

21st World Ceramic Tiles Forum

International PCR

Shanghai, November 2014





- **WCTF Rio Janeiro 2013:** work item assess development international PCR
- **24 September:** first WCTF international PCR meeting
 - Two PCRs: **US PCR for flooring and CET PCR for ceramic tiles**
 - **Conclusion:** assess differences/common points of PCRs
- **US PCR for flooring:** developed by NSF International
- **CET PCR for ceramic tiles:** developed by CET Environment WG

US PCR and CET PCR



	US PCR for flooring	CET PCR for ceramic tiles
Reference standard	ISO 14025. Environmental labels and declarations - Type III environmental declarations - Principles and procedures	EN 15804. Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products (<u>in accordance with ISO 14025</u>)
Scope	Carpet floor coverings Resilient floor coverings Laminate floor coverings Ceramic tiles Wood flooring	Ceramic tiles for internal and/or external flooring and walls coverings and façade cladding

US PCR and CET PCR



	US PCR for flooring	CET PCR for ceramic tiles
Types of EPDs	Single, individual products Product Groups Representative products	Single product EPD of a product grouping Sectorial EPD
System boundaries	Cradle-to-grave	Cradle-to-gate Cradle-to-grave

US PCR and CET PCR



	US PCR for flooring	CET PCR for ceramic tiles
Declared unit	No declared unit	1 m ² of ceramic tile for covering walls and floors
Functional unit	1 m ² of floor covering for a specified time period (60 years)	1 m ² of ceramic tile for covering walls and floors for a period of 50 years
Characteristics to be declared	<p>Example ceramic tiles:</p> <ul style="list-style-type: none">• Class, Tile type, Grade, Nominal facial area, Nominal thickness, Dimensional categories, Sustainable certification• Product weight	<ul style="list-style-type: none">• Classification of ceramic tiles (water absorption, shaping, method A/B)• Product weight

US PCR and CET PCR



	US PCR for flooring	CET PCR for ceramic tiles
Product standards covered	<ul style="list-style-type: none">• Carpet-Relevant AATCC and ASTM Test Methods and Standards for electrostatic propensity, colorfastness, radiant flux, smoke density, pile integrity• Resilient-ASTM specifications for VCT, sheet vinyl, rubber, solid vinyl, linoleum and polyester composition• Laminate-ANSI-NALFA LF 01 and NALFA UL 01• Ceramic Tile-ANSI A137.1 (ceramic tile) and ANSI A137.2 (glass tile)• Wood Flooring-ANSI standards	<ul style="list-style-type: none">• EN 14411:2012 Ceramic tiles

US PCR and CET PCR



	US PCR for flooring	CET PCR for ceramic tiles
Material content (%)	Example for ceramic tiles: Body: clay (50%), quartz (10%) and feldspar (40%) Glaze: frit, clay, misc. minerals	Material content in % does not need to be declared.
Data collection	<ul style="list-style-type: none">• Raw materials stage data examples are provided• Manufacturing stage data examples: packaging	<ul style="list-style-type: none">• Data examples are provided: clay, silica sand, feldspars, purchased products from external supplier)• Manufacturing stage data examples are provided: energy/water consumption, waste, packaging products/waste
Background data	ELCD, US Life Cycle Inventory database, Ecoinvent, Gabi, etc	ELCD, Ecoinvent, Gabi, etc

US PCR and CET PCR



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Environmental Impact categories	Abiotic Resource Depletion Potential Global Warming Potential Acidification Potential Photo-Oxidant Formation Potential Eutrophication Potential Ozone Depletion Potential	

US PCR and CET PCR



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Impacts describing resource use	<ul style="list-style-type: none">• Primary energy demand of non-renewable resources• Primary energy demand of renewable resources	<ul style="list-style-type: none">• Use of renewable primary energy• Total use of renewable primary energy resources• Use of non-renewable primary energy• Total use of non-renewable primary energy resources• Use of secondary material• Use of renewable secondary fuels• Use of non-renewable secondary fuels• Use of fresh water

US PCR and CET PCR



	US PCR for flooring	CET PCR for ceramic tiles
Impacts describing waste	No requirements	<ul style="list-style-type: none">• Hazardous waste disposed• Non-hazardous waste disposed• Radioactive waste disposed
Impacts describing output flows	No requirements	<ul style="list-style-type: none">• Components for re-use• Materials for recycling• Materials for energy recovery• Exported energy
Scenarios	No scenarios	Scenarios for Transport, Installation, Use, Maintenance and end-of-life stages, and packaging waste

WCTF International PCR: conclusions

- Increasing **market demand** on EPDs
- EPD can become a **legal requirement** to place on the market construction products in the EU (CPR)
- Ceramic industry looks for **harmonized EPDs**, an international PCR can provide this goal
- Ceramic tile community can take advantage of **existing PCRs**

