

ST/771-FT



Description

Self-adhesive film designed for cutting plotters, ideal for elegant decorations with frosted effect on glasses, crystal glasses and mirrors, even more enhanced when the film is hit by direct light. The film is ideal for partial or full decorations on large glass walls, thanks to the adhesive with small channels called "FTX Air Free System" which favours air ejection upon application. Ideal for outdoor and indoor use. Reaction to fire certification (B-S2-D0). Dry application recommended.

Colori: transparent frosted.

Technical Information

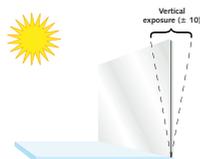
Film:	Calendered P.V.C.
Film Thickness (without adhesive):	80 +/- 3% µm (Op. Inst. n° 4).
Liner:	monosiliconated PE coated white paper "Air Free FTX system" technology.
Release:	4 +/- 3 N/m (FTM10).
Adhesive:	acrylic ultra-permanent at high cohesion.
Grammage:	25 +/- 5 g/m2.
Peel 180° after 20 min.:	min. 350 N/m on steel at 20°C (Op. Inst. n° 7).
Peel 180° after 72 h.:	min. 650 N/m on steel at 20°C (Op. Inst. n° 7).
Application method:	dry method.
Application temperature:	suggested between 12 and 28°C.
Shrinkage:	< 0,2 mm after 48 h. at 70°C on steel (Op. Inst. n° 8).
Temperature resistance:	from -50°C to +90°C adhered to steel no variation (Op. Inst. n° 15).
Reaction to fire classification:	B-S2-D0 (Standard EN 13501-1:2007+A1 Classification report CSI n° 0626DCREA14_3).
Seawater resistance:	adhered to steel no variation after 100 h. at 20°C (Op. Inst. 14).

Life expectation*:

7 years. When vinyl is exposed vertically (+/-10° from vertical) in middle European climate conditions (Central Europe), not shaped and applied correctly on a flat surface.

Reasons for a significant reduced performance level:

- Vinyl exposed horizontally/oblique (more than +/-10° from vertical): reduction up to a third of the data described above.
- Southern-European climate conditions, exposition of the vinyl to long periods of sunlight,



areas with high temperatures, high altitudes or highly polluted and/or an inadequate maintenance of the vinyl: further reduction of more than half of the date described above.

General Data

Storage: 2 years, film must be kept warehoused at room temperature (20°C / 50% R.H.) Suspended horizontally or placed in a vertically upright position in polythene bag.

Plotter cut, weeding and transportation: the cut quality of the film directly depends on the plotter used, on the wearing conditions of the blade and on the pressure exercised on it. It is therefore important to know the characteristics of the equipment used and to carry out some test in advance of cut trials on the film with blade in good conditions.

For an excellent weeding, the regulation of the cutting depth of the blade should produce a light incision in the liner.

A light pressure causes the incomplete cut of the film.

An excessive pressure causes the clean cut of the liner with consequent dragging problems of the plotter, lifting of the letters and excessive wearing of the blade.

It is recommended to effectuate the weeding operation immediately, or in the shortest time possible after cutting the film. This avoids the reunification of the adhesive and consequent weeding difficulties.

To transport the cut graphics from the liner to the surface to decorate, it is advised the use of an application tape with a medium-strong degree of adhesivity. If necessary, to ease the detachment, reverse the cut graphic on a table with the liner facing upwards and pull the liner instead of the tape.

Application: the film is suitable for applications on glass and acrylic panels, opaque and transparent. Before applying the film make a general cleaning of the surface with liquid detergent and ensure that there is no oils, waxes or other residues present, as well as the ones resulting from the cleaning, which might compromise the adhesion of the film, causing its detachment in time.

It is not recommended that the film is applied to polycarbonate panels, the emission of volatile substances might provoke a detachment of the film.

Before decoration always effectuate a compatibility trial between the self-adhesive film and the surface to be decorated.

It is recommended to apply the film in a room with a temperature between 15 and 28°C. In case of application at a temperature lower than 15°, the initial adhesion capacity of the cut graphics on cold surfaces might be compromised.

Apply the vinyl only using the dry-method. Do not use water!

