



Ardagrip Xtrem & Ardatec Xtrem

PROTECTIVE EPOXY-RESIN BASED COATING BELOW CERAMIC FLOORINGS

TECHNICAL DATA SHEET

SMART PRODUCT ADVANTAGES

- Suitable for all waterproofing designs as per AIV-F (1-4)
- In wet rooms, on balconies, in swimming pools
- In chemically highly stressed areas
- Tested as per PG-AIV for the classes A, B, and C (AbP)
- Tested as RM 02 P as per DIN EN 14891
- For indoor, outdoor, underwater applications
- flexible, crack-bridging

PRODUCT DESCRIPTION

System Ardatec Xtrem is a 2-C epoxy system coating (fluid plastics) consisting of primer - Ardagrip Xtrem and coating - Ardatec Xtrem, for the application as composite sealing (AIV-F) beneath ceramic tiling and slabbing, indoors and outdoors, on wall and floor.

- DIN 18531-5 on balconies, loggias (not above occupied rooms)
- DIN 18534-3, Waterproofing for indoor applications for WeK W0-I to W3-I for the waterproofing designs 1 to 4
- DIN 18535-1 Water exposure class in pools W1-B (S1) and W2-B (S2) up to 10 m filling height

System Ardatec Xtrem is a highly resistant protective coating against water and aggressive media. Resistance to chemical stress due to domestic and cleaning water as per test media PG- AIV, load class C as for instance in commercial kitchens, beverage industry, dairy processing, laundries is guaranteed and moreover, it is resistant to acids and leaches as per list of resistances.

FIELD OF APPLICATION

System Ardatec Xtrem is tested in accordance with the „Prüfgrundsätze für flüssige Abdichtungen im Verbund mit Fliesen- und Plattenbelägen“ for the load classes A, B and C (PG-AIV), as per Building Rules List A, part 2, serial number 1.10, for granting a general technical approval AbP (P-5208/889/11), in connection with Ardaflex Ultimate, Ardaflex Flexmörtel or



Ardaflex Xtrem (EP) as system adhesive and Ardatape 120 Extra and accessories as sealing tape system (Systemkit).

System Ardatec Xtrem can be used as composite sealing (AIV-F) under ceramic tiles and plates for surfaces on walls and floors that are directly and indirectly, highly and very highly loaded by industrial process and domestic water, indoors and outdoors, as well as for sealing of pools up to 10 m filling height. On substrates of concrete, masonry, screed, plaster, gypsum boards. Suitable for bridging of cracks with maximum crack width deviation/new formation of cracks in the substrate after application of the system coating of up to 0.2 mm, e.g. in wet rooms, shower facilities, on balconies and covered walks, against pressing water from the inside in swimming pools and also for pool edges. System Ardatec Xtrem can be used indoors and outdoors and underwater; it is also suitable at very high exposure to additional long-term chemical load.

COMPOSITE SEALING (AIV-F) ON BALCONIES, LOGGIAS, COVERED WALKS, DIN 18531-1

System Ardatec Xtrem has been approved in accordance with PG-AIV for class A (AbP), for directly loaded wall and floor surfaces outdoors. It is suitable with flowing off, not retaining effect on horizontal surfaces, consisting of stable, mineral substrates, like concrete or cement screed. It is suitable as water-bearing layer with a minimum inclination of 1.5% for carrying tiles and plates. Laying of slabbing should be done as fast as possible after the application of the system coating incl. accessories. Laying works shall be done as per DIN 18157-1 with S1 adhesive mortar using

the buttering-floating method and the system materials Ardaflex Ultimate, Ardaflex Flexmörtel or Ardaflex Xtrem (EP), as well as Ardatape 120 Extra + accessories.

COMPOSITE SEALING (AIV-F) INDOORS, DIN 18534-3

System Ardatec Xtrem is unrestrictedly suitable for all types of waterproofing designs 1 to 4 in the WeK **W0-I to W3-I** loaded with very high chemical load due to domestic and cleaning water (as per test media PG-AIV, class C, resistant to alkali and chemicals), e.g. in commercial kitchens, beverage industry, dairy processing, laundries. Laying works shall be done as per DIN 18157-1 with the system materials Ardaflex Ultimate, Ardaflex Flexmörtel or Ardaflex Xtrem (EP), as well as Ardatape 120 Extra + accessories.

