



KORODUR Industrial Floor
approved. world-wide. Made in Germany.

KORODUR Industrial Floor

KORODUR – the world-wide concept for industrial floors

Experience shows that the floor is one of the most stressed parts of the overall building. In everyday use, industrial floors often have to meet the highest demands. KORODUR industrial floors have been proven durable for decades, even under extreme loads. More than 550 million m² of KORODUR floor world-wide is proof enough.

The hardest and most wear-resistant industrial floor is always the best and most economic solution in the long run. KORODUR industrial floors have been meeting highest

technical requirements for over 80 years. They are the result of continued high quality control.

Whether processed as KORODUR hard aggregate material or NEODUR dry mortar, KORODUR industrial floors qualify for indoor and outdoor use in any industrial area and line of industry: production halls of all types, warehouses, high-bay storage areas, logistic centres, distribution centres, workshops, cold stores, car parks, ramps, hangars, etc.

hard aggregate topping



hard aggregate dry-shake



new buildings and restoration



hard aggregate fast screed

self-leveling systems

benefits

- highly wear-resistant
- for mechanical stress of all kinds
- slip-resistant and skid-proof
- electrostatically not chargeable
- low maintenance
- mineral, physiologically inert
- resistant to gasoline, oil and solvents
- resistant to frost and de-icer
- indoors and outdoors
- nearly indestructible

