

# GUIDANCE

on *BEST PRACTICES*  
for *COLOUR SCHEMES*



# accessibility



UPPF<sup>1</sup>, on the basis that what is good for a minority becomes good for the remaining majority, has taken the initiative to develop this guide on good colour practices, in partnership with UNEA<sup>2</sup>, UNTEC<sup>3</sup>.

To enable our visually impaired partners to read this brochure properly, all text is in 14 point.

<sup>1</sup> PAINT FINISHES PROFESSIONAL UNION

<sup>2</sup> NATIONAL UNION FOR ADAPTED BUSINESSES

<sup>3</sup> NATIONALE UNION OF CONSTRUCTION ECONOMISTS

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## foreword

**The law of 11 February 2005** guarantees accessibility to everything and for everyone. The regulations immediately apply to new constructions. Existing buildings are also concerned. The owners or operators of approximately 650,000 establishments open to the public (ERP) must have carried out an audit of their establishments before 1<sup>st</sup> January 2011 and have then brought them into compliance by 1<sup>st</sup> January 2015 at the latest.

**Article 2 of Law 2005-102 of 11 February 2005 defines the concept of disability:**

“A disability, within the meaning of this law, is any restriction of activity or participation in society experienced in one's environment due to a substantial, lasting or permanent alteration of one or more psychological functions, multiple disabilities or a disabling health problem.”

While all users are impacted by the colour scheme of a premise, some are more so than others.

According to INSEE (HID 2000 study), there are 1,900,000 visually impaired people in France, 65,000 of whom are blind. One in 10,000 newborns suffers from vision disorders. This guide to best practices is more than enough help for any construction and renovation actor when it comes to designing living spaces. Its aim is to improve adaptation of workplaces in companies and be one of the essential tools in the painter's daily professional activity.

**We hope this guide will provide a better colour living for ...all of us.**

# 45%

disabilities arise as we go through life.

In 2002, 12 million French people defined themselves as disabled, whereas 80% of all disability is not visible. One in eight people we know is such a person.



## One million

people suffer from a mental disability, 850,000 from an isolated motor disability and more than eight million people are affected by a motor disability. 370,000 people use a wheelchair. By 2030, the share of over-65s will increase from 20% to 25%. Ageing sooner or later comes with capacity limitations

**Colour matching** is dictated by current trends and is subject to taste. Two juxtaposed colours can be more or less distinguished depending on the value of the contrast between them and the visual acuity of the people looking at them. When a contrast is required to facilitate visual identification of an architectural element, the difference between the reflection index of the light of the element to be identified and the reflection index of the light of its environment must be at least 50%. For written panels, logos, pictograms etc., **the difference in contrast with the background of the support is at least 70%.**

**Calculation formula:** Contrast in % =  $\frac{B1-B2 \times 100}{B1}$

B1 = Light reflection index of light colour  
 B2 = Light reflection index of dark colour

In the accessibility regulation inspection guide, two tools are recommended for checking contrasts:

- The tool used as a reference for creating web pages. This is used to determine the two colours to be tested and gives an assessment of how compatible they are in terms of contrast. <http://www.visionaustralia.org.au/info.aspx?page=961>
- The table drawn from "Orientation and reference points in public buildings" (1988) by Arthur P. and Passini R., reproduced opposite shows the contrast, in percentage, between two different colours.

## Reference table of contrasts between two colours

	Beige	White	Grey	Black	Brown	Pink	Purple	Green	Orange	Blue	Yellow	Red
Red	78	84	32	38	7	17	28	24	62	13	82	
Yellow	16	16	73	89	80	58	75	76	52	79		
Blue	75	82	31	47	7	50	17	13	56			
Orange	44	60	44	76	59	12	47	50				
Green	72	80	11	53	18	43	6					
Purple	70	79	5	56	31	41						
Pink	51	65	37	73	53							
Brown	77	84	26	43								
Black	87	91	58									
Grey	69	78										
White	28											
Beige												

The difference in contrast is at least 70%



- A photometer is used to measure the colour reflection index.
- The light reflection indices for the following colours are:
  - Red 13% • Yellow 71% • Blue 15% • Orange 34%
  - Green 17% • Purple 18% • Pink 30% • Brown 14%
  - Black 8% • Grey 19% • White 85% • Beige 61%
- The calculation formula together with these values results in the table above.
- For users who cannot measure the reflection value, the table indicates which combinations are recommended or not advised.
- The values vary depending on the environment.



