

Ferrum

Always on firm ground.

Ceramics for the hard everyday life in industry.





Apprenticeship and testing establishment, Weinsberg, Germany



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Quality ceramics: an investment that pays off.

Specialists are more efficient. This also applies to the ceramic floor tiles of the series Ferrum, which were especially developed for the extreme requirements of industrial enterprises. The integrally coloured, unglazed split tiles are particularly slip-resistant and thus prevent accidents at work. They are extremely robust and by far more resistant to compression than concrete or coating materials. A technically sophisticated range of accessories including cove skirtings, nosing tiles and gutter tiles facilitates the realization of company-specific complete solutions.

Apart from this, Ferrum offers all the advantages of high-quality architectural ceramics made in Germany. The tiles permit quick and thus inexpensive laying. They are resistant to chemicals, humidity and other loads quite usual in industrial everyday life. And they are convincing by their practically unlimited durability. In addition, ceramics is non-combustible. Finally, the minimal cleaning works required reduce the maintenance costs. Result: Ferrum is an investment that pays off.

For AGROB BUCHTAL, the world-wide renowned company providing ceramic problem solutions, high-quality products and first-class service are inseparable. That is why planners and architects using our products can benefit from the know-how of our in-house planning department - for competent support in all phases of the project.



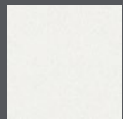
Production shed, Nuremberg, Germany



Meat processing, Castelnovo, Italy



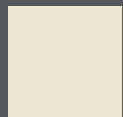
School Centre, Neu-Wulmstorf, Germany



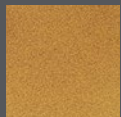
91
white



929
stone-grey



900
grey-beige



950
colorado-brown



902
grey-white



958
brick-red



Mitred pair

Terminal piece

Gutter tile

Gutter tile with outlet 1½"

External angle

Internal angle

Cove skirting, $r = 12 \text{ mm}$,
25 x 12,5 cm

Floor tile 25 x 12,5 cm

Nosing tile
25 x 12,5 cm

Extruded Ceramic Tiles, Precision, DIN EN 14411, group Al_b, unglazed (UGL)*
for floor coverings in indoor and outdoor areas (split tiles)

Floor Tiles

25 x 12,5 cm



11 mm thick

25 x 12,5 cm



14 mm thick

25 x 12,5 cm



18 mm thick

25 x 12,5 cm



20 mm thick

Nosing Tile

25 x 12,5 cm



		1100	1160	1180	1110	4822	Model number
		25 x 12,5 cm	25 x 12,5 cm	25 x 12,5 cm	25 x 12,5 cm	25 x 12,5 cm	Nominal dimensions
		240 x 115 x 11 mm	240 x 115 x 14 mm	240 x 115 x 18 mm	240 x 115 x 20 mm	240 x 115/52 x 11	Work size mm
		33.000/m ²	33.000/m ²	33.000/m ²	33.000/m ²	4.000/m	m ² /m - pieces
		22.869/m ²	28.380/m ²	35.442/m ²	41.679/m ²	3.880/m	m ² /m - kg
		24	20	16	14	8	Bundle - pieces
		0.727 m ²	0.606 m ²	0.485 m ²	0.424 m ²	2,000 m	Bundle - m ² /m
		16.632	17.200	17.184	17.682	7.760	Bundle - kg
		52.364	43.636	30.545	30.545		Pallet - m ²
		1,197.504	1,238.400	1,082.592	1,273.104		Pallet - kg
		Alb	Alb	Alb	Alb	Alb	Product standard
		see below	see below	see below	see below	see below	Slip resistance
		2	3	4	4		Stress Group
		R10/A	R10/A	R10/A	R10/A	R10/A	
		900-1100	900-1160**	900-1180**	900-1110	900-4822	900
		Price gr. A107 (m ²)	Price gr. A123 (m ²)	Price gr. A139 (m ²)	Price gr. A150 (m ²)	Price gr. A434 (pce.)	grey-beige
		R12/B	R12/B	R12/B	R12/B	R12/B	
		902-1100	902-1160**	902-1180**	902-1110	902-4822	902
		Price gr. A107 (m ²)	Price gr. A123 (m ²)	Price gr. A139 (m ²)	Price gr. A150 (m ²)	Price gr. A434 (pce.)	grey-white
		R12/B	R12/B		R12/B	R12/B	
		929-1100	929-1160**		929-1110	929-4822	929
		Price gr. A119 (m ²)	Price gr. A139 (m ²)		Price gr. A162 (m ²)	Price gr. A434 (pce.)	stone-grey
					R11/B		
					950-1110*		950
					Price gr. A150 (m ²)		colorado-brown
					R11/A		
					958-1110**		958
					Price gr. A150 (m ²)		brick-red