System Ardatec Xtrem is suitable for water exposure class **W0-I** (low impact) on walls and floors; with non-frequent action of splash water; e.g. wall surfaces in bathrooms outside of shower areas and in domestic kitchens. Floor surfaces in domestic areas without floor drain, e.g. in kitchens, utility rooms, guest's WC.

System Ardatec Xtrem is to be used for water exposure class **W1-I** (moderate impact) on walls and floors; non-frequent action of domestic water without intensification by banked-up water; e.g. wall surfaces above domestic bath tubs and shower basins. Floor surfaces in the domestic area with floor drain and/or in domestic bathrooms with drain without high water impact from the shower area.

System Ardatec Xtrem is suitable for water exposure class **W2-I** (high impact) on wall and floor; with frequent action from domestic water, mainly on the floor, partly intensified by dammed up backwater; e.g. wall surfaces of showers in sports facilities and commercial buildings. Floor areas with drains or discharge channels. Floor areas in rooms with showers flush with the floor. Wall and floor surfaces of sports facilities and commercial buildings.

System Ardatec Xtrem is suitable for water exposure class **W3-I**, waterproofing design 3 and 4 (very high impact) on wall and floor, for surfaces with very frequent or long-term action of splash and / or domestic water and/or water from intensive cleaning processes intensified by banked-up water, e.g. surfaces in the area of swimming pool edges, showers and shower rooms in sports facilities and commercial buildings. Surfaces in commercial kitchens, laundries, breweries.

COMPOSITE SEALING (AIV-F) IN SWIMMING POOLS

System Ardatec Xtrem is certified as per PG-AIV for class B (AbP) below tiles and slabbing as composite sealing for wall and floor surfaces directly loaded by filling water in swimming pools, indoors and outdoors, up to a filling height of 10 m. Laying works shall be done as per DIN 18157-1 using the buttering-floating method and the system materials Ardaflex Ultimate, Ardaflex Flexmörtel or Ardaflex Xtrem (EP), as well as the sealing tape Ardatape 120 Extra + accessories.

SUBSTRATES

The substrates must be solid, dry and free from impurities or separating agents. The following substrates can be sealed with Ardatec Xtrem: Concrete, screed, cement plaster, aerated concrete, gypsum plasters, gypsum fibre boards, gypsum plasterboards, stable wood building boards (special

construction method; please contact us).

SUBSTRATES/DRYING RATE

Concrete, usually after 6 months, as per DIN 18157. Cement-based screed after reaching the residual moisture, heated 1.8 CM%, unheated 2.0 CM%. Calcium sulphate screed after reaching the residual moisture, heated and unheated 0.5 CM%.

APPLICATION

Do not apply Ardatec Xtrem at substrate temperatures below +5 °C and above +25 °C. For absorbent substrates, use Ardagrip Xtrem (2K-EP) as primer. The two components of Ardagrip Xtrem, part A and B, are mixed with the specified mixing ration (2:1). For this, part B will be emptied into the container with part A and mixed homogeneously using a power drill and a spiral basket agitator. The mixed primer Ardagrip Xtrem is then transferred in a processing container with the corresponding diameter for roller application and immediately applied. Apply the mixture within the pot life of approx. 30 minutes at + 20 °C.

It is applied by short-pile roller. The primer Ardagrip Xtrem is to be spread over the entire surface with dry quartz sand, grain size 0.3 - 0.6 mm when still fresh. Once the primer has cured, any sand not embedded must be completely removed. Material consumption for priming with Ardagrip Xtrem: approx. 150-200 g/m². Curing time for primer Ardagrip Xtrem: approx. 16 hours at + 20 °C. Ardagrip Xtrem can also be used as EP mortar, e.g. mixed with dry quartz sand to fill pockets (1:10 to 1:20).