**Current trends** and the influence of personal preferences determine the colouring of living spaces but the core principles must apply.

For example, ceilings are generally white because this colour, and even off-white, reflects light and expands rooms. For walls, light, solid colours are preferable. Dark colours correct the impression of too large spaces and are to be avoided in small spaces. Bright colours hinder the perception of distance.

A soft grey expands the space and when combined with warm pastels (yellow, ochre, orange, red, soft pink) warms rooms that lack direct sunlight, while cool pastels (blue, green, purple) stabilize the light.

**In general**, the use of **matt finish paints** is recommended, as gloss finishes can result in glare in some cases. If wall coverings are chosen, these should be solid rather than striped or having patterns that can't easily be distinguished between.

**For walls, floors and doors**, the colour contrast of two adjacent surfaces should be at least 50%. Reference should be made to the checking tools (see page 4).

**For glass doors**, the regulations recommend two strips at least 5 cm wide, one positioned 110 cm from the ground and the other 160 cm wide. In the case of possible back-lighting, good practice recommends placing this strip on both sides of the door and that the colour is not confused with the landscape beyond this door.



All the main decoration principles associated with the recommendations of the accessibility law allow for a good perception of the space and the definition of good practices.

### Ceilings

Sufficient contrast with the walls allows for good perception of a room. If the ceiling and the walls have the same colour, the moulding must be of a colour whose contrast makes it possible to clearly distinguish the separation between the ceiling and the walls.



### Windows

The colour of a window frame must be different from that of the walls.



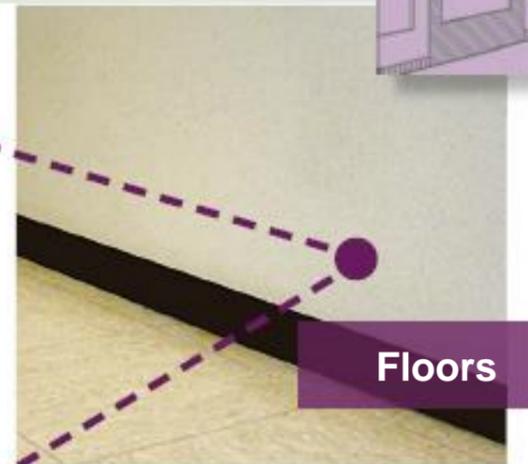
### Walls

Solid and pale so that walls stand out from the floor. The baseboard with a strong shade makes it possible to mark out the floor more strongly. Any protruding angles can be emphasised with some colour.



### Floors

Solid and pale so that ceilings stand out from the floor. The baseboard with a strong shade makes it possible to mark out the floor more strongly. Obstacles can be signalled by using a different colour.



### Doors

These can be the same colour as the walls or a different colour. Depending on the case, their frames will be treated differently:

- > a door frame for a door that is the same colour as the walls should be a different colour,
- > a door frame that is a different colour from the walls needs to be the same colour as the door or the wall.



## Accessories

Handle, switch, doorbell, grab bar, moulding, baseboard, stringer, etc. are both useful and offer reference points. Bright, strong colours should be used for these. A different colour for each accessory is desirable. So that, now matter how it is positioned or in which room the accessory is located, it will be easier to see. Accessories must stand out from a colourful atmosphere:

- dark handle with light door
- light handle with dark door

## Furniture

The same rules must apply to the floor and walls. The rule concerning accessories will be applied in particular to handles, locks, etc.



## Obstacles

Pilers, barriers, etc. Particular attention needs to be paid to choosing their colour, especially if obstacles are located in transit areas.



