

Stage flats

Reduce the ecological impact of your flats



STAGE FLATS: A MAJOR ENVIRONMENTAL CHALLENGE

Flats, also called picture rails or artificial walls, are a recurring element in set design. They are used in all cultural sectors to build the walls of a set and their environmental impact can be significant.

**Flats and their stands represent
an average of**

60 % of a film set



In the cinema, in theater as well as in any event that requires walls for scenery, fake walls are made. They are assembled wood panels, on which materials will be applied to create the background: paint, plaster, wallpaper, fabrics.

Each wooden panel leans against vertical reinforcements: beams, jacks, struts, brackets. Sometimes the structure is reinforced by a bracket (stiffener) on the top to ensure the stability of the entire structure.

43,055 sq. ft.
**of sets were built on the
french series Versailles**

Flats are generally made up of a rectangular frame made of softwood slats, one side of which is covered with plywood (poplar or okoume wood). Sometimes, more in the event and audiovisual sector, with medium density fiberboard,

a composite wood. The elements are assembled together, either with screws, nails or glue.

Although there are several sizes of constructed flats and no standardization within the industry, its manufacture has more or less naturally followed the standards of the sizes offered in the plywood market.

Since Méliès until now, this element has evolved a lot in the cinema. Initially manufactured to be stored and reused (known as the Repertory Flat), this element has been manufactured for each production since the 80's and disposed of at landfill sites. There are many reasons for this: real estate pressure, lack of storage space and the low cost of materials.

**Average cost of a 300 X 150 flat:
(labor, workshop and material)**

170 euros before tax

Manufacture of 10 flats:

8 hours of labor



**Currently,
tons of wood are thrown
away after each
production**

REDUCE THE ENVIRONMENTAL IMPACT OF YOUR SETS

STAGE FLATS

Choose a standardized flat that can be stored and reused in a variety of areas:

In the film and audiovisual industry: switch back to the «Repertory Flat», which is designed to be stored and reused.

In the cultural sector: apply a fireproof and eco-responsible substance to flats to meet the M1, M2, M3 standards.

In the construction sector: The structure of flats allows them to be reused as partitions or siding.

In the craft industry, for the individual do-it-yourselfer and associations: when properly assembled for disassembly, the elements of flats can be reused easily and cheaply.



Where can I find flats for rent or for reuse in Paris Region?

La Réserve des Arts
La Ressourcerie du Cinéma
La Ressourcerie de la Cartoucherie

VERTICAL STAND

Rent your stands (jacks, struts, brackets, etc.) or make them with a folding system, which can be reused and easily stored in a film studio. This will save a large amount of wood.



MAKE ECO-RESPONSIBLE FLATS

HOMOGENIZE YOUR FLATS

- **Homogenization of the thickness of flats**

For the frame, use 70mm X 22mm section brackets.

For the laminated panel, choose a panel 8 mm thick.

In this way, all the reused flats will be of the same thickness and will allow for the assembly of flats coming from different productions.

8 mm thick plywood makes the flat more rigid, thus avoiding the installation of a «corner brace batten» (wooden reinforcement triangle) and therefore, the overconsumption of wood.

- **Homogenization of the height and width of flats**

Recommended sizes: 250 X 120, 300 X 150, 250 X 60

In the cinema, the height and squareness of the flats has to be rigorous. To allow for the reuse of flats, you need to have exactly the same heights.

Adapting to the plywood sizes available on the market avoids unnecessary wood waste.

A height of 2.50 meters will allow for the reuse of flats in events since the maximum height of the partitioning is often 2.50 meters. This also applies to the building sector since the minimum height of a living room is 2.50 meters



face to face

ECO-DESIGN YOUR FLATS

Wood

If reuse is not possible, prefer wood produced in France or in Europe to reduce the carbon impact of transportation.

For the choice of materials, feel free to consult the **FDES sheets**, which present the results of the analysis of the life cycle of a product as well as its sanitary information in order to calculate the performance of a construction in eco-design.

Look for the **FSC and PEFC eco-labels** that guarantee sustainable forest management and the environmentally friendly use of forest resources.

Screws and bolts

To build the frame, prefer high quality Torx screws (star-shaped screws) that are 60 mm long and easy to remove when you want to recover the material for reuse.

To assemble flats, lag bolts are also suitable for reuse and can be reused many times on other constructions.



MATERIALS FOR FLATS

The different textures applied to the surface may make flats unsuitable for reuse. Using Repertory Flat techniques allows for their reuse on multiple productions. Choose the most ecological products/materials possible.

1. Wrap with fabric, burlap, carpeting, or coverings made of hemp or linen.
2. Use Variovlies renovation wallpaper, craft paper or American paper before applying the coating paint.

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For paints, consider the Enviro + zero discharge paint tool cleaner. This machine allows for the reuse of water and the eco-designed product that breaks down the paint molecule in a closed circuit.

Preferred products:

- Vellum or burlap Wallpaper
- Reversible glue Wallpaper glue
- Bati Reno paper (to paint on)
- Paper paste on underlay for an old wall effect
- Recycling felt underlay made in France
- Linen fiber underlay made in France
- German ecological embossed paper to replace sandpaper



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