The primer (Ardagrip Xtrem) must have been cured before the coating of Ardatec Xtrem (2K-EP) can be applied. The two components of Ardatec Xtrem, component A and B, filled in a clean processing container with the specified mixing rate (1:1) and mixed using a power drill and a spiral basket agitator to form a homogeneous mass. Apply the mixed coating Ardatec Xtrem within the pot life of approx. 45 minutes at + 20 °C. Coating is applied on the sanded primer using a short pile roller. To increase the stability on wall surfaces, 2 - 3 wt% of adulterant 222 can be added and mixed to Ardatec Xtrem. To ensure safe waterproofing, the coating must be applied in at least 2 work steps of approx. 0.8 mm layer thickness each. The first coating must have cured before the second coating can be applied (sticky, but not able to be screeded). The second coating must be applied within 48 hours. The last coating of Ardatec Xtrem is to be gritted with dry quartz sand of grain size 0.6- 1.2 mm over the entire surface. Sanding serves as bonding layer to provide good bonding between the following adhesives and the coating layer. Laying of tiles and plates may only be done after the coating has cured completely, after approx. 48 hours.

CONNECTION JOINTS, FLOOR DRAINS, PIPE BUSHINGS

Transitions to floor drains/channels or wall ducts shall be secured with the appropriate floor or wall collars Ardatape Floor/-Wall (parts of the system kit). For gluing in or the installation of sealing tape/collars use the selected sealing products as used for priming, laying in and pressing on. In the classes W0-I to W2-I, make sure that a flange width of 30 mm is ensured and in class W3-I use a flange width of 50 mm. The bushings wider than the collars delivered are made of

glass web and called Ardatape Strong and are integrated in the surface sealing.

canister, 72 pieces per pallet

Ardatec Xtrem component B, item No. 30170843, 5 kg canister, 72 pieces per pallet

APPLICATION OF CERAMIC FLOORINGS

Recommended adhesive for preparing and laying of tiles and plates on system coating Ardatec Xtrem: In case of load by water, acids and leaches: Ardaflex Xtrem (epoxy resin adhesive as per DIN 12004-R2 T) and pointing: Ardacolor Xtrem Easy (epoxy resin adhesive as per DIN 12004-R2 T, joint filling as per DIN 13888-RG). In case of load by water and alkaline loads, chlorine: Ardaflex Ultimate or Ardaflex Flexmörtel (thin bed mortar as per DIN EN 12004-C2TE)

HEALTH AND SAFETY AT WORK

Ardagrip Xtrem and Ardatec Xtrem contain epoxy resin and aminic hardener. Irritant. It may cause sensitization in case of skin contact. Harmful for aquatic organisms, with long-term hazardous effect in waters. Causes eye and skin irritation. Avoid release to the environment. Refer to special instructions/ safety data sheets. Only use it within well-ventilated areas. Wear suitable gloves and protective clothing. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Avoid contact with skin. Causes burns. Includes epoxy-resin based compounds. Follow the manufacturer's instructions; observe possible restrictions of employment as per Maternity Protection Act or Youth Employment Protection Act, as well as accident prevention regulations and information issued by the professional association. Professional Association - Chemistry: Professional Association - regulation 227 "Working with epoxy-resin". Professional association of building industry "practical guide for handling of epoxy-resins". Wear suitable protective gloves: Protective gloves resistant to chemicals as per EN 374 made of nitrile rubber - special laminates - butyl rubber, e.g. made by Mapa-Professionnel (Spontex, Mönchengladbach): ULTRIL 377 - ULTRANITRIL 491, 492, 494 or 495) - CHEMPLY. Please find the maximum wearing period in www.mapa-professionnel.com. Please find instructions on personal protection, breathing protection and eye protection in the safety data sheet.

GISCODE

Ardagrip Xtrem, part A: Giscode RE 1, part B: Giscode RE 1

Ardatec Xtrem, part A: Giscode RE 1, part B: Giscode RE 3

Ardatec Xtrem, mixture: Giscode RE 2

STORAGE

In a cool and dry place. Ardagrip Xtrem and Ardatec Xtrem are not inflammable and not sensitive to frost. The product can be stored for at least 6 months when left in the original, unopened packaging.

