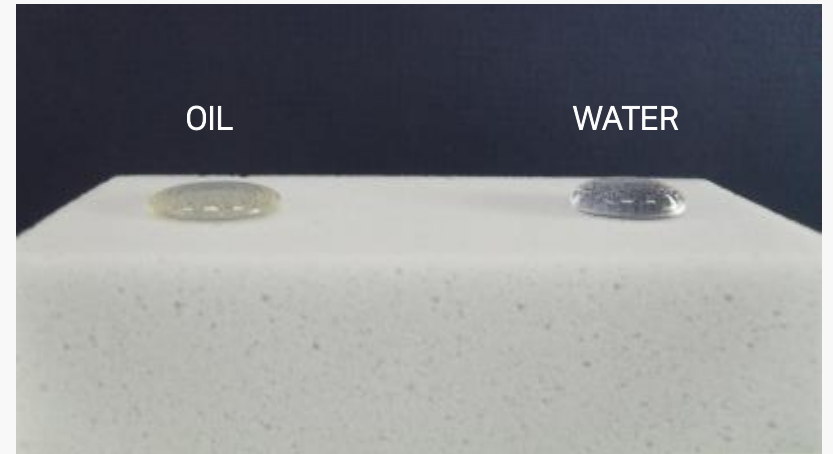
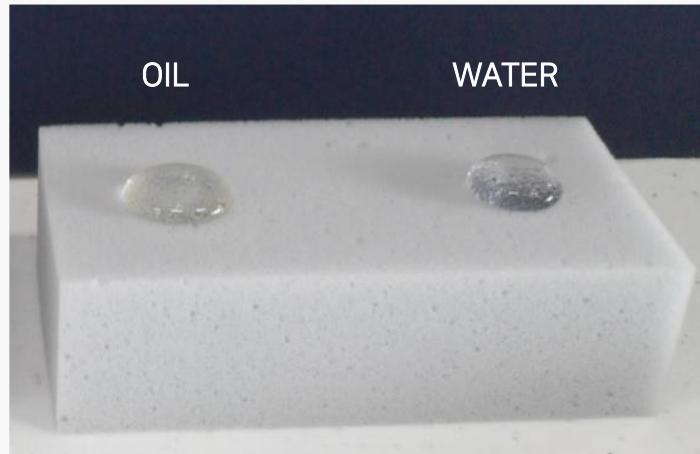
- 접촉각 : 140°
- 규격: 1200mm x 600mm
- 두께 : 최대 50T
- 적용 분야 : 기차 (벽 · 천장 단열재 / 흡음재) / 특수선 / 전기차 배터리 / 항공



코팅 전

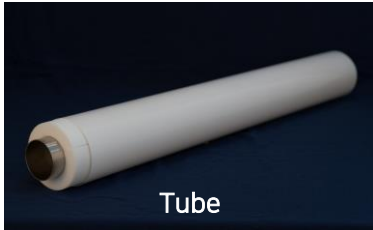


코팅 후



CNC 가공 , 파이프 커버 단열재

- 타입 : 튜브 / 90° & 45° 엘보우 / 티 / 리듀서 등
- 두께 : 25T / 40T / 50T / 75T / 100T
- 구조 : 파이프 + VIXUM® 멜라민폼 단열재 + 마감재 (컬러 강판, PVC 커버 등)
- 적용 분야 : 제약 단지/ 식음료 생산 라인 / 위생용품 라인 / 지하 도시가스 배관 등
- 규격 : KS (Korea standard), ASME BPE (America standard)