Skirtings

25 x 12,5 cm



Cove skirting
r= 25 mm

External angle

Internal angle

			Gutter tile	Gutter tile with outlet 1 1/2"	Mitred pair	Terminal piece	Model number
4030	4033	4034	54420	54421	54422	54423	Nominal dimensions
25 x 12,5 cm			25 x 15,6 cm	25 x 15,6 cm		25 x 15,6 cm	Work size mm
240 x 125/20 x 11			244 x 150 x 30	244 x 150 x 30	(2x) 240 x 150 x 30	244 x 150 x 30	m - pieces
4.000			4,000				m/pce./pair - kg
3.520/m	0.200/piece	0.170/piece	7.200/m	1.530/piece	3.030/pair	1.950/piece	Bundle - pcs./pair
14 piece	4 piece	8 piece	8 piece	8 piece	4 pair	8 piece	Bundle - m
3.500			2.000				Bundle - kg
12.320	0.800	1.360	14.400	12.240	12.120	15.600	Pallet - m
							Pallet - kg
Alb	Alb	Alb	Alb	Alb	Alb	Alb	Product standard
			see below	see below	see below	R10/A	Slip resistance
			R10/A	R10/A	R10/A		
900-4030	900-4033	900-4034	900-54420	900-54421	900-54422	900-54423	900
Price gr. A434 (pce.)	Price gr. A445 (pce.)	Price gr. A445 (pce.)	Price gr. A458 (pce.)	Price gr. A560 (pce.)	Price gr. A581 (pair)	Price gr. A560 (pce.)	grey-beige
			R12/B	R12/B	R12/B	R12/B	
902-4030	902-4033	902-4034	902-54420	902-54421	902-54422	902-54423	902
Price gr. A434 (pce.)	Price gr. A445 (pce.)	Price gr. A445 (pce.)	Price gr. A458 (pce.)	Price gr. A560 (pce.)	Price gr. A581 (pair)	Price gr. A560 (pce.)	grey-white
929-4030	929-4033	929-4034					929
Price gr. A434 (pce.)	Price gr. A445 (pce.)	Price gr. A445 (pce.)					stone-grey
950-4030*	950-4033*	950-4034*					950
Price gr. A434 (pce.)	Price gr. A445 (pce.)	Price gr. A445 (pce.)					colorado-brown
			-/B	-/B	-/B	-/B	
			91-54420	91-54421	91-54422	91-54423	91
			Price gr. A475 (pce.)	Price gr. A577 (pce.)	Price gr. A601 (pair)	Price gr. A577 (pce.)	white

*Exception: colour no. 950 corresponds to the DIN EN 14411, group All_a.

Extra thick tiles up to 50 mm are available as special productions.



Laying instructions – Exclusively mechanical stress

Preparation of the base

The base must be firm, clean and good bearing. Surfaces reducing the adherence and impurities have to be carefully removed. The laying base must be ready for laying, flush and perpendicular according to DIN 18202. Poured asphalt and cement screeds must be primed with PCI Gisogrund*. Cement bases must be sufficiently pre-wetted if subsequent sealing is intended.

Sealing

Stress class A2 according to the List of building regulations (Bauregelliste) A, part 2: application of the sealing in at least two completely covering layers with PCI Rapid 2K*, minimum dry layer thickness of 2.0 mm. All junctions, corners, movement joints, penetrations etc. have to be sealed with PCI Pecitape* sealing tapes or sealing collars.

Laying

For the largely void-free laying with flexible floating-bed mortar PCI Nanoflott light*: after the application of a contact layer on the laying base, the mortar must be pre-applied by means of a floating-bed or medium-bed trowel in such a way that the entire surface of the ceramic tiles is embedded in the mortar; this is ensured by a slightly sliding movement at the laying of the tiles.

Pointing

With modified cement mortar PCI Durafug NT* by the grouting method. After the setting of the joint grouting mortar, wash the surface and remove the remaining mortar film after drying by means of a humid sponge.

Movement joints

The movement joints pre-filled with PCI DIN-Polyband* are closed in an elastic manner with the PU sealing material PCI Elritan 140*. Prior to pointing, the cleaned joint edges must be primed with PCI Elastoprimer 135*.

These laying instructions are to be considered only as general information. For the concrete application in projects, it may be necessary to obtain specific recommendations from the system manufacturer.