## Toilets

Accessories should stand out clearly, especially taps, electrical controls and toilet seat lids



## For movement is habitual

or occasional, we often encounter architectural barriers that must be safely worked around or overcome. Autonomy may be reduced, depending on age or mobility, and on the size or complexity of the premises. A carefully chosen colour scheme can make orientation and movement easier in complex locations. To understand each establishment, the colour legend must be defined at reception. Thus, floors and specific parts will have a particular colour allowing the user to easily determine their location.

**The main principles of colouring (contrasts) associated with the recommendations of the accessibility law make it possible to define good practices for:**

## Floors

Contrast can be formed by both colour and a difference in material. Non-slip materials are expressly desired.

Colour distinguishes one place from another. These are used to go from one place to another following a coloured path. Thus, a corridor may have several colour juxtapositions. These juxtapositions need to decrease over the length of the corridor in accordance with the intersections and doors. Moving from one point to another is facilitated by a coloured strip from the reception area to the desired location.

**The colour** makes it possible to signal obstacles such as posts, a difference in level, etc. Some establishments (hospitals, CARE HOMES FOR DEPENDENT PERSONS (EHPAD), ETC.) directly specify these recommendations in projects.

## Walls

Walls are different to floors. A rail or handrail with a strong colour provides support when moving around.

## Stairs

They are composed of an alert strip, two handrails, steps, risers and stair nosings. Each element is unique and for safety reasons, must be easily identifiable. All polished materials not including any surface treatment or the application of non-slip features (in particular concrete, stone, metal, polished glass) are prohibited.

A **caution signal** to a visually impaired person can be assured through various **means and techniques**, including simply changing the texture of the flooring. Afnor standard NFP 98-351 defines a type of caution signalling strip that must be implemented at the edge of railway platforms and when pavements are lowered in front of pedestrian-protected street crossings.

If the decision to fit the top of a staircase with such a caution strip is taken by a client, **it is important that its location complies with the standard**. Whatever the means of caution signalling chosen, it should be designed and implemented uniformly for all staircases in the same building. In addition, its relief must not create a risk of falling.

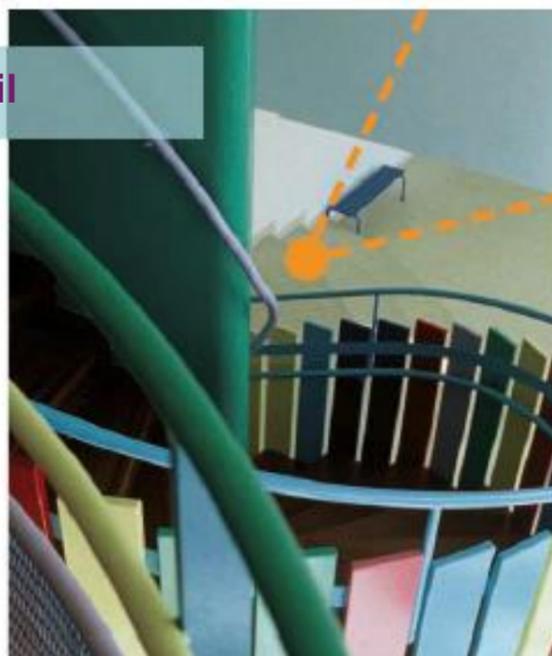
## Caution signalling strip

At the top of the staircase, a floor covering must allow for caution signalling at a distance of 0.50 m from the first step by means of a visual and tactile contrast. The landings are not covered by this requirement. Caution signalling must be present along the entire width of the staircase.



## Handrail

It must contrast with the supporting wall and exceed the length of the step (the "tread width" required for stairs) before and after.



## Steps

Good visibility of the first step in the downwards direction is particularly important.



## Risers

The first and last steps must have a riser of a minimum height of 10 cm, visually contrasted with the step.