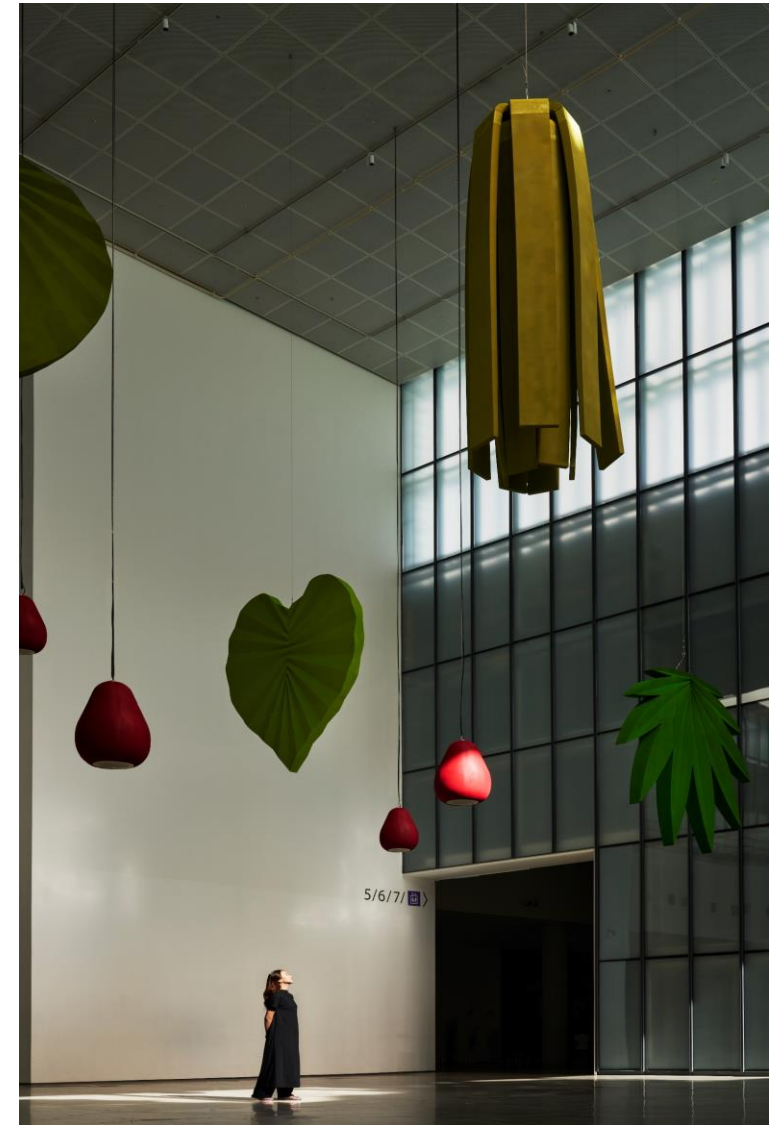
3D 형상 가공

- 맞춤형 디자인 제작 가능 (협업)
- 스프레이 페인팅(단일색상) 가능
- 적용 분야 : 흡음재 / 조형물 / 오브제 등
- 설치 장소 : 박물관, 갤러리, 호텔, 레스토랑, 카페, 사무실, 학교, 오디오룸 등



Individual, sound room in Korea

CONFIDENTIAL



National Museum of Modern and Contemporary Art, Korea

UV 프린팅, 스프레이 페인팅

- 맞춤형 디자인 제작 가능 (협업)
- 스프레이 페인팅(단일색상) 가능/ UV 프린팅 가능
- 적용 분야 : 흡음재 / 조형물 / 오브제 / 브랜드 콜라보레이션 등
- 설치 장소 : 박물관, 갤러리, 호텔, 레스토랑, 카페, 사무실, 학교, 오디오룸 등



