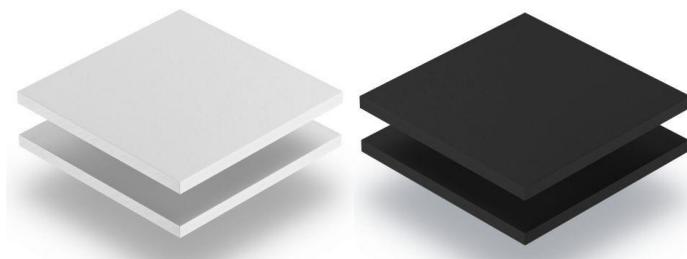


MatexPVC®

PRESENTATION

Les plaques de PVC expansées sont idéales en usage intérieur et extérieur dans le domaine de la publicité, de la construction et de l'industrie.

Les plaques sont caractérisées par leur légèreté, leur durabilité et leurs surfaces polyvalentes pouvant être sérigraphiées, imprimées, laminées, travaillées en relief, gravées ou fraisées.



Référence	Désignation	Dimensions	Tolérance d'épaisseur (mm)
MK1	PVC expansé blanc de 1 mm	3050 x 1220 x 1 mm	0.6 - 1.4
MK2	PVC expansé blanc de 2 mm	3050 x 1220 x 2 mm	1.6 - 2.4
MK3	PVC expansé blanc de 3 mm	3050 x 1220 x 3 mm	2.6 - 3.4
MK4	PVC expansé blanc de 4 mm	3050 x 1220 x 4 mm	3.6 - 4.4
MK5	PVC expansé blanc de 5 mm	3050 x 1220 x 5 mm	4.6 - 5.4
MK10	PVC expansé blanc de 10 mm	3050 x 1560 x 10 mm	9.6 - 10.4
*MK10N	PVC expansé noir de 10 mm	3050 x 1220 x 10 mm	9.6 - 10.4
MK15	PVC expansé blanc de 15 mm	3050 x 1220 x 15 mm	14.6 - 15.4
MK19	PVC expansé blanc de 19 mm	3050 x 1220 x 19 mm	17.6 - 19.4
MK1915	PVC expansé blanc de 19 mm	3050 x 1560 x 19 mm	17.6 - 19.4
MK20	PVC expansé blanc de 20 mm	3050 x 2050 x 20 mm	19 - 21
*MK20N	PVC expansé noir de 20 mm	3050 x 1220 x 20 mm	19 - 21
MK25	PVC expansé blanc de 25 mm	3050 x 1220 x 25 mm	23.75 - 26.25
MK38	PVC expansé blanc de 38 mm	3050 x 1220 x 38 mm	36.75 - 39.25

*PVC Noir uniquement pour intérieur

PROPRIÉTÉS TECHNIQUES

Propriétés	Méthode de test	Unités	Valeurs
Densité	ASTM D792	g/cm ³	0.47 - 0.55
Perméabilité à l'eau	ASTM D570	%	1≤
Limite d'élasticité en flexion	ASTM D790	Mpa	834
Dureté (Shore D)	ASTM D2240	D	45-80
Force de maintien vissé	QB/T 17657	N	842
Point VICAT	QB/T 2463.2	°C	74
Coefficient Linéaire de Dilatation Thermique	ASTM D696	mm/m°C	0.0422

Les rapports d'essais au feu M1 sont en fin de fiche technique.

Les rapports d'essais sont valables pour l'ensemble des épaisseurs, la matière première n'étant pas modifiée en fonction de l'épaisseur. Pour le PVC Noir se référer aux rapports d'essais page 12. (Essais effectués avec du PVC blanc ayant les mêmes propriétés techniques.)

AVANTAGE PRINCIPAUX

- Poids plus léger de moitié que les plaques de PVC solide
- Bonnes qualités mécaniques
- Bonne isolation, transmission de chaleur réduite
- Facile à travailler avec des outils, en impressions et avec des peintures conventionnelles
- Peut être facilement collée, formée, clouée et vissée
- Inflammabilité: plaque auto-extinguible
- Faible perméabilité à l'eau
- Haute résistance chimique
- Conforme à divers standards internationaux
- Non toxique

APPLICATIONS

- **Publicité** - Panneaux, tableaux d'affichage et d'exposition, enseigne, etc.
- **Construction** - Allèges, cloisons, revêtement mural, décoration intérieure, gaines de climatisation, etc.
- **Industrie** - Cabines et panneaux de contrôle, structures adaptées aux milieux corrosifs, conduits, etc.
- **Sérigraphie** - La qualité de la surface et sa régularité en font un produit idéal pour la sérigraphie. Ces plaques sont compatibles avec des encres aqueuses ou à base de solvants.
- **Impression numérique** - La plaque a été spécialement conçue pour des impressions "flatbed".