- ✓ Made in Germany
- ✓ approved world-wide
- ✓ > 550 million m² in service



steel industry



construction machinery



high school



Caterpillar



car park



Real Market



recycling



Heidelberg Druckmaschinen



assembly/production



Daimler Logistics



underground train station Köln



high-bay store



Airbus



paper industry



building material storage



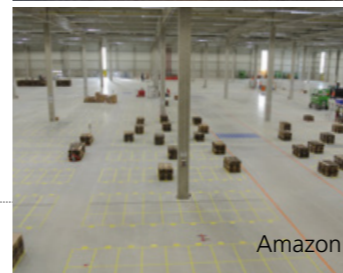
Wirtgen Group



furniture industry



agricultural machinery



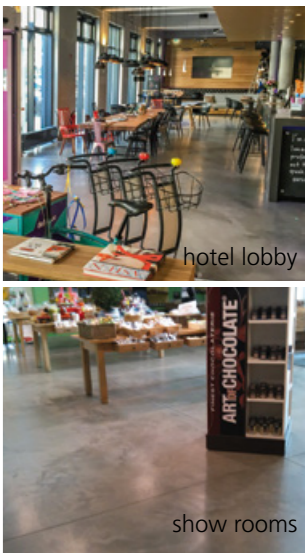
Amazon



Metro Group



automotive



hotel lobby



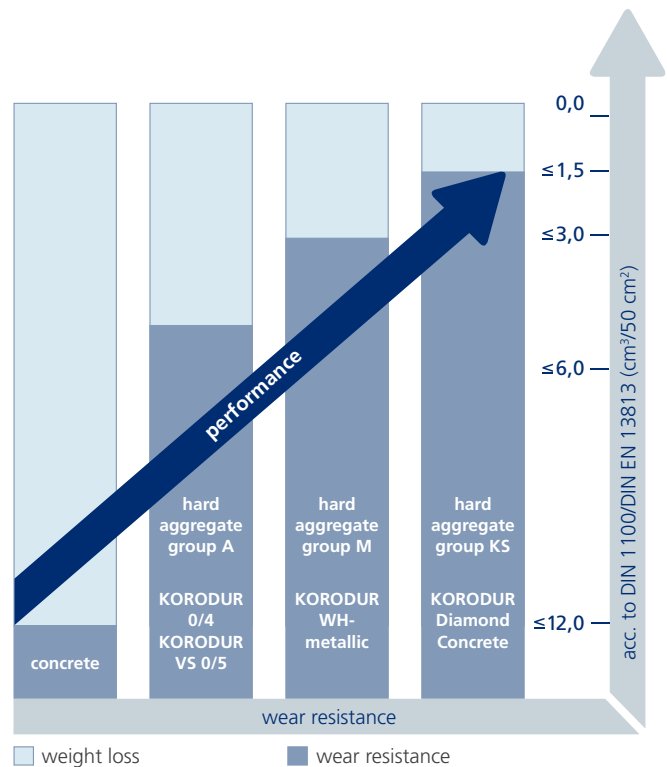
show rooms

DIN 1100 – Hard aggregates for cementitious hard aggregate screeds

DIN 1100 stipulates the required standard to have hard aggregates which are used as aggregates in hard screeds acc. to DIN 18560-7, giving the screed specific strength properties and high wear resistance. It also stipulates the testing procedures and regulations for quality monitoring.

Hard aggregates are classified in three category groups acc. to their wear resistance (Böhme):

coating group	wear resistance
A (general)	$\leq 6 \text{ cm}^3/50 \text{ cm}^2$
M (metallic)	$\leq 3 \text{ cm}^3/50 \text{ cm}^2$
KS (corundum/silicon carbide)	$\leq 1,5 \text{ cm}^3/50 \text{ cm}^2$



DIN 18560-7 – Industrial screeds in construction

DIN 18560-7 includes the national application regulations for industrial screeds acc. to DIN EN 13813. A hard aggregate screed acc. to DIN 18560-7 is a heavy duty cement screed (industrial screed) with hard aggregates acc. to DIN 1100. Part 7 defines the three important stress groups I heavy, II medium and III light, forming the basis for the planning and tender specification of an industrial screed. On this basis and depending on the coating group, the layer thickness of the hard aggregate screed is determined.

Groups of mechanical stress acc. to DIN 18560-7, table 1

stress group	stress caused by	
	mobile industrial handling equipment, kind of tires*	operational processes and pedestrian traffic, examples
I (heavy)	steel and polyamide	processing, sliding and rolling of metal parts, placing down of goods by means of metal forks, pedestrian traffic of more than 1000 persons/day
II (medium)	urethane-elastomer and rubber	sliding and rolling of wood, paper rolls and plastic castings, pedestrian traffic of 100 to 1000 persons/day
III (light)	solid tires and pneumatic tires	assembly areas (on tables), pedestrian traffic up to 100 persons/day

* refers only to clean tires; pressed-in grit and dirt on tires increase the stress

Nominal thickness of a hard aggregate layer acc. to DIN 18560-7, table 6

stress group acc. to table 1	nominal thickness in mm acc. to coating group		
	A	M	KS
I (heavy)	≥ 15	≥ 8	≥ 6
II (medium)	≥ 10	≥ 6	≥ 5
III (light)	≥ 8	≥ 6	≥ 4

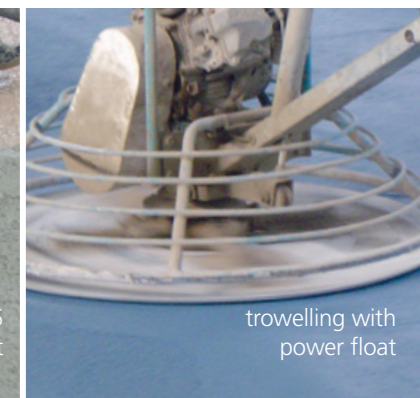
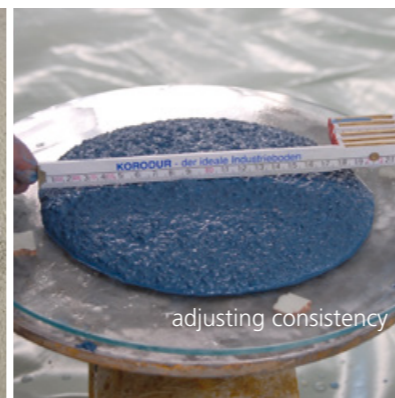
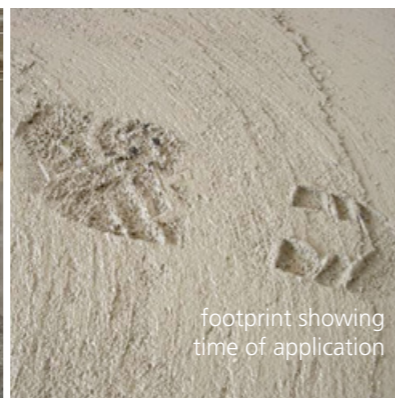
DIN EN 13813 – Screed material and floor screeds

