

# Ardatec 1K Flex

# **ONE-COMPONENT FLEXIBLE DICING CLAMPS**

# **TECHNISCHES MERKBLATT**

#### SMARTE PRODUKTVORTEILE

- composite sealer [CM] under ceramic surfaces (AIV-F)
- on balconies, terraces, in wet rooms, swimming pools
- on wall and floor surfaces
- for inside and outside
- flexible and crack-bridging
- for water exposure classes WO-I to W3-I in accordance with DIN 18534-3
- for water exposure classes W1-B up to 3 m fill level in accordance with DIN 18535-3
- for balconies, terraces, loggias in accordance with DIN 18531-5
- in accordance with DIN EN 14891-18-01 as CM 01 P

#### PRODUCT DESCRIPTION

Ardatec 1K Flex is a crack-bridging single-component mineral sealing grout for composite sealing (AIV-F) under ceramic surfaces. Ardatec 1K Flex cures crack-free. Simply and easily applied by brush, roller, sprayer or trowel.

Ardatec 1K Flex is low-chromate in accordance with EU Regulation 1907/2006 (REACH) and it fulfills the requirements of building material class B2 "flammable" in accordance with DIN 4102-1.

Usable for water exposure classes on balconies in accordance with DIN 18531-5, indoors in accordance with DIN 18534-3 as well as in the pool area in accordance with DIN 18535-3.

Ardatec 1K Flex is tested in accordance with the "test principles for liquid-applied sealing materials in connection with tiles and pavers (PG-AIV-F), June 2010". For wet room classes A and B in accordance with the ZDB data sheet pursuant to the Building Rules List A, Part 2 consecutive No. 2.50, for the General Test Certificate issued by the General Building Authority (AbP) in conjunction with Ardaflex flexible adhesive, Ardaflex Top<sup>5</sup>, Ardaflex Ultimate, Floorflex Classic as system adhesive and system sealing tape Ardatape 120 Extra and Ardatape accessories.

#### AREAS OF APPLICATION

Ardatec 1K Flex as composite sealing (AIV-F) under ceramic tiles and pavers for wall and floor surfaces that are extremely exposed directly and indirectly to process and service water.

For sealing substrates made of concrete, masonry, screed, plaster, sheets of drywall, sheetrock joints, which require solid closure. Suitable for crack class R1-1 (maximum crack width change/new crack formation in substrate following application of sealing compounds measuring 0.2 mm), e.g. in wet rooms, shower facilities, on balconies and terraces, against water pushing from inside in swimming pools up to a water depth of 3 m (against leakage) and additionally for pool borders.

Ardatec 1K Flex can be used equally in water as well as outside and under water. For very high exposure due to additional long-lasting chemical stress, we recommend using our product Ardatec Xtrem based on epoxy resin.

# SEALING OF BALCONIES AND TERRACES, DIN 18531-5 – WITH LIQUID-APPLIED COMPOSITE SEALING MATERIALS (AIV-F):

It can be applied if exposed to run-off, non-standing water on horizontal surfaces, consisting of solid mineral substrates such as concrete or cement screed. As a water-conducting layer with a minimum gradient of 1.5%, suitable for installing tiles and pavers. If possible, the installation should be carried out directly after curing. The installation is based on DIN 18157-1 and it must be carried out using S1 adhesive mortars.

#### WATERPROOFING FOR INTERIOR APPLICATIONS, DIN 18534-3 – WITH LIQUID-AP-PLIED WATERPROOFING MATERIALS (AIV-F) FOR W0-I TO W3-I:

Einsetzbar in Wassereinwirkungsklasse WO-I (geringe Einwirkung) an Wand und Boden:

Suitable for wall and floor applications for water exposure class WO-I (low exposure): Infrequent exposure to splash water; e.g. wall surfaces in bathrooms outside of shower areas and domestic kitchens. Floor surfaces in residential applications without a drain, e.g. in kitchens, utility rooms, guest bathrooms.