This vinyl is not compatible with:

- surfaces that give out gas (out-gassing) as polycarbonate
 - non flat surfaces. Slight curved surfaces are allowed
 - porous surfaces in general either made of plastic or of other material
 - surfaces with low superficial tension, silicon, rubber, PP, PE and apolar in general
 - painted surfaces with poor adhesion of the paint to the surface underneath
 - dirty surfaces such as walls and non-smooth surfaces
 - non-cleaned or non-flat surfaces
 - flexible surfaces such as banners, truck curtains or textiles
 - gasoline vapors or spills
-

Cleaning and maintenance of decoration: use water with soft cloths and non-aggressive detergents. Do not use rough sponges and cloths, abrasive creams or very strong solvents. Cleaning with unsuitable products and tools could cause a premature deterioration of the vinyl. It is recommended to verify in advance the compatibility of the film with the cleaners used. If high-pressure washing is performed, then you must never aim the water jet on the edges of the film, as the water power might create over lifting and detachments. The water nozzle must always be kept perpendicular and never oblique to the surface that needs to be cleaned, at least at 1 mt of distance.

An extended exposure to solar radiations and atmospheric agents might provoke an early aging of the film, especially of the areas exposed to south and/or in a non-vertical position. Therefore, where it is possible, for a good maintenance of the decoration, it is advised to avoid installations in the direction of the sun.

Removal: for easy removal, if possible, heat the film with an industrial heatgun. The operations of the vinyl removal are conditioned by many factors, such as the time passed from the application, exposure of the decoration either outdoors or indoors, type of surface, temperature of the room and of the surface, etc. Therefore it is difficult to quantify and determine the speed and execution time of the removal by A.P.A. S.p.A.

Should glue traces remain on the surface, these can easily be removed with the ready-for-use liquid APA REMOVER. Before using APA REMOVER always test the compatibility of the product on a corner of the surface which has to be cleaned.

The company APA cannot be held responsible of any damage caused during the removal phase and/or damages of the surface upon which the film has been applied.

General Indications*: the values and the data given are based on tests we believe to be reliable and are typical values intended only as a source of information, and do not constitute a guarantee. The lifetime estimates are extrapolated on the base of accelerated laboratory aging tests, performed on material that hasn't been installed and applied on flat surface. It is care of the customer to test the material before the actual use and the specific application in order to determine whether the APA product is suitable for a specific purpose and appropriate to the use and the application chosen, independently from the abovementioned data and according to the appropriate methods of use.

The APA products are manufactured under an accurate control and are guaranteed free of defects of material or processing.

A.P.A. SpA cannot be held responsibility for any damages other than the substitution of the goods.

- APA guarantees to maintain the interval of the variability of the colours of its products in the best possible way, using instrumental and visual checks.
- To avoid colour variation, all the parts of the vinyl applied have to belong to the same production batch. It is also the case for decorations that are required for a long duration of time, updating or improvements of the decoration. Therefore, it is recommended to ask beforehand for the required material, belonging to the same production batch.
- The feature of a metal colour depends of the angle of vision of the products. For a uniform colour all parts must be applied maintaining the same direction of orientation.

No salesman, representative, agent or distributor has authority to supply data different from those reported in this Technical Data Sheet. To make improvements all products may be modified without prior notice.

For a safe use of the self-adhesive materials by A.P.A. it is recommended to read the dedicated safety information.

CSI SpA
Certificazione e Testing

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RAPPORTO DI CLASSIFICAZIONE *CLASSIFICATION REPORT* 0626\DC\REA\14_3

Rapporto di classificazione di reazione al fuoco del prodotto
Reaction to fire classification report of product : **FILM CALANDRATO CON
ADESIVO
ULTRAPERMANENTE**

Descrizione
Description..... : **Vedi pag. 2 / see page 2**

Per conto di
On behalf of..... : **A.P.A S.p.A.**

Indirizzo
Address..... : **Via Marradi, 1
20123 Milano**

Norma tecnica: EN 13501-1 - Classificazione al fuoco di prodotti ed elementi da costruzione -
Parte 1: Classificazione sulla base dei dati di prova derivati da prove di reazione al fuoco
*Technical standard: EN 13501-1 Fire classification of construction products and building
elements - Part 1: Classification using test data from reaction to fire tests*

Data / Date.....: **04/09/2014**

1. DATI GENERALI / GENERAL DATA :

Identificazione delle norme di riferimento / *Standard reference identification:*

