

## IPANEX

### Additive Used To Make Priming Coats, Impervious Plaster and waterproof Concrete, Hard-Wearing Screeds and Coatings.

#### Product Specifications:

IPANEX is a chloride-free liquid additive used to make mortar and concrete impervious to pressurised water by preventing any capillary effect. By reducing the water/cement ratio and simultaneously enhancing processability, IPANEX will substantially improve mortar and concrete quality. Reducing the surface tension of makeup water will cause a substantial increase in plasticity and pliability of any IPANEX mortar, concrete or screed material.

#### Areas of Application:

Use IPANEX to make priming coats promoting adhesion between mineral-based substrates and plaster coats, impervious plaster coats protecting indoors and outside walls against wetness and pressurised water, hard-wearing screeds and coatings characterized by waterproofing and enhanced chloride resistance, impervious concrete for building construction and civil engineering projects. Added to injection grouts and sealing slurries, IPANEX will improve flow characteristics, processability and waterproofing properties.

#### Processing Notes:

##### Substrate preparation:

Apply IPANEX screed and sealing plaster layers only to solid substrates having sufficient load-carrying capacity. If necessary, consolidate the substrate by flooding it several times with DURIPAL (see DURIPAL data sheet). Remove any old plaster or rendering layers; scratch 1-2 cm of brittle mortar out of joints. Any surface to be treated must be free of oil, grease, bitumen patches, coats of paint and any other substance that might impair adhesion. Use appropriate procedures to repair brittle concrete, crumbling masonry, or cracks. While curing, no IPANEX mortar must be subject to pressurised water; therefore, any inrush of water or heavily soaked masonry will have to be repaired before IPANEX mortar can be applied (consult our Applications department). When coating indoors surfaces, check walls and floor slabs for stability under modified structural conditions. With IPANEX mortar, use only washed, uncrushed natural sand free of loam, humus or other pollutants. Adapt particle distribution and grain size to the intended use.

#### Impervious IPANEX Plaster:

##### First coat of plaster (gun-applied):

In accordance with mixing instructions (Table I), use a mixer to prepare a highly liquid IPANEX plaster to be gun-applied fresh in fresh m to a well-cleaned substrate wetted using DURIPAL (consumption: 300-500 grams per square meter).

##### Second coat of plaster:

Once the gun-applied coat has cured (minimum duration, 4 hours; maximum, 5 days), apply a second coat of plaster having a thickness of at least 15 mm, preparing the material in accordance with the mixing instructions contained in Table I. Once the coat of plaster has cured, a float can be used to smooth it down or to close its pores, as required.

To prevent the formation of condensation water, sealing coats of plaster applied indoors should be made of type E 64 IPA refurbishing plaster. In this context, take care to have a rough sealing coat surface so as to avoid adhesion problems.

Thoroughly presoak all substrates. Protect glass surfaces and anodized parts.

#### Action (Properties):

Even though IPANEX mortar and concrete will require up to 10 % less water, plasticity and applicability of any concrete so made will increase substantially. Waterproofing is achieved by forming micropores avoiding capillary suction. IPANEX mortar and concrete is resistant against thawing salts and frost, and will keep out pressurised water. Simultaneously, vapour diffusion characteristics are improved.

#### Test Certificates:

Concrete and Plaster Including IPANEX - Testing Water Permeability To DIN 1048; Munich Technical University Report no. 7508-82. Testing IPANEX in Sealing Coats of Plaster; Report no. 62/1201681, Bundesversuchs- und Forschungsanstalt Arsenal (Federal German Test and Research Station).