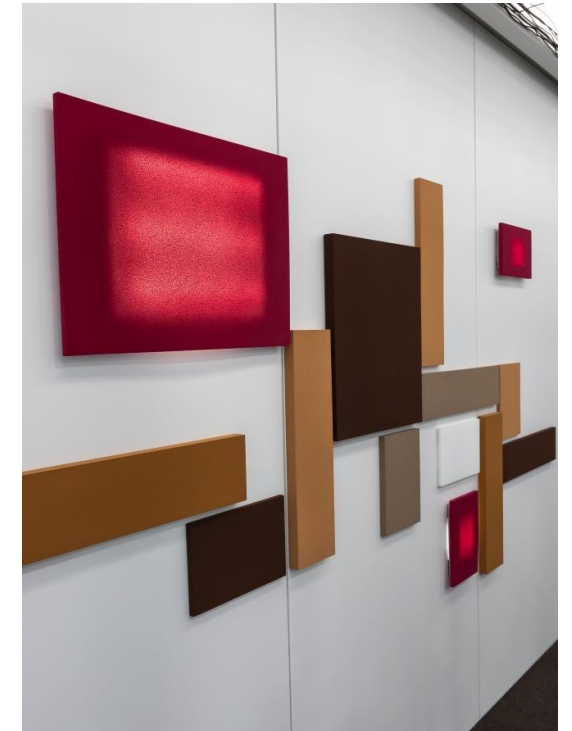
팝아티스트 찰스장 콜라보레이션 흡음 패널



라이엇 게임즈 콜라보레이션 흡음 패널



영상 제작사 콜라보레이션 흡음 패널



CLESTRA HAUSERMAN 한국 본사 쇼룸 설치

VIXUM[®] references

수송



- 적용 분야 : 선바이저 내장재
- 적용 제품: VIXUM®SW001
- 가공법: 수평 & 수직 커팅
- 적용 차종:
 - ❖ 현대 투싼
 - ❖ 기아 스포티지
 - ❖ 닛산 로그

2014년부터 VIXUM® 멜라민폼은 차량 선바이저 내부의 단열재로 사용되고 있습니다. 선바이저를 구성하는 복합 재료를 마감할 때, VIXUM은 매끄러운 마감을 제공하여 차량 내부의 고급스러움을 향상시킵니다. 또한, VIXUM® 멜라민폼은 -200도에서 +200도까지의 넓은 온도 범위에서 안정적인 특성을 유지하므로 선바이저에 이상적이며, 고온의 태양열을 효과적으로 차단합니다.

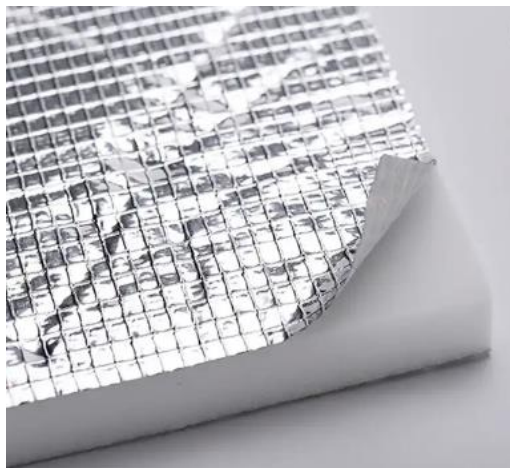
현대 투싼(이미지 출처 : 현대자동차 홈페이지)



- 적용 분야 : 고속철도, 지하철, 트램 / 벽 & 천장 단열 및 흡음재
- 적용 제품 : VIXUM®SW/SG
- 가공법
 - 수평 & 수직 가공 + 알루미늄 배접
 - 발수 코팅

VIXUM® 멜라민폼은 전 세계 다양한 철도 프로젝트에 적용되고 있습니다. 주로 철도 차량 내부의 벽과 천장에 있는 에어컨 덕트 주변에 설치되며, 운행 중 발생하는 소음을 크게 줄여 더 쾌적한 실내 환경에 기여합니다.

철도 차량의 경우 습기 침투를 방지하는 것이 중요하기에 멜라민 폼은 알루미늄과 결합되거나 발수 코팅 처리됩니다. 장기간의 진동에 노출되더라도 VIXUM®멜라민 폼은 원래의 형태와 상태를 유지하여 철도 차량에서 안정적이고 쾌적한 환경을 오랜 기간 동안 보장합니다.



VIXUM[®] references

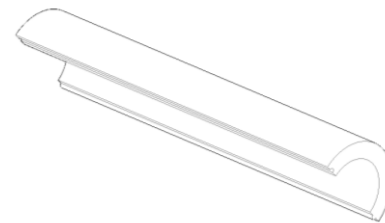
산업

파이프 커버 단열재

제약단지 (한국)



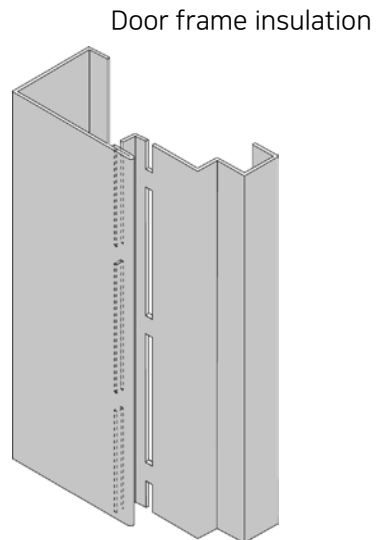
- 적용 분야 : 제약단지, 화장품, 식음료 등
- 적용 제품: VIXUM®SW
- 가공법 : CNC 가공



VIXUM® 멜라민 폼은 극한 온도 범위에서도 뛰어난 단열 성능을 제공하며, 다양한 형태와 크기로 쉽게 가공할 수 있어 설치가 편리합니다.