MISE EN OEUVRE

Les plaques de PVC expansé peuvent être aisément et économiquement travaillées à l'aide des mêmes outils couramment employés dans l'industrie du bois et du métal.

La manipulation, la manutention et le stockage sont particulièrement aisés, grâce à leur très grande légèreté.

En règle générale, il est conseillé de procéder en employant une vitesse de coupe élevée et une vitesse d'alimentation réduite.

Dans les cas extrêmes, il est recommandé de refroidir les lames à l'air comprimé.

Le PVC expansé peut être découpé aisément à l'aide d'un couteau.

Découpe :

La découpe des plaques de PVC expansé se fait facilement à l'aide d'une lame droite à dents fines et bien affûtée, une scie à ruban, une scie circulaire ou bien sur une scie sauteuse.

Perçage - Les plaques de PVC expansé peuvent être percées à l'aide de n'importe quel type de perceuse ordinaire.

Fixation - Les plaques de PVC expansé peuvent être vissées, boulonnées ou clouées. Afin d'obtenir une meilleure répartition de la charge sur une plus grande surface, nous recommandons l'utilisation de rondelles de grand diamètre.

Impression :

Les plaques de PVC expansé conviennent à toutes les techniques d'impression. Les plaques doivent être propres et sèches avant de procéder à l'impression.

Collage :

Les colles employées couramment pour le collage du PVC ainsi que la plupart des colles à base de solvant conviennent. Afin d'obtenir une adhérence structurale maximale, employer un produit adhésif à deux étapes. Pour la fixation temporaire, utiliser une bande auto-adhésive.

Soudure :

Les plaques de PVC expansé peuvent être soudées entre elles ou bien à d'autres plaques rigides en PVC à l'aide d'une soudeuse à air chaud courante ou bien en employant la méthode dite "de la lame chauffante".

THERMOFORMAGE

Les plaques de PVC expansé peuvent être thermoformées sous vide, embouties. L'outillage utilisé normalement pour le thermoformage des plaques en plastique peut s'employer pour travailler le PVC expansé.

- Afin d'éviter un affaissement excessif, les plaques de PVC expansé de grandes dimensions nécessitent d'être soutenues par soufflage.
- Les formes peu profondes peuvent être réalisées de manière satisfaisante avec presque tout type d'outillage de thermoformage habituel.
- Les formes plus complexes ou plus profondes exigent un système de chauffe à double face (de type « sandwich »). Par rapport à d'autres types de plaques en plastique rigide, le thermoformage des plaques de PVC expansé est avantageux : le temps de travail est généralement réduit, le rayon et la profondeur du formage ne sont limités que par le degré d'élasticité de la surface.

Température de formage

- Plage de thermoformage de 115°C à 130°C. Bonne élasticité de la matière, bien que la définition des contours soit quelque peu limitée. La souplesse initiale de la surface du PVC expansé est conservée. Rapport maximum de formage recommandé h:d environ 1 :1.25
- Plage de thermoformage de 160 °C à 170 °C. Elasticité moyenne, excellente définition des contours. A cause de l'étirage, la surface peut paraître légèrement grainée. Afin d'éviter un affaissement excessif, les plaques de grandes dimensions nécessitent d'être soutenues par soufflage. A des températures de 160 °C à 170 °C, une légère altération de couleur peut avoir lieu.

Cycle thermique

L'emploi d'une source de chaleur rayonnante raccourcit sensiblement le cycle thermique en comparaison à celui exigé pour le travail des plastiques rigides. Le cycle dépendra du type de machine de formage employé.

Un four à rayons infra rouges de type céramique convient le mieux. Il est fortement conseillé de chauffer les deux faces (haut et bas), surtout lors du formage des plaques plus épaisses.

Exemple pour une épaisseur de plaque de 5 mm :

Cycle thermique approximatif : chauffe d'une face par réchauffeur de type céramique :

- Température de l'élément chauffant : 450 °C
- Densité de puissance : 20 kW/m²

Epaisseur de la plaque (en mm)	Cycle thermique (en sec)
5	110

Cycle thermique approximatif : chauffe de deux faces par réchauffeur de type céramique :

- Température du réchauffeur : Haut – 380 °C, Bas -150 °C
- Densité de puissance : 40 kW/m²

Epaisseur de la plaque (en mm)	Cycle de chauffe (en sec)
5	60

Rapport d'essais au feu PVC 10 mm



Test Report

No. SDFS1911007258FF

Date: Nov.12, 2019

Page 1 of 4

Sample Description : PVC FOAM BOARD
Style / Item No. : 10MM

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SGS Ref No. : GZHL1911045779SD
Sample Receiving Date : Nov.04, 2019
Test Performing Date : Nov.04, 2019 to Nov.12, 2019

Test Result Summary

Test(s) Requested	Result(s)
NF P 92-507:2004	Classification: M1

Summary:

- For further details, please refer to the following page(s).