- EN 13501-1:2007+A1 - Classificazione al fuoco di prodotti ed elementi da costruzione - Parte 1: Classificazione sulla base dei dati di prova derivati da prove di reazione al fuoco
- EN 13501-1:2007+A1 *Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests.*
- EN ISO 11925-2:2010 Prove di reazione al fuoco prodotti edilizi - parte 2 - innesco quando soggetto al diretto contatto della fiamma
- EN ISO 11925-2:2010 *Reaction to fire tests for building products - part. 2 -ignitability when subjected to direct impingement of flame.*
- EN 13823:2010 Prove di reazione al fuoco prodotti edilizi - Prodotti edilizi escluse le pavimentazioni esposti ad un attacco termico di un singolo elemento in combustione
- EN 13823:2010 *Reaction to fire tests for building products _ Building products excluding floorings exposed to the thermal attack by a single burning item.*

2. IDENTIFICAZIONE DELLE PROCEDURE / PROCEDURES IDENTIFICATION

- Procedura normalizzata / *Standard procedure* : : **SI / YES**
- Controllo calcoli e trasferimento dati / *Calculation and data transfer check* : **SI / YES**

3. DETTAGLI DEL PRODOTTO CLASSIFICATO / DETAILS OF CLASSIFIED PRODUCT

3.1 Natura e impiego / *Nature and end use application* :

Il prodotto **FILM CALANDRATO CON ADESIVO ULTRAPERMANENTE** è definito come un rivestimento murale decorativo. La sua classificazione è valida per le seguenti condizioni di impiego:

*The product **FILM CALANDRATO CON ADESIVO ULTRAPERMANENTE** is defined as a decorative wallcovering. Its classification is valid for the following end use application(s):*

- Rivestimento parete – Incollato su supporto incombustibile o cartongesso
- *Wall covering – Glued on non combustible substrate or gypsum plasterboard*
- Rivestimento soffitto – Incollato su supporto incombustibile o cartongesso
- *Ceiling covering – Glued on non combustible substrate or gypsum plasterboard*

3.2 Descrizione / *Description:*

Il prodotto **FILM CALANDRATO CON ADESIVO ULTRAPERMANENTE** è compiutamente descritto nei rapporti di prova in sussidio della classificazione elencati in 5.1

*The product **FILM CALANDRATO CON ADESIVO ULTRAPERMANENTE** is fully described in the test reports in support of the classification listed in 5.1.*

4. DICHIARAZIONI / DECLARATIONS

- Questo rapporto di classificazione definisce la classificazione assegnata al prodotto indicato in copertina secondo le procedure stabilite nella norma EN 13501-1 /
- *This classification report defines the classification assigned to the product mentioned on the cover in accordance with the procedures given in EN 13501-1.*
- I risultati di prova contenuti nel presente rapporto di classificazione si riferiscono esclusivamente al campione provato
- *Test results contained in this classification report relate only to the specimens tested.*
- Il presente rapporto di prova non può essere riprodotto parzialmente senza l'autorizzazione del Responsabile di Laboratorio
- *The test report shall not be reproduced except in full without the written approval of the Managing Director.*

5. RAPPORTI DI PROVA E RISULTATI DI PROVA IN SUPPORTO DI QUESTA CLASSIFICAZIONE

TEST REPORTS AND TEST RESULTS IN SUPPORT OF THIS CLASSIFICATION

5.1 Rapporti di prova / test reports

Nome del laboratorio / <i>Name of laboratory</i>	Nome del Committente / <i>Name of sponsor</i>	Numero di Identificazione del rapporto di prova / <i>Test report ref. No.</i>	Metodo di prova / <i>test method</i>
CSI S.p.A.	A.P.A S.p.A.	0626/DC/REA/14_1	EN 13823
CSI S.p.A.	A.P.A S.p.A.	0626/DC/REA/14_2	EN ISO 11925-2

5.2 Risultati di prova per prodotti da costruzione esclusi i pavimenti

Test results for construction products except floorings

Metodo di prova <i>Test method</i>	Parametro <i>Parameter</i>	Numero di prove <i>Number of tests</i>	Risultati / <i>Results</i>	
			Parametri continui media / <i>Continuous parameter average</i>	Parametri di conformità / <i>Compliance parameter</i>
EN ISO11925-2				
Attacco della fiamma in superficie <i>Surface flame attack</i> Applicazione 30 s / 30 s exposure	Fs ≤ 150 mm	6	(-)	S / Y
Attacco della fiamma all'estremità <i>Edge flame attack</i> Applicazione 30 s / 30 s exposure	Fs ≤ 150 mm	6	(-)	S / Y
Gocce/parti accese / <i>Flamig droplets/particle</i>	Innesco della carta da filtro/ <i>Ignition of the filter paper</i>	12	(-)	N / N
EN 13823				
	FIGRA _{0,2MJ}	3	0	(-)
	FIGRA _{0,4MJ}		0	(-)
	LFS < Edge		(-)	S / Y
	THR _{600s} [MJ]		0,6	(-)
	SMOGRA [m ² /s ²]	3	14,3	(-)
	TSP _{600s} [m ²]		57,8	(-)
	Gocce/parti accese <i>Flaming droplets/ particles</i>	3	(-)	N / N