## Stair nosings

Good contrast between the stair nosings and the flooring, steps and landings is essential to allow accurate perception of the shape and ends of the stairs. It is advisable to use colour or tone oppositions, or lighting effects. The contrast can be achieved either by differentiating the stair nosings or by suitable decorative elements.



The **law on accessibility** for public access buildings, workplaces and housing sets out what is mandatory and what is recommended. The table below summarises this.

	ERP Workplaces		Housing	
	MANDATORY	RECOMMENDED	MANDATORY COMMON AREAS	RECOMMENDED
CEILINGS		●		●
WALLS		●		●
DOORS		●		●
Signage marking glass doors	●		●	
WINDOWS		●		●
MOULDINGS, SKIRTING BOARDS, RAILS		●		●
FURNITURE		●		●
OBSTACLES	●		●	
TOILETS		●		●
FLOORS		●		●
STAIRS				
Contrasting handrail/wall	●		●	● FOR ENCLOSURES
Contrasting stair nosings	●		●	● IF REQUESTED BY THE OCCUPANT
Contrasting step risers	●		●	● IF REQUESTED BY THE OCCUPANT
Caution signalling strip	●		●	● IF REQUESTED BY THE OCCUPANT



### Signage is used to:

- mark out a route
- orientation around the premises
- direct to accesses, services and evacuation points
- warning of risks
- inform

**The signage must be clear and simple in compliance with existing standards and if possible homogeneous.** A signage panel must be long-wearing. Lighting must be sufficient (100 lux) with no colour changes. It is recommended that the signage panel be adapted to the viewing angle of a person standing or sitting without hindering movement and positioned so that it can be approached very closely by the visually impaired person, without hindering the access of other users. If it is located at a height below 2.20 m, a visually impaired person must be able to approach it at less than one metre. **The colours used must contrast with the backgrounds and limited be no more than two colours.**

### Shapes and colours... standardised signage have safety criteria that must be met.



Yellow triangles with black edges indicate a warning



Yellow-orange squares are used for chemical labelling



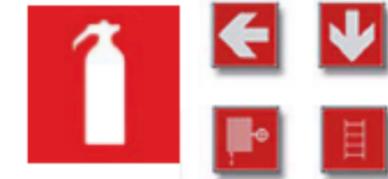
White circles circled and crossed with red mean a ban



Blue circles signal an obligation or notice



Green squares indicate the presence of first aid materials and equipment



Red squares indicate the presence of fire fighting equipment



OBSERVATION DISTANCE	LETTER SIZE (ONLY ONE LINE)	SIGNAGE SIZE (LOGO OR PICTOGRAM)
Metre	Millimetre	Millimetre
1	30	50
2	60	100
5	150	250
10	300	500

The size of the letters and pictograms needs to vary according to the observation distance.

Under no circumstances may the height of the writing be less than 15 mm for signage and information relating to orientation.

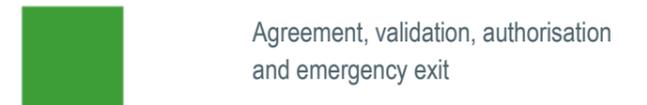


### The essential codes

**RED**



**GREEN**



**BLUE**



**YELLOW**



**BROWN**



**Floor marking...** Each area designed for the public must be locatable by means of markings on the ground and vertical signage.



**Floor marking**

**Size of adapted seating**

BB Minimum width : 3.30 m  
 Minimum length : 5.00 m

This specific location can be identified by paint in bright blue with a white logo in the centre or with a white pictogram on the periphery of the location.



**Signage**

**Vertical signs**

B6a1 or B6d sign No parking allowed

M6h sign Disabled access only

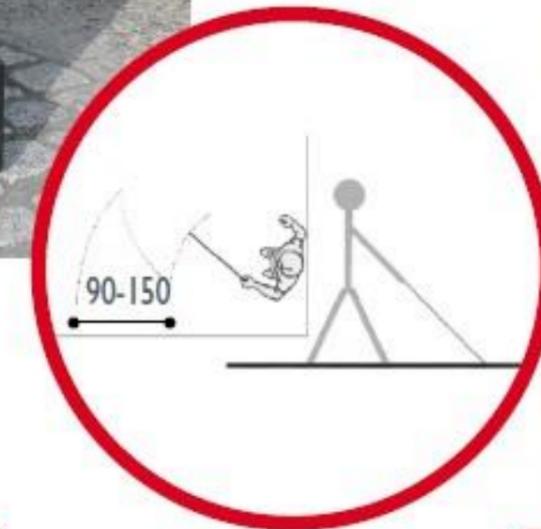
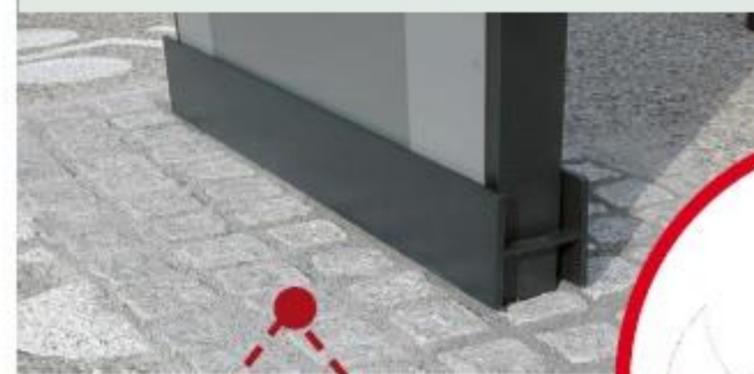
Ordering possible at special site



**Pillars, posts and furniture need some contrasting colour, either contrasting the floor or background:**

- 10 cm minimum height around or on each side of the support
- across a length greater than or equal to one third of its width
- at a height between 1.20 m and 1.40 m

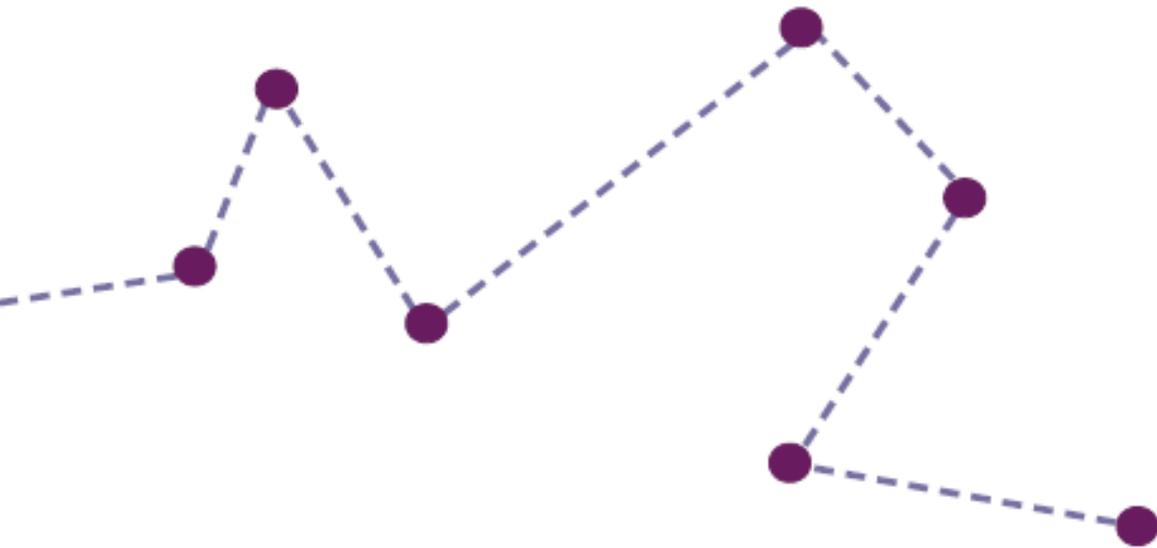
**For pillars or posts less than 1.30 m, contrast needs to be present in the upper section at a suitable height allowing an equivalent result to be achieved.** (source: CERTU)





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# accessibility

