

ISO/TC 189 WG1&4

Emerging issues

Luciano Galassini
Confindustria Ceramica - Italy

November 9, 2018



Our analysis is based on the assumption that it is necessary to overcome in the standards the distinction between GL/UGL for BIa tiles. Our considerations are as follows:

- ✓ **There is no need to create further groups of tiles with $E_v \leq 0.5$ %. The BIa group shall remain as it is and not be further divided;**
- ✓ **there is the need to have a new international test method to determine the wear resistance of tiles. Such a test method shall be applicable to all types of tiles (AIa, BIa, AIb, BIb, AIIa; BIIa, AIIb, BIIb, AIII and BIII) and shall be based on a multi-attribute criteria.**
- ✓ **Wear resistance requirements lead to a wear resistance classification which is related to the final destinations.**

New standard on WEAR RESISTANCE



**Standard on surface abrasion
as described in ISO 10545-7
(PEI method)**

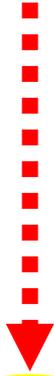


WALL

residential, light
commercial use in
office space,
reception areas

normal commercial
and light
institutional use in
public spaces of
restaurants and
hospitals, auto
show-rooms

shopping malls, stores,
commercial kitchens, work
areas, laboratories, service
areas, shipping/receiving,
and exterior decks, extra-
heavy and high-impact use
in food plants, dairies,
breweries and kitchens



W

H

HH

HHH

WEAR RESISTANCE PERFORMANCE LABEL

WEAR RESISTANCE LABEL (WRL)

W

H

HH

HHH

WHY 4 ?

- Necessity to avoid further differentiations as with the current technology ceramic surfaces are more similar than they were in the past.
- Complete change with PEI classification. Necessity to introduce a new way of thinking in the commercialization of ceramic floor tiles also considering new competing materials.

?	W	H	HH	HHH
Deep Abrasion (ISO 10545-6) or similar				
Surface Abrasion (600/6000 cycles with PEI) to evaluate GLOSS variation (Dgloss) (ISO 10545-X)				
Weight loss (WL) (ISO 10545-X)				
Resistance to Scratch (ISO 10545-Y)				

	W	H	HH	HHH
Deep Abrasion (ISO 10545-6) or similar	No requirement	> 393 mm ³	176-393 mm ³	□ 175 mm ³
Surface Abrasion (600/6000 cycles with PEI) to evaluate GLOSS variation (□gloss) (ISO 10545- X)	No requirement	PEI600 36 □ □gloss □ 50 + ISO stains - only Cr (min class 3)	PEI600 □gloss □ 35 + ISO stains – only Cr (min class 3)	PEI6000 □gloss □ 5 + ISO stains – only (min classe 3)
Weight loss (WL) (ISO 10545- X)	No requirement	PEI6000 0.035 □ WL < 0.045 mg/mm ²	PEI6000 0.028 □ WL < 0.035 mg/mm ²	PEI6000 WL < 0.028 mg/mm ²
Resistance to Scratch (ISO 10545-Y)	No requirement	minimum 4	Minimum 5	Minimum 6