Suitable for wall and floor applications for water exposure class W1-I (moderate exposure):

infrequent exposure to service water without intensification by accumulating water; e.g. wall surfaces over residential bathtubs and shower basins. Floor surfaces in residential applications with drain and/or in residential bathrooms with drain but without a high exposure to water from the shower area.



Suitable for wall and floor applications for water exposure class W2-I (high exposure):

with frequent exposure to service water, especially on the floor, occasionally intensified by accumulating backwater; e.g. wall surfaces of showers in sports centers and places of business.

Floor surfaces with drains or gutters. Floor surfaces in rooms with floor-level showers. Wall and floor surfaces of sports centers and places of business. Suitable for wall and floor applications for water exposure class W3-I (very high exposure) waterproofing type 3:

Surfaces with very frequent or long-lasting exposure to splash and/or service water and/or water from intensive cleaning processes intensified by accumulated water, e.g. surfaces in the area of swimming pool borders, showers and shower facilities in sports centers/places of business. Surfaces in industrial kitchens, laundry facilities, breweries. The installation is carried out in accordance with DIN 18157-1.

#### Note:

For very high exposure due to additional long-lasting chemical stress, waterproofing type 4, we recommend using our product Ardatec Xtrem, based on epoxy resin.

#### WATERPROOFING OF CONTAINERS AND POOLS, DIN 18535-3 – WITH LIQUID-AP-PLIED WATERPROOFING MATERIALS (AIV-F); AS W1-B TO A FILL LEVEL OF 3 M; FOR LOCATIONS S1-B (FREE-STANDING) AND S2-B (INTERIOR, ADJACENT):

Suitable for wall and floor surfaces for underwater applications against water pushing from inside up to a pool depth of 3 m on solid mineral substrates, e.g. concrete, cement plaster or cement screed. Only suitable as waterproofing material to serve as substrate for tiles and pavers. If possible, the installation should be carried out directly after curing. The installation is carried out in accordance with DIN 18157-1.

#### SUBSTRATES

#### Indoors in accordance with WO-I and W1-I (insensitive to moisture):

Gypsum plaster and gypsum lime plaster, sheetrock wall panels, sheetrock panels with mat reinforcement, gypsum fiberboard, sheetrock panels, calcium sulfate bonded screeds (gypsum), wood and wood materials.

## Indoors in accordance with W2-I and W3-I (insensitive to moisture): :

Concrete, MG CS II/III lime cement plaster, MG CS IV cement plaster, lightweight concrete hollow wall panels, cement-bonded mineral-based building panels, polystyrene composite elements with mortar coating and fiber reinforcement, aerated concrete building panels, cement screeds.

#### Outdoors, on balconies and terraces (sensitive to moisture):

#### Concrete, cement screed

In the pool area underwater in accordance with W1-B: Concrete, cement screeds, cement plasters. The substrate is usually ready for concrete after six months in accordance with DIN 18157. For cement screed after the residual moisture has been reached, heated 1.8 CM%, unheated 2.0 CM%. For calcium sulfate screeds after the residual moisture has been reached, heated and unheated 0.5 CM% in accordance with DIN 18560.

#### APPLICATION

Before the first application of Ardatec 1K Flex, dry, absorbent substrates must be slightly pre-moistened or thinly primed with Ardagrip Classic diluted 15 with water. The pre-moistening water must be absorbed into the substrate before the first coating of Ardatec 1K Flex is applied. In a clean vessel, mix Ardatec 1K Flex with tap water using a mortar mixer until it is free from lumps.

If applying it with a roller or a wide brush use 3.6 liters of water or 3.5 liters of water if applying it with a serrated trowel to 20 kg of powder. After an exposure period of approximately three minutes, the sealant is mixed again and then it can be applied immediately.

Do not apply Ardatec 1K Flex at temperatures below +5°C and above +25°C. The mixed material must be applied at +20°C for approximately 45–60 minutes.