6. CLASSIFICAZIONE E CAMPO DIRETTO DI APPLICAZIONE CLASSIFICATION AND DIRECT FIELD OF APPLICATION

6.1 Riferimenti e campo diretto di applicazione / Reference and direct field of application

Questa classificazione è stata condotta conformemente alla clausola 8.2 della EN 13501-1:2007+A1.
This classification has been carried out in accordance with clause 8.2 of EN 13501-1: 2007+A1.

6.2 Classificazione / Classification

Il prodotto **FILM CALANDRATO CON ADESIVO ULTRAPERMANENTE** in relazione al suo comportamento alla reazione al fuoco è classificato:
*The product **FILM CALANDRATO CON ADESIVO ULTRAPERMANENTE** in relation to its fire reaction behaviour is classified.*

B

La classificazione aggiuntiva in relazione allo sviluppo di fumo è:
The additional classification in relation to smoke production is:

s2

La classificazione aggiuntiva in relazione alle gocce/particelle accese è:
The additional classification in relation to flaming droplets/particles is:

d0

Il formato per la classificazione di reazione al fuoco per i prodotti da costruzione eccetto i pavimenti è la seguente:

The format of the reaction to fire classification for construction products except flooring is:

Comportamento al fuoco <i>Fire behaviour</i>		Sviluppo di fumo <i>Smoke production</i>			Parti infiammate <i>Flaming droplets</i>	
B	-	s	2	-	d	0

6.3 Campo di applicazione / Field of application

Questa classificazione è valida per le seguenti condizioni di impiego /
This classification is valid for the following end use conditions:

- Incollato su supporto incombustibile o cartongesso
Glued on non combustible substrate or gypsum plasterboard
- Senza cavità
Without gap
- Tipo di fissaggio: incollato
Type of fixings: glued



Questa classificazione è anche valida, per i seguenti parametri del prodotto /
This classification is also valid, , for the following product parameters:

- Colore: qualsiasi
Colour: any

- Altre denominazioni commerciali incluse:
Other trade names included:
SERIE NW
SERIE S
SERIE FS
SERIE T
SERIE ST
SERIE AP (prodotti con processo di calandratura e dotati di adesivo ultrapermanente / *manufactured with calendering and with ultrapermanent adhesive*)
SERIE L (prodotti con processo di calandratura e dotati di adesivo ultrapermanente / *manufactured with calendering and with ultrapermanent adhesive*)

7. LIMITAZIONI / *LIMITATIONS*

7.1 Avvertimento / *Warning*

Questo documento non rappresenta un'approvazione di tipo od una certificazione del prodotto
This document does not represent type approval or certification of the product.

La classificazione assegnata al prodotto in questo rapporto è relativa ad una dichiarazione di conformità del fabbricante nel contesto del sistema 3 di attestazione di conformità e marcatura CE ai sensi della regolamento sui prodotti da costruzione.

Il fabbricante ha presentato una dichiarazione, che è conservata in archivio. Questo conferma che il progetto del prodotto non richiede specifici processi, procedure o fasi (p.e. senza aggiunta di ritardanti di fiamma, limitazione del contenuto organico, o aggiunta di cariche) che sono diretti a migliorare la prestazione al fuoco per ottenere la classificazione ottenuta. Come conseguenza il fabbricante ha concluso che il sistema 3 di attestazione è appropriato. Il laboratorio di prova, pertanto, non ha svolto alcun ruolo nel campionamento del prodotto per la prova, anche se conserva riferimenti appropriati, forniti dal fabbricante, a fornire la tracciabilità dei campioni provati.

The classification assigned to the product in this report is appropriate to a declaration of conformity by the manufacturer within the context of system 3 attestation of conformity and CE marking under the Construction Products Regulation.

The manufacturer has made a declaration, which is held on file. This confirms that the products design requires no specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic content, or addition of fillers) that are aimed at enhancing the fire performance in order to obtain the classification achieved. As a consequence the manufacturer has concluded that system 3 attestation is appropriate.

The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide for traceability of the samples tested.

DATA
Date

RESP. DIVISIONE
Division Head

RESP. DEL CENTRO
Managing Director

04/09/2014

Paolo Mele

Raoul Gatti