PACKAGING

Ardagrip Xtrem component A, item No. 30835790, 3.33 kg canister, 72 pieces per pallet

Ardagrip Xtrem component B, item No. 30835791, 1.67 kg canister, 72 pieces per pallet

Ardatec Xtrem component A, item No. 30170833, 5 kg

TECHNICAL DATA ARDATEC XTREM

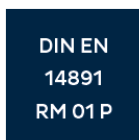
Base	Epoxy resin, modified
Specific weight of the mixture	approx. 1.4 g/ml
Basin test as per DIBT	Positively tested until 25 m of water column. Approved until 10 m
Tests as per DIN EN 14891	Tested as per CM 02 P: waterproof, flexibilized epoxy resin with improved crack bridging ability to be processed when still fluid, at low (- 5 °C) and resistant to chlorinated water. Pull-off strength after storage in water s 5.0 MPa Pull-off strength after contact with chlorinated water > 5.0 MPa Crack bridging at normal conditions approx. 0.75 mm Crack bridging at low temperature (- 5 °C) > 0.75 mm
Assignment as per DIN 18531-5	Sealing of balconies, loggias.. Sealing system with an AbP as per PG-AIV-F, FbK A, crack-bridging reaction resin (RM) W (no classified standard specification of water action). For outdoor surfaces with flowing off not damming surface water RM 02 P (see above) R (bridging of new cracks or changing of crack width up to 0.2 mm)
Assignment as per DIN 18534-3	Sealing indoors with sealing system with an AbP as per PG-AIV-F, FbK A, B, C crack-bridging reaction resin (RM) W0-I to W3-I (water exposure class with low to very high load*) for all waterproofing designs 1 to 4 R1-I bridging of new cracks or changing of crack width up to 0.2 mm

TECHNICAL DATA ARDATEC XTREM

Assignment as per DIN 18535-3	Sealing of containers and basins, sealing system with an AbP as per PG-AIV-F, FbK B, RM 02 P (see above) W1-B (water exposure class up to 5 m water column), W2 -B to 10 m WeK R1- B (bridging of new cracks or changing of crack width up to 0.2 mm) 51- B (location: outdoors, freestanding pool) 52- B (location: indoors, adjacent pool)
Colour of mixture	Grey
Mixing ratio	Part A : Part B = 1 : 1
Pot life	approx. 45 minutes at + 20 °C
Application temperature	10 °C to 30 °C
Drying time 1st and 2nd layer	approx. 16 hours at + 20 °C
Drying time 2. Layer / can be walked on	approx. 16 hours at + 20 °C
Full loadable with water after	approx. 7 days at + 20 °C, approx. 14 days at + 10 °C
Laying of tiles and plates	after approx. 48 hours at + 20 °C
Viscosity of mixture	approx. 8,000 mPas at + 20 °C
Consumption	on sanded primer 2.1 kg/m ² ; 1.5 mm Thickness of dry layer
Elongation at break	75 %
Tensile strength	5.6 N/mm ²
E-module calculated from shear strength	280 N/mm ²
Chemical resistance	as per PG-AIV, acids and leaches, as well as in accordance with our list of resistances, e.g. caustic potash solution: 20%; Lactic acid: 5 %; Hydrochloric acid: 3 %; Acetic acid: 5%
Heat resistance	-20 °C to +80 °C

Ardagrip Xtrem and Ardatec Xtrem are normally flammable as per DIN 4102-1, building material class B2.

For all application applies: The composition of the sealing system (AIV-F) of the individual components results from the specifications in AbP (see the respective chapter).



These instructions reflect the extent of our current knowledge and are the result of extensive testing and practical experience. Due to the large number of the possible applications and storage and processing factors over which we have no control, we cannot guarantee good results in each individual case. We recommend testing the product first before final application. Slight discolouration of sealants can occur under UV-radiation. Slight colour differences between the batches are possible through the production process. No liability can be accepted for absolute colour fidelity. Use material of the same charge-number for a building object. Our technical and commercial advisory service will be pleased to answer your queries.
This data sheet supersedes all previous versions.

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