DIN EN 13813 represents a pure material norm, stipulating the requirements to screed mortars for industrial floor constructions in indoor areas. Depending on the type, differing standardized characteristic values for the description of the properties are required. For a directly used, cementitious industrial screed, compressive strength, flexural strength and wear resistance have to be indicated.

Product properties

KORODUR system solutions			product data			processing				curing*			surface treatment			specific features	
KORODUR hard aggregates (without binding agent)	NEODUR dry mortars (with binding agent)		product quality	coating group	layer thickness	consumption	fresh on fresh	on set concrete sub-base (with bonding agent)	dry-shake method	intermediate curing (with KOROCURE)	curing (with KOROTEX KOROMINERAL CURE)	densifying (with KOROMINERAL CURE)	epoxy impregnation (with KOROMINERAL Li+)	KOROCLEAN (special grinding procedure with densifier)	food safety		conductivity
hard aggregate screed	0/4 and VS 0/5	HE 65	CT-C70-F9-A6	A	8–15 mm	2,1 kg/m ² /mm	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	optional supply in silo meets Federal Water Act frost and de-icer resistant various colours available
	WH-special	HE 65 SVS 3	CT-C70-F9-A3	A													
	WH-metallic	HE 65 metallic	CT-C80-F11-A3	M													
	Diamond Concrete	HE 65 SVS 1,5	CT-C70-F9-A1,5	KS	4–15 mm	2,2 kg/m ² /mm											
hard aggregate screed synthetic-modified		HE 65 Plus	CT-C70-F9-A6	A	15–30 mm	2,1 kg/m ² /mm		✓	✓	✓	✓	✓	✓	✓	✓	high frost/de-icer resistance no additional bonding agent	
hard aggregate dry-shake	0/4	HE 3	CT-C70-F9-A6	A	1–2 mm	3–5 kg/m ²	✓		✓	✓	✓	✓	✓	✓	✓	✓	mechanically processable easy handling various colours available
	WH-special	HE 3 SVS 3	CT-C70-F9-A3	A		6–8 kg/m ²											
	WH-metallic	HE 3 metallic	CT-C80-F11-A3	M													
	Diamond Concrete	HE 3 SVS 1,5	CT-C70-F9-A1,5	KS		3–5 kg/m ²											
hard aggregate fast screed		HE 60 rapid	CT-C60-F8-A6	A	10 mm and up	2,1 kg/m ² /mm		✓		✓	✓	✓	✓	✓	✓	✓	fast-setting early strength highly wear-resistant dimensionally stable
		HE 60 rapid SVS 3	CT-C60-F8-A3	A		3,5 kg/m ² /mm											
		HE 60 rapid metallic	CT-C60-F8-A3	M		2,2 kg/m ² /mm											
		HE 60 rapid SVS 1,5	CT-C60-F8-A1,5	KS													
fast-setting screed binder		FSCem	CT-C40-F6 to CT-C50-F7		15 mm and up	2,1 kg/m ² /mm		✓									fast-setting early ready for covering dimensionally stable
fast-setting screed		FSCem Screed	CT-C40-F6		15–120 mm			✓									
self-leveling systems		NEODUR Level	CT-C40-F8-AR0,5		5–30 mm	1,7 kg/m ² /mm		✓			✓						self-leveling fast-setting wear-resistant

