DA
Flooring, paving and Setts Requirements for safety in use IP 10/00

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ABRASIONE NB LA PROVA UNI EN E' CHIAMATA ANCHE CAPON

Table 4 Exposure of floorings to wear during service life

Class of use	Number of pedestrians	Number of journeys across floor each day	Number of days per year	Service life expectancy without significant wear (years)	Approx total of number of pedestrian journeys
Intensive (eg airport, shopping mall)	70,000+	1	350+	20	500,000,000
Medium (eg office building)	500	2	250	20	5,000,000
Low (eg individual residence)	4	4	350+	10	50,000

The draft European Standards for concrete paving slabs and blocks have recommend that the dividing line between 'light' and 'intensive' traffic should be 23 mm. The results in Table 3 seem to confirm that this is a reasonable and realistic dividing line provided that division does not be come too absolute. Using these numbers the following guidance is proposed.

Abrasion resistance value	*Suggested usage*
< 23	Intensive use (eg shopping malls)
23–30	Moderate (eg office buildings)
> 30	Individual (eg houses)

However, this guidance does not, at present, take into account the required service life of the surface, nor the cleaning and maintenance regime.

It is now possible to begin to estimate the link between service life and expected abrasion and so the following classification is suggested:

- Less than 23 seems to be suitable for heavily trafficked areas. This is approximately equal to 500 million pedestrian journeys during th service life of the floor.

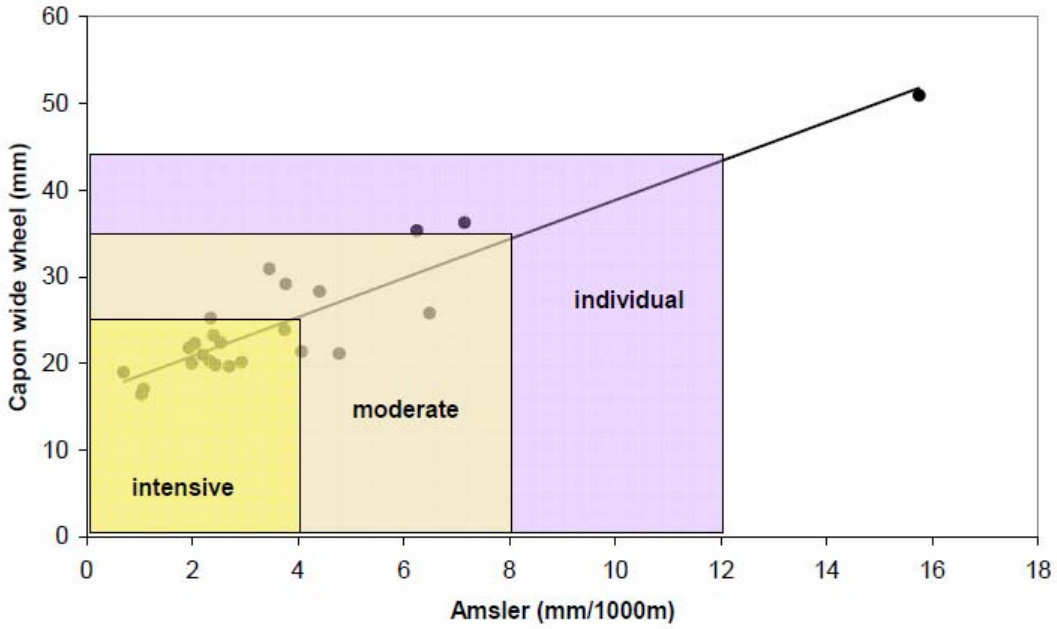
- Between 23 and 30 is likely to be satisfactory for offices, etc (but not shops, stations etc). This is approximately equal to 5 million pedestrian journeys during the service life of the floor.

- Greater than 30 is probably restricted to houses or apartment blocks. This is approximately equal to 50,000 pedestrian journeys during the service life of the floor.

Use	*Examples*
Intensive	*. public halls in stations, airports, shopping centres;* *. halls in an apartment block with more than 30 housing units;* *. common rooms of an office building with more than 50 employees;* *. floorings in supermarkets, etc.*
Moderate	*. common rooms of multifamily houses (with max. 30 housing units);* *. common rooms of block offices (max. 50 employees);* *. rooms with moderate commercial use.*
Individual	*. all rooms in private housing units.* *note: in this category, the areas most susceptible to wear are the ones which are directly accessible from outside.*

Table 7 Values of abrasion resistance determined by the 3 different standard test methods for the different use categories proposed in Table 6

USE / *TEST METHOD*	*INDIVIDUAL*	*MODERATE*	*INTENSIVE*
Capon wide wheel (mm)	*≤ 42*	*≤ 35*	*≤ 24*
Böhme	*??*	*≤ 38*	*≤ 27*
Amsler (mm/1000m)	*≤ 12*	*≤ 8*	*≤ 4*


Capon wide wheel (mm)
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
16
18
Amsler (mm/1000m)
individual
moderate
intensive

DA selective guide to the specification of dimension stone

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TABLE 7

TABER Abrasion limits for recommended applications

PROPOSED USE	MINIMUM TABER INDEX VALUE
	(FROM SPRY [4])
LIGHT DUTY, DOMESTIC	8
MEDIUM DUTY, LIGHT COMMERCIAL	12
HEAVY DUTY	15

Taber abrasion index	Appropriate uses
> 20-25	All uses; high abrasion resistance
15 - 20	Moderately high abrasion resistance; suitable for most uses, including high traffic prestige commercial flooring.
12 - 15	Moderate abrasion resistance; suitable for all but high traffic prestige commercial flooring.
8 - 12	Moderately low abrasion resistance; suitable only for light commercial or domestic flooring situations.
< 8	Low abrasion resistance; suitable only for domestic or light external traffic situations.