The application must always be carried out in two, or possibly three, work steps in order to achieve the required minimum layer thickness of 2.0 mm (dry). The second work step is carried out if the first work step has cured scratch-proof (after approximately 3 to 4 hours).

For the application of Ardatec 1K Flex, it is recommended to use a 4 x 4 x 4 or 6 x 6 x 6 mm toothed finishing trowel – applied with the side with teeth and smoothed with the flat side of the trowel. Using the toothed finishing trowel ensures that the intended quantity is applied and the layer thickness is maintained. The application wet layer thickness is approximately 1.2 mm per work step. This corresponds to a quantity used per work step of approx. 1.75 kg/m<sup>2</sup>; total use of approximately 3.5 kg/m<sup>2</sup>.

## WATERPROOFING CONNECTING JOINTS

Joints in the concrete and screed as well as joints between wall and floor surfaces are sealed with Ardatape 120 Extra or Ardatape Inside/Outside. Before the first coat, Ardate 1K Flex is applied onto the entire surface of the sealing tape (mixing ratio 20 kg Ardatec 1K Flex: approximately 3.6 L water).

### CONNECTING JOINTS ON FLOOR DRAINS AND GUTTERS

Only floor drains with a suitable compression sealing flange should be installed. Like the surface, the flange is coated with Ardatec 1K Flex and incorporated into the surface sealing by laying Ardatape Floor or Ardatape Strong (glass fiber meshes). Standard DIN 18534 specifies suitable flange widths for gutter systems; for WO-I and W1-I  $\geq$  30 mm, for W3-I  $\geq$  50 mm.

#### WATERPROOFING OF PENETRATIONS

If penetrations are needed for installations, then these are integrated into the surface waterproofing by applying Ardatape Wall or Ardatape Floor or Ardatape Strong (glass fiber meshes). It is recommended that the joints between penetrations and ceramic be first filled with an elastic sealant, e.g. Sanitärsilicon Profi, Profisil Premium. Waterproofing over construction joints in the pool body must be bridged with e.g. Ardatape 120 Extra by incorporating a loop.

#### INSTALLATION OF TILES AND PAVERS

Tiles or pavers may be installed on the substrate waterproofed with Ardatec 1K Flex after a drying period of approximately one day. We recommend the respective system adhesive mortar in accordance with AbP: Ardaflex Top2, Ardaflex Flex mortar, Ardaflex Ultimate or Floorflex Classic. Ardatape 120 Extra and Ardatape accessory must be used as system sealing tape. Please consult our current Technical Data Sheets before processing the adhesive mortar. Installation is carried out in accordance with DIN 18157-1.

#### INFORMATION FOR WATERPROOFING SWIMMING POOLS

A pool body free from cracks and deformations is a prerequisite for the installation of waterproofing materials.

Expansion joints or construction joints in the concrete body must be waterproofed with a joint tape set in concrete. Waterproofing must installed on the side of the basin that is facing the water (inside). It must form a closed tub and in general, it must be installed above the highest water level.

After waterproofing has been completed and before tiling is started, the effectiveness of waterproofing must be checked by a test filling for at least two weeks. In-ground pools require additional protection from the outside.

#### IN THE CASE OF SALINE BATHS, IT MAY BE NECESSARY TO USE REACTIVE RESIN MATERIALS BASED ON EPOXY RESIN FOR WATERPROOFING AND SEALING DE-PENDING ON THE ANALYSIS OF THE BATHING WATER:

For this purpose, we recommend our products Ardatec Xtrem for waterproofing and Ardaflex Xtrem along with Floorflex Xtrem for tiling and Ardacolor Xtrem Easy or Ardacolor Xtrem Multi for grouting.

#### OCCUPATIONAL HEALTH AND SAFETY

Contains cement, alkaline reaction with water. Potentially irritating to eyes and skin. Please note the risk and safety information on the containers and in the safety data sheets.

#### STORAGE

Store cool and dry. Can be stored for at least 12 months.