* in case of a surface treatment, curing only with foil

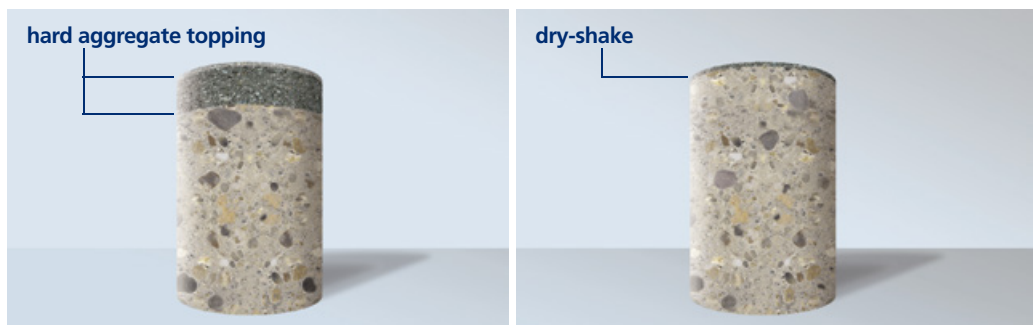


Hard aggregate topping or dry-shake?

The technical discussion about the topic hard aggregate topping or dry-shake method has intensified during the recent years both in Germany as well as abroad. There are advantages and disadvantages of both systems. The planned use of the industrial floor, i.e. the expected stress, is of great importance.

For mineral hard aggregate toppings acc. to DIN 18560-7 the test criteria, the hard aggregate quality and the layer thickness, in dependence of the stress are clearly defined. A hard aggregate dry-shake application also improves the abrasion resistance of a floor. However, in highly stressed areas, the resistance of the floor, due to the dry-shake thickness is limited in its durability.

The differences between the two methods become clear when comparing the consumption quantities. The dry-shake method allows a layer thickness of up to 1 to 2 mm at maximum. However, a hard aggregate topping in a layer thickness of e.g. 10 to 15 mm is technically superior to a thickness of 1 to 2 mm.



impact resistance	the thicker the hard aggregate layer, the higher the impact resistance	absorbed only by the concrete sub-base
penetration behavior/effect of liquid media	a hard aggregate topping, following the DAfStb guide line "Concrete construction in context with water pollutant substances", is classified as dense	due to minor layer thickness, proof of density not possible
frost and de-icer test	a hard aggregate layer, acc. to the CDF test method, is classified as frost/de-icer resistant	due to minor layer thickness, proof of frost/de-icer resistance not possible
colored floors	complete coloring of the hard aggregate layer	due to minor layer thickness, risk of mixing-up with the base concrete
wear resistance of finished component	the wear resistance values to be achieved are bindingly defined in DIN 18560-7 for each coating group	acc. to experience, the wear resistance values range below the values of the used hard aggregate material due to the mixing-up of the dry-shake application with the base concrete
compressive strength	compressive strength minimum 70 N/mm ²	acc. to experience, the surface compressive strength only corresponds to the compressive strength of the concrete grade
flatness	the hard aggregate layer may contribute to fulfil higher demands to flatness	flatness is only defined by the accuracy of installation of the base concrete
steel fiber reinforcement/ organic components in the concrete	the hard aggregate layer covers reliably steel fibers protruding from the concrete and floating organic components	depending on the concrete formulation and the steel fibers type/quantity, steel fibers may appear on the surface



curing with KOROTEX



densifying with KOROCLEAN



KORODUR silo system



application of NEODUR Level



**MADE IN
GERMANY**

KORODUR – the world-wide concept for industrial floors

More than 550 million m² – proof enough

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HINTS: The specifications provided in this brochure for application and processing are based on tests carried out by KORODUR under ideal conditions in the laboratory and acc. to the relevant technical regulations. Therefore, the indicated data don't represent directions for application or a quality agreement in the meaning of § 434 (1) BGB, no regulation in the meaning of § 434 (2) sentence 2 BGB (German Civil Code) and no guarantee for practical application. Due to the differing conditions on site, preliminary own tests and suitability checks are required before application. Please consider the currently valid product information as well as the relevant safety data sheet acc. to Regulation (EC) No. 1907/2006 in the latest version – also published on the internet: www.korodur.de