Signed for and on behalf of
Shunde Branch
SGS-CSTC Co., Ltd.



Daniel Guan
Approved signatory



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Test Report

No. SDFS1911007258FF

Date: Nov.12, 2019

Page 2 of 4

TESTS AND RESULTS

Test Conducted:

This test was conducted according to NF P 92-507:2004 Fire safety-building-interior fitting materials - Classification according to their reaction. And the test methods as following:

1) NF P 92-501:1995 Safety against fire – Building materials – Reaction to fire tests – Radiation test used for rigid materials, or for materials on rigid substrates (flooring and finishes) of all thicknesses, and for flexible materials thickness more than 5 mm

Conditioning:

Prior to testing, the sample was conditioned,

In an atmosphere having a temperature of (23±2)°C and a relative humidity of (50±5)% until constant mass is obtained. The mass is considered as constant when two successive weightings 24 hours apart do not differ by more than 0.1% or 0.1 g (take the highest mass value)

Test Results:

1) NF P 92-501:1995 Test by Radiation

	Specimen 1	Specimen 2	Specimen 3	Specimen 4	AVE
Time of ignited exposed face (ti1) (seconds)	DNI	DNI	DNI	DNI	-
Time of ignited unexposed face (ti2) (seconds)	DNI	DNI	DNI	DNI	-
Sum of the height of the flame Σh (cm)	0	0	0	0	0
Sum of the duration of flaming combustion, ΔT	0	0	0	0	0
$q = \frac{100 \sum h}{t_i \sqrt{\Delta T}}$	N/A	N/A	N/A	N/A	N/A
Flaming molten droplets (Yes/No)	No	No	No	No	-
Non-flaming molten droplets (Yes/No)	No	No	No	No	-
Melt through (Yes/No)	Yes	Yes	Yes	Yes	-

Remark:

N/A- Not applicable

Conclusion: According to the test results and Annex 1 requirement, the submitted sample is classified: M1



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Test Report

No. SDFS1911007258FF

Date: Nov.12, 2019

Page 3 of 4

Annex I Requirements

Table 2 Resume of classification for the rigid materials and flexible materials which thickness more than 5mm

Radiation Test ^{a)}		Flame Spread		PCS	
Requirement		<2 mm/s	>2 mm/s	<2.5 MJ/kg	>2.5 MJ/kg
No Effective Inflammation	M0			M0 ^{a)}	M1
	q<2.5 ^{b)}				
	q<15				
	q<50				
	q ≥50				
		M4	NC		

^{a)}For the classification M0 of multilayer materials and painted inert materials, refer to clause 3.3.2, 3.3.3, 3.3.4 and appendix C.

^{b)}The meanings of the index q refer to clause 3.2.3.4 of NF P 92-507:2004.

^{c)} If the materials presented a particular behaviour, the classification also needs to refer to Table 3.

Statement:

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use. The test results relate only to the specimens of the product in the form in which were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product, which is supplied or used, is fully represented by the specimens, which were tested.



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Test Report

No. SDFS1911007258FF

Date: Nov.12, 2019

Page 4 of 4

SAMPLE INFORMATION AND PICTURES

Area density: About 6.36kg/m²
 Thickness: About 10 mm
 Test face: One Face



End of Report



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Rapport d'essais au feu PVC 38 mm



Test Report

No. SDFS1912008576FF

Date: Dec.18, 2019

Page 1 of 4

Sample Description : PVC FOAM BOARD
Style / Item No. : 38MM

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SGS Ref No. : GZHL1912052177SD
Sample Receiving Date : Dec.12, 2019
Test Performing Date : Dec.12, 2019 to Dec.18, 2019

Test Result Summary

Test(s) Requested	Result(s)
NF P 92-507:2004	Classification: M1

Summary:

- For further details, please refer to the following page(s).

Signed for and on behalf of
Shunde Branch
SGS-CSTC Co., Ltd.