#### Technical Data:

<b>aterial</b>	Modified alkali silicate emulsion without synthetic additives
<b>pperance</b>	milky-white
<b>ensity</b>	13 g/cm <sup>3</sup>
<b>n Value</b>	2-13 (highly alkaline)
<b>onsumption</b>	Primer: 50% cover : 0.12 ltr/square meter with 5 mm layer thickness Full cover: 0.25 ltr/square meter with 5 mm of layer thickness Waterproof Plaster: approx. 0.35 ltr/square meter and 1 cm of plaster thickness Waterproof horizontal Screed: approx. 0.25 ltr/square meter and 1 cm of screed thickness concrete: 0.4-1 % of concrete weight (plastysising, waterproofing)
<b>ompressed ater Sealing</b>	10 m water column to DIN 1164 and DIN 1084 with approx. 2-2.5 cm of layer thickness
<b>orage</b>	Under non-freezing conditions
<b>shelf Life</b>	5 years within unopened container
<b>pplyed In</b>	Plastic canisters holding 10 lts or 20 lts

#### IPANEX Sealing Screed:

The additive IPANEX can be used to prepare highly wear-resistant indoors and outdoors sealing screeds. Thanks to their pliability and plasticity, IPANEX sealing screeds – made up earth-damp - can be applied easily and rapidly and will have excellent compaction characteristics. Prepare the substrate as, described above and apply a priming slurry of IPANEX (indoor screeds to be mixed in accordance with Table II; outdoor screeds, i.a.w. Table III) so that IPANEX screed material can be applied wet in wet

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### Please Note:

Subdivide large-sized surfaces by joints; pre-existing structural joints have to be integrated. If necessary, install screed fabrics; keep any screed moist for several days. Reprofile any slumps, broken edges and missing sections in a separate processing step, cutting all adjoining

surfaces at right angles. Wall/floor junctions and transitional areas have to be reinforced by grooves or reaction joints made of impervious IPANEX mortar (see Fig. 1).

**Table I Mixing Ratios, Impervious IPANEX Plaster**

Structure	Sand/Cement Mixing Ratio Dry Mixture	Qty of IPANEX per 100 lts of Dry Mixture	Minimum Coating Thickness	IPANEX Consumption
Priming coat (adhesive slurries)	1 (50 lts sand, 50 lts cement)	5 lts	5 cm	25 ltr/m <sup>2</sup>
Plaster (impervious mortar)	3 70 lts sand, 30 lts cement)	lts	With soil moisture : 1.5 cm with pressurised water: 2.0 cm	3ltr/m <sup>2</sup> 4ltr/ m <sup>2</sup>

**Sand:** uncrushed, washed natural sand; 0-4 mm, to DIN 4226

### IPANEX Mortar for Grooves, Wall/Floor Junctions and Horizontal Barrier Courses:

IPANEX can be used to make up impervious mortar used to make grooves, wall/floor junctions and horizontal barrier courses providing a high level of waterproofing against pressurized and capillary water. For details, refer to Fig. 1.

#### Grooves:

Using a suitable tool, cut a groove measuring approx. 4 X 4 cm along the wall/floor junction line. Use suitable measures - e.g. an IPANEX R barrier, or sealing injections - to stop any leaks or intruding water - so that IPANEX priming slurry (for mixing instructions, refer to Table I) can be applied into the 4 X 4 cm groove in the absence of running water for a surface free of pores and sink holes.

#### Wall/Floor Junction, Horizontal Barrier Courses:

When starting a new wall, use impervious IPANEX mortar for its first course (for mixing instructions, refer to Table I), by way of horizontal barrier. With impervious horizontal courses built in by cutting slots or replacing masonry, use impervious IPANEX mortar (for mixing instructions, refer to Table I) as a capillary waterproof course.

### IPANEX for Concrete: (See next technical leaflet

IPANEX will permit concrete grades having a 0.4-0.5 water/cement ratio that, even though they require less water, are characterized by substantially improved flow characteristics and excellent pliability. They can be compacted very well indeed so that the danger of rock pockets will be minimized.

#### Please Note:

When making and curing any impervious, plaster, screed, mortar or concrete containing IPANEX, observe all cement work rules imposed by DIN 1045, i.e. avoid heat, frost and high winds while applying the material and for at least 24 hours afterwards; keep moist during a sufficiently long period of time. Use only water to clean equipment and mixers!

#### Safety Recommendations:

Because of its alkalinity, IPANEX is corrosive! Observe all protective measures prescribed by any competent social insurance association against occupational hazards in the chemical industry. Use gloves and protective goggles. Avoid any contact between the product and your skin. For improved protection, apply cream to your hands. Use a good deal of water to wash away any splashes of material reaching your skin or an eye