Mit diesen Hinweisen wollen wir Sie aufgrund unserer Versuche und Erfahrungen nach bestem Wissen beraten. Eine Gewährleistung für das Verarbeitungsergebnis im Einzelfallkönnen wir jedoch wegen der Vielzahlder Verwendungsmöglichkeiten und der außerhalb unseres Einflusses liegenden Lagerungs- und Verarbeitungsbedingungen unserer Produkte nicht übernehmen. Eigenversuche durchführen. Leichte Verfärbungen bei Dichtstörfen unter UV-Einstrahlung möglich. Geringe Farbschwankungen zwischen Chargen produktionstechnisch bedingt. Für die absolute Farbtreue wird keine Garantie übernommen. Objektbezogen chargengleiches Material verwenden. Unser technischer und kaufmännischer Beratungsdienst steht Ihnen zur Verfügung.

# Bostik GmbH

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Mit dem Erscheinen dieses Datenblattes werden alle früheren Ausgaben ungültig.

TECHNISCHE ANGABEN UND DATEN		
	Base	Plastic-modified fine cement mortar
	Density	approx. 1.5 g/ml
	Pool inspection in accordance with DIBT (German Institute for Building Technology)	2,0 - 2,1 l je 25-kg-Sack
	Testing in accordance with DIN EN 14891/2012-07	Tested as CM 01 P: liquid-applied, water-impermeable cement product with improved crack-bridging capacity at low temperatures ( $-5^{\circ}$ C) and resistant to chlorinated water. Adhesive tensile strength after water retention $\geq$ 0.5 MPa Adhesive tensile strength following contact with chlorinated water $\geq$ 0.5 MPa Crack-bridging under normal conditions $\geq$ 0.75 mm Crack-bridging at low temperature ( $-5^{\circ}$ C) $\geq$ 0.75 mm
	Classification in accor- dance with DIN 18535-3	Waterproofing of containers and pools Waterproofing system with an AbP in accordance with PG-AIV-F CM 01 P (see above) W1-B (water exposure class up to a water column of 5 m) R1-B (bridging of new cracks or variations of crack widths of up to 0.2 mm) S1-B (location: free-standing outsi- de basin) S2-B (location: adjacent interior basin)
	Classification in accor- dance with DIN 18534-3	Waterproofing of interior spaces Waterproofing system with an AbP in accordance with PG-AIV-F crack-bridging mineral-based water- proofing material (CM) WO-I (water exposure class from low to very high stress <sup>1</sup> [*in the case of very high stress and W3-I intensive exposure to additional chemicals, it is better to use reactive resins (RM)] R1-I bridging of new cracks or variations in crack width of up to 0.2 mm
	Allocation in accordance with DIN 18531-5	Waterproofing of balconies and terraces Waterproofing system with an AbP in accordance with PG-AIV-F crack-bridging mineral-based wa- terproofing material (CM) W (no classified standard requirement or water exposure). For exterior sur- faces if the surface water drains well and does not accumulate CM 01P (see above) R (bridging of new cracks or variations in crack width of up to 0.2 mm)
	Dry layer thickness for all water exposure classes	2,0 mm (2,4 mm wet layer thickness)
	Water need	approximately 3.5 L (application by trowel) or approximately 3.6 L (application by roller or brush) to 20 kg of powder
	Use of dry mortar	approximately 3.5 kg/m² – for two coats
	Curing period	approximately 3 minutes
	Processing time	approximately 60 minutes
	Processing temperature	Not below an air temperature of +5°C; not below an air temperature of +10°C of the building component up to max of +25°C
	Drying time of first + second layer	approximately 3-4 hours
	Accepts foot traffic	Drying time of second layer/accepts foot traffic after approximately one day
	Installation of tiles and slabs	as soon as it accepts foot traffic
	Full load-bearing ca- pacity	after 28 days
	Temperature resistance	- 20 °C to + 80 °C
	Building material class	B2. flammable in accordance with DIN 4102

# **BOSTIK HOTLINE**

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