제조 환경에서 파이프 단열재로 사용되어 화재 안전성을 높이고 소음을 줄여 더 쾌적한 작업 공간을 만듭니다.

오랜 시간 동안 안정성을 유지하여 형태 변화가 적고, 손쉽고 안전하며 깨끗한 유지관리를 보장합니다.



- 적용 분야 : 방화문 심재 / 문틀 단열재
- 적용 제품 : VIXUM®SW012 / VIXUM®SW024
- 가공법 : 수평 & 수직 가공

다양한 소재가 방화문의 심재로 사용되지만, 고급 방화문에는 대게 미네랄 울과 멜라민 폼의 조합으로 구성됩니다. 이 구조는 문이 본래 지닌 내화성을 유지하면서 가공성을 향상시키고 무게를 줄여 안정성과 기능을 높입니다.

또한, 멜라민 폼의 우수한 흡음 특성은 기존 소재들과 비교할 때 소음 감소에 기여하여 고급 방화문의 중요한 특징이 됩니다.

VIXUM[®] references

공간 음향



- 설치 장소 : S社 전주 연수소 (363m²)
- 적용 분야 : 흡음패널(천장)
- 적용 제품 : VIXUM®DECO V-CUT
- 가공법: 3D 형상 가공





[case 1. 커스텀 디자인 흡음 패널]



[case 2. 커스텀 디자인 흡음 포스터]

- 장소 : 쇼룸, 로비
- 적용 제품 : VIXUM®SW (커스텀 디자인)
- 가공법: 스프레이 페인팅/ UV 프린팅

[case 1. 커스텀 디자인 흡음 패널]

VIXUM 흡음 패널은 다양한 색상으로 스프레이 페인팅되어 뛰어난 흡음 효과와 함께 아름다운 인테리어 효과를 제공합니다. 패널 뒷면에 자석이 부착되어 있어 쇼룸의 분위기를 쉽게 변화 시킬 수 있었습니다

[case 2. 커스텀 디자인 흡음 포스터]

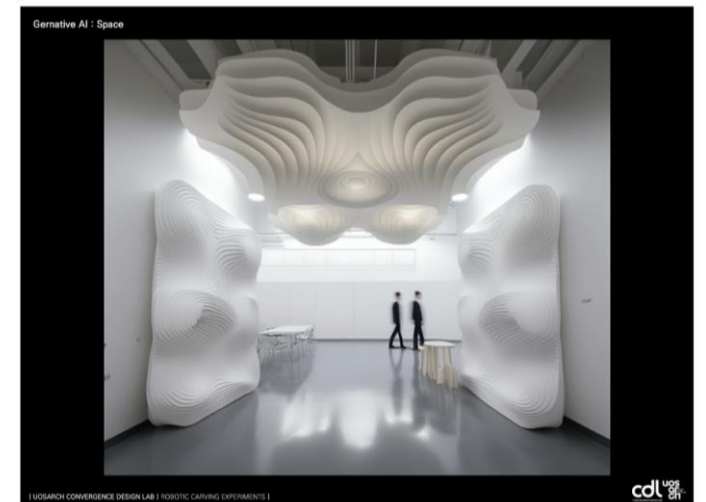
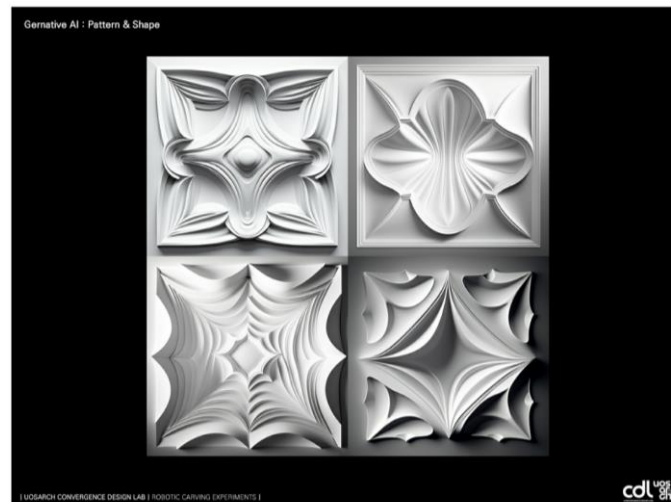
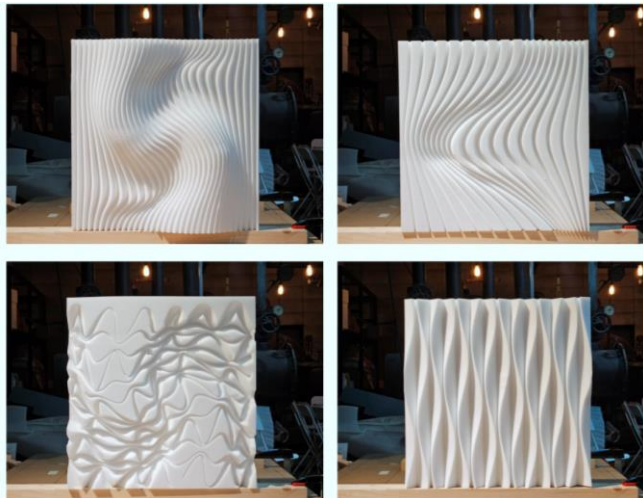
천장이 높고 아치형 천장이 있는 공간으로, 울림 소리가 심해 VIXUM 흡음 포스터가 설치되었습니다. 제품의 표면에는 고객의 요청에 맞춘 디자인이 UV 인쇄되어 뛰어난 흡음 효과와 독특한 인테리어 디자인을 동시에 제공하였습니다.