Ada



Ada Liu
Approved signatory



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Test Report

No. SDFS1912008576FF

Date: Dec.18, 2019

Page 2 of 4

TESTS AND RESULTS

Test Conducted:

This test was conducted according to NF P 92-507:2004 Fire safety-building-interior fitting materials - Classification according to their reaction. And the test methods as following:

1) NF P 92-501:1995 Safety against fire – Reaction to fire tests – Radiation test used for rigid materials, or for materials on rigid substrates (flooring and finishes) of all thicknesses, and for flexible materials thickness more than 5 mm

Conditioning:

Prior to testing, the sample was conditioned,

In an atmosphere having a temperature of (23±2)°C and a relative humidity of (50±5)% until constant mass is obtained. The mass is considered as constant when two successive weightings 24 hours apart do not differ by more than 0.1% or 0.1 g (take the highest mass value)

Test Results:

1) NF P 92-501:1995 Test by Radiation

	Specimen 1	Specimen 2	Specimen 3	Specimen 4	AVE
Time of ignited exposed face (ti1) (seconds)	DNI	DNI	DNI	DNI	-
Time of ignited unexposed face (ti2) (seconds)	DNI	DNI	DNI	DNI	-
Sum of the height of the flame $\sum h$ (cm)	0	0	0	0	0
Sum of the duration of flaming combustion, ΔT	0	0	0	0	0
$q = \frac{100 \sum h}{t_i \sqrt{\Delta T}}$	N/A	N/A	N/A	N/A	N/A
Flaming molten droplets (Yes/No)	No	No	No	No	-
Non-flaming molten droplets (Yes/No)	Yes	Yes	Yes	Yes	-
Melt through (Yes/No)	No	No	No	No	-

Remark:

N/A- Not applicable

Conclusion: According to the test results and Annex 1 requirement, the submitted sample is classified: M1



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Test Report

No. SDFS1912008576FF

Date: Dec.18, 2019

Page 3 of 4

Annex I Requirements

Table 2 Resume of classification for the rigid materials and flexible materials which thickness more than 5mm

Radiation Test ^{a)}		Flame Spread		PCS	
		Requirement	<2 mm/s	>2 mm/s	<2.5 MJ/kg
No Effective Inflammation	M0			M0 ^{a)}	M1
q<2.5 ^{b)}	M1				
q<15	M2				
q<50	M3				
q ≥50		M4	NC		

^{a)} For the classification M0 of multilayer materials and painted inert materials, refer to clause 3.3.2, 3.3.3, 3.3.4 and appendix C.

^{b)} The meanings of the Index q refer to clause 3.2.3.4 of NF P 92-507:2004.

^{c)} If the materials presented a particular behaviour, the classification also needs to refer to Table 3.

Statement:

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use. The test results relate only to the specimens of the product in the form in which were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product, which is supplied or used, is fully represented by the specimens, which were tested.



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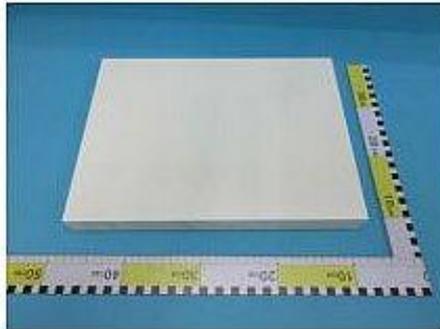
No. SDFS1912008576FF

Date: Dec.18, 2019

Page 4 of 4

SAMPLE INFORMATION AND PICTURES

Area density: About 24.0kg/m²
 Thickness: About 38 mm
 Test face: One face



End of Report



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Test Report

No. AJHG2009001547FB-01

Date: OCT.21, 2020

Page 1 of 6

THE TEST REPORT IS TO SUPERSEDE THE TEST REPORT No.: AJHG2009001547FB, DATE: OCT.14, 2020

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

Sample Description: PVC FOAM SHEET

Density: 0.5g/cm³

Thickness: 15mm

Composition: POLYVINYL CHLORIDE

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 :SEP.26, 2020

Test Performing Date :SEP.26, 2020 TO OCT.13, 2020

Signed for and on behalf of
SGS-CSTC Co., Ltd.

Allen Zou
Technical Manager

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Test Report

No. AJHG2009001547FB-01

Date: OCT.21, 2020

Page 3 of 6

Test method	Parameter	Specimen number	Results
EN ISO 11925-2 Exposure = 30 s	$F_s \leq 150$ mm	6	Yes
	Ignition of the filter paper		No

IV. Classification and direct field of application

This classification has been carried out in accordance with **EN 13501-1:2007+A1:2009**.

a) Classification

The product, "PVC FOAM SHEET", classification is as following.