* The processing guidelines/product information of PCI Augsburg GmbH (www.pci-augsburg.de) must be strictly observed!



Material consumption for the PCI products to be used

PCI Gisogrund:	approx. 0.15 to 0.2 l/m ²
PCI Rapid 2K:	at least 4.0 kg/m ²
PCI Nanoflott light:	approx. 4.0 to 5.0 kg/m ²

PCI Durafug NT:	Joint width	Joint depth	Consumption
	10 mm	8 - 10 mm	approx. 2.1 kg/m ²
	8 mm	8 - 10 mm	approx. 1.7 kg/m ²
	6 mm	8 - 10 mm	approx. 1.3 kg/m ²
	10 mm	10 - 15 mm	approx. 3.1 kg/m ²
	8 mm	10 - 15 mm	approx. 2.5 kg/m ²
	6 mm	10 - 15 mm	approx. 1.9 kg/m ²
	10 mm	15 - 20 mm	approx. 4.2 kg/m ²
	8 mm	15 - 20 mm	approx. 3.4 kg/m ²

PCI Elastoprimer 135:	approx. 0.01 l/lfm
PCI Elritan 140:	Joint 10 x 10 mm: approx. 110 ml/lfm
	Triangular joint 10 x 10 mm: approx. 60 ml/lfm

Laying instructions – Mechanical and chemical stress

Preparation of the base

The base must be dry, firm, clean and good bearing. Smooth surfaces must be roughened by shot-peening or slight grinding; impurities reducing the adherence have to be carefully removed. The laying base must be ready for laying, flush and perpendicular according to DIN 18202. Prior to the application of the sealing, the base must be primed with PCI Epoxigrund 390*; after that, a layer of silica sand is spread over the surface.

Sealing

Stress class C according to the List of building regulations (Bauregelliste) A, part 2: application of the sealing in at least two completely covering layers with PCI Apoflex*, minimum dry layer thickness of 2.0 mm. All junctions, corners, movement joints, penetrations etc. have to be sealed with PCI Pectape* sealing tapes or sealing collars.

Laying

With the two-component reaction resin bonding agent PCI Durapox NT* (mixed with silica sand HS 020) by the buttering-float-
ing method: after the application of a thin contact layer on the laying base and material, the laying mortar must be applied by means of a notched trowel (6-8 mm toothing) both on the laying base and on the tile reverse side in order to obtain a largely void-free embedding of the ceramics.

Pointing

With PCI Durapox NT* by the grouting or the spraying method. After approx. 5 to 10 minutes, pre-wash the surface with warm water and PCI Epoxi-Schwamm hart* (hard sponge). After that, wash with PCI Epoxi-Schwamm fein* (soft sponge). Wash off any remaining film at the final cleaning, i.e. approx. 24 hours after pointing. Cleaning is facilitated by adding PCI RS-Reiniger-Extra* to the washing water.

Movement joints

The movement joints pre-filled with PCI DIN-Polyband* are closed in an elastic manner with the PU sealing material PCI Elritan 140*. Prior to pointing, the cleaned joint edges must be primed with PCI Elastoprimer 135*.

These laying instructions are to be considered only as general information. For the concrete application in projects, it may be necessary to obtain specific recommendations from the system manufacturer.

* The processing guidelines/product information of PCI Augsburg GmbH (www.pci-augsburg.de) must be strictly observed!



Material consumption for the PCI products to be used

PCI Epoxigrund 390:	approx. 0.4 kg/m ²		
PCI Apoflex:	at least 2.8 kg/m ²		
PCI Durapox NT:	Joint width	Joint depth	Consumption
	10 mm	10 mm	approx. 0.8 kg/m ²
	8 mm	10 mm	approx. 0.6 kg/m ²
	6 mm	10 mm	approx. 0.45 kg/m ²
Laying, toothing 2 x 6	approx. 3 mm		approx. 1.8 kg/m ²
Laying, toothing 2 x 8	approx. 4 mm		approx. 2.45 kg/m ²
PCI Elastoprimer 135:	approx. 0.01 l/lfm		
PCI Elritan 140:	Joint 10 x 10 mm: approx. 110 ml/lfm		
	Triangular joint 10 x 10 mm: approx. 60 ml/lfm		

(+ 1.3 kg/m² HS 020)
(+ 1.0 kg/m² HS 020)
(+ 0.75 kg/m² HS 020)
(+ 2.95 kg/m² HS 020)
(+ 4.0 kg/m² HS 020)

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