흡음 패널- 로봇팔 가공



- 서울시립대학교 건축학과 협업 프로젝트
- 가공법 : 로봇팔 가공 + AI 디자인

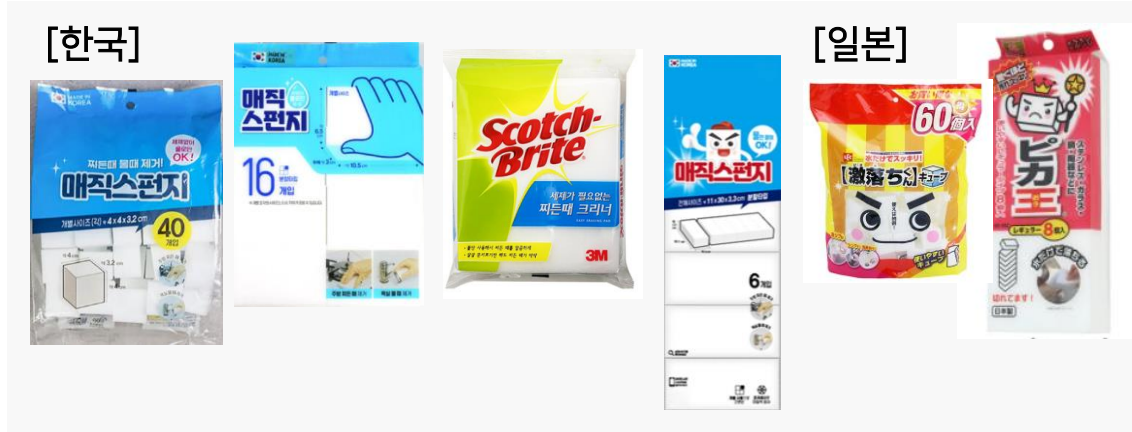
2025년 개관 예정인 의정부 디자인 도서관에 로봇팔 가공 VIXUM 조형물이 설치 될 예정입니다.



VIXUM[®] references

소비재

VIXUM® 적용 브랜드



Amazon US online - VIXUM® CLEAN miracle eraser



동성케미컬의 VIXUM® 멜라민 폼은 전 세계적으로 요구되는 대부분의 안정성 인증을 보유한 유일한 멜라민 폼입니다.

Magic Block과 같이 소비자가 직접 접촉하는 제품 중 가장 안전한 소재 입니다.

협력 구조



E.O.D

**Life-Centric
Science & Solutions**

Dongsung Chemical Co.,Ltd
10F, AIA TOWER, 16 Tongil-ro 2-gil, Jung-Gu, Seoul 04511, Korea
www.idongsung.com
www.vixum.co.kr
www.youtube.com/@dongsungchemical