

Use area classifications



Selecting a floorcovering that will satisfy the actual or expected service requirements is essential if a product is to perform up to the end user's expectations. With so much product information now available, it is hardly surprising that selection can sometimes be difficult.

Polyflor vinyl floorcoverings, for example, are manufactured in a range of thicknesses, with differing levels of filler and constructions, to suit a variety of applications. In addition, some vinyl floorings have specialist features such as acoustical, static control or slip-resisting properties. These are the variables from just one manufacturer!

So in order to help the end user and/or the building designer make an informed choice, the majority of Polyflor products now show the European use area classifications and the Agrément ratings. The Use Area Classifications can only be claimed if the products meet the requirements of the performance criteria that have been laid down. The Agrément rating is awarded by one of the national Agrément assessment bodies and only after an independent assessment of the product, both in laboratory conditions and on-site use.

A basic understanding of both systems is useful when making decisions on suitability of

CLASS	SYMBOL	LEVEL OF USE	DESCRIPTION
		domestic	areas considered for residential use
21		Moderate	Areas with low or intermittent use
22		General	Areas with medium use
23		Heavy	Areas with intense use
		commercial	areas considered for public and commercial use
31		Moderate	Areas with low or intermittent use
32		General	Areas with medium traffic
33		Heavy	Areas with heavy traffic
34		Very Heavy	Areas with intense use
		industrial	areas considered for light industrial use
41		Moderate	Areas where work is mainly sedentary with occasional use of light vehicles
42		General	Areas where work is mainly standing and/or with vehicular traffic
43		Heavy	Other light industrial areas

Use area classification table

products. A general guide to both systems follows:

17.1 EUROPEAN CLASSIFICATION EN 685

This European Norm describes the various levels of use area, the relevant icons and typical applications. These typical applications may vary from country to country as room usage

varies and some applications may require a higher rated product.

The European system has three specific use categories, with sub-divisions based on type and intensity of traffic (see the above chart.) Individual EN product specifications detail the performance and physical criteria that a

product must meet to achieve the classification - and products can meet the criteria of all three groups. When a higher classification number is claimed, the product will meet all the requirements of the lower classes in that group.

The individual EN product specifications allow for products of different filler levels and abrasion resistance and define minimum overall and wear layer thickness for each classification. Homogeneous products, being 100% wear layer, are classified using the minimum wear layer thickness and the overall thickness. Compared to an heterogeneous product of the same classification which would give a typical life expectancy of 10 years, a 'P' abrasion group homogenous product has twice as much useful life and as such the life expectancy would be 20 years in a class 34/43 use area.

17.2 AGRÉMENT SYSTEM

The Agrément system, which originated in France, has been in use for many years. The ratings were based on four key physical properties. The results which the product achieved against a test criteria in each category gave it the overall rating. (The higher the number, the better the performance.)

The overall performance was then quoted as a UPEC rating and this system is still recognised today in France. In 1987, the scheme for floorcoverings was revised, but still retained the basic concepts that made the scheme so

useful. The revision, carried out in conjunction with the European floorcovering manufacturers, made the overall scheme simpler. As all vinyl floorcoverings achieved a C2 rating when tested, it was felt unnecessary to include this and the new system concentrated on the U, P and E ratings.

The new scheme was termed the GWS system, with G being the general classification ranging from 1 to 5 and being a combination of the previous U and P ratings. W indicates that the product can tolerate wet cleaning but not standing water. WS indicates the product can tolerate standing water by having the joints welded. The W and S replace the previous E rating.

A comparison of both ratings is as follows:

G1 is equivalent to U₂ P₂

G2 is equivalent to U₂+P₂

G3 is equivalent to U₃ P₂

G4 is equivalent to U₃ P₃

G5 is equivalent to U₄ P₃

No W rating is equivalent to E₁

W rating is equivalent to E₂

WS rating is equivalent to E₃

The Agrément bodies produce a comprehensive listing of typical use areas, which are too numerous to list here, together with the product rating required. Contact Polyflor or

their overseas agents for the address of the local national body that can provide this information.

17.3 EUROPEAN NORMS

European Norms - or "EN"s - are aimed at harmonising industry standards throughout the European Union and EFTA countries, and have now replaced the old British Standards relating to floorcoverings.

The standards are:

EN 649 covering homogeneous and heterogeneous vinyls, and replacing BS 3261A.

EN 650 covering jute or polyester backed vinyls.

EN 651 covering homogeneous and heterogeneous vinyls on PVC foam, and replacing BS 5085.

EN 652 covering vinyl flooring with a cork based backing.

EN 653 covering expanded PVC flooring such as cushion vinyls.

EN 654 covering semi-flexible PVC tiles, and replacing BS 3260.

EN 655 for PVC tiles with a base of agglomerated cork and a PVC wear layer.

The relevant ENs which apply to Polyflor vinyl floorcoverings are 649, 651 and 654.

Under EN 649, products are given an abrasion group rating. There are two test methods accepted for abrasion which have an established correlation; EN 660 Parts 1 and 2. Either can be used to establish the abrasion category.

The ratings are expressed as T,P, M and F. These groups were chosen with reference to the already well established Agrément system, and relate to the idea of a notional 10-year life expectancy in a given use area. The initials come from the French: Transparent, Pas or Peu chargé, Moyen chargé and Fortement chargé, and basically relate to the amount of filler (chargé) used in a formulation.

EN 649 defines the performance criteria which products must meet in order to claim Use Area Classification under EN 685, as discussed in Use area classifications.

In addition to the vinyl specification, specifications for rubber flooring have now been published. They are:

EN 1817 Homogeneous and heterogeneous rubber flooring.

EN 1816 Homogeneous and heterogeneous rubber flooring with foam backing.

EN 12199 Homogeneous and heterogeneous relief rubber flooring.

PROPERTY	(FRENCH TERM)	SYMBOL	RANGE
Wear	(Unsure)	U	1-4
Penetration	(Poinçonnements)	P	1-4
Water resistance	(Eau)	E	1-3
Chemical resistance	(Chimique)	C	1-3