Fire behaviour		Smoke production		Flaming droplets
B	—	s	1	. d 0

Reaction to fire classification: B—s1, d0

Remark: The classes with their corresponding fire performance are given in annex A.

b) Field of application

This classification for the submitted sample is valid for the following end use condition:

---Free standing

---No joint

This classification is valid for the following product parameters:

---Characteristics of the various layers identical to those as described in § II b of this test reports.

Statement: The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

Warning:

This classification report does not represent type approval or certification of the product.

The test laboratory has, therefore, play no part in sampling the product for the test, although it holds appropriate references to the manufacturer's factory production control that is aimed to be relevant to the samples tested and that will provide for their traceability.

To be continued...

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Test Report

No. AJHG2009001547FB-01

Date: OCT.21, 2020

Page 4 of 6

Annex A

Classes of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products

Class	Test method(s)	Classification criteria	Additional classification
A1	EN ISO 1182 ^a and	$\Delta T \leq 30^\circ\text{C}$, and $\Delta m \leq 50\%$, and $t = 0$ (i.e. no sustained flaming)	-
	EN ISO 1716	$PCS \leq 2.0 \text{ MJ/kg}^a$ and $PCS \leq 2.0 \text{ MJ/kg}^{b,c}$ and $PCS \leq 1.4 \text{ MJ/m}^2^d$ and $PCS \leq 2.0 \text{ MJ/kg}^e$	-
A2	EN ISO 1182 ^a or	and $\Delta T \leq 50^\circ\text{C}$, and $\Delta m \leq 50\%$, and $t \leq 20 \text{ s}$	-
	EN ISO 1716		
	EN 13823	$FIGRA \leq 120 \text{ W/s}$ and $LFS <$ edge of specimen and $THR_{600s} \leq 7.5 \text{ MJ}$	Smoke production ^f and Flaming droplets/particles ^g
B	EN 13823 and	$FIGRA \leq 120 \text{ W/s}$ and $LFS <$ edge of specimen and $THR_{600s} \leq 7.5 \text{ MJ}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ¹ Exposure = 30s	within 60s $F_s \leq 150 \text{ mm}$	
C	EN 13823 and	$FIGRA \leq 250 \text{ W/s}$ and $LFS <$ edge of specimen and $THR_{600s} \leq 15 \text{ MJ}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ¹ Exposure = 30s	$F_s \leq 150 \text{ mm}$ within 60 s	
D	EN 13823 and	$FIGRA \leq 750 \text{ W/s}$	Smoke production ^f and Flaming droplets/particles ^g
	EN ISO 11925-2 ¹ Exposure = 30s	$F_s \leq 150 \text{ mm}$ within 60 s	
E	EN ISO 11925-2 ¹ Exposure = 15s	$F_s \leq 150 \text{ mm}$ within 20 s	flaming droplets/particles ^h

To be continued...

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Test Report

No. AJHG2009001547FB-01

Date: OCT.21, 2020

Page 5 of 6

F	No performance determined
<p>^a For homogeneous products and substantial components of non-homogeneous products.</p> <p>^b For any external non-substantial component of non-homogeneous products.</p> <p>^c Alternatively, any external non-substantial component having a PCS $\leq 2,0$ MJ/m², provided that the product satisfies the following criteria of EN 13823: FIGRA ≤ 20 W/s, and LFS < edge of specimen, and THR_{600s} $\leq 4,0$ MJ, and s1, and d0.</p> <p>^d For any internal non-substantial component of non-homogeneous products.</p> <p>^e For the product as a whole.</p> <p>^f In the last phase of the development of the test procedure, modifications of the smoke measurement system have been introduced, the effect of which needs further investigation. This may result in a modification of the limit values and/or parameters for the evaluation of the smoke production.</p> <p>s1 = SMOGRA ≤ 30m²/s² and TSP_{600s} ≤ 50m²; s2 = SMOGRA ≤ 180m²/s² and TSP_{600s} ≤ 200m²; s3 = not s1 or s2</p> <p>^g d0 = No flaming droplets/ particles in EN 13823 within 600 s; d1 = no flaming droplets/ particles persisting longer than 10 s in EN 13823 within 600 s; d2 = not d0 or d1.</p> <p>Ignition of the paper in EN ISO 11925-2 results in a d2 classification.</p> <p>^h Pass = no ignition of the paper (no classification); Fail = ignition of the paper (d2 classification).</p> <p>ⁱ Under conditions of surface flame attack and, if appropriate to the end-use application of the product, edge flame attack.</p>	

To be continued...

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Test Report

No. AJHG2009001547FB-01

Date: OCT.21, 2020

Page 6 of 6

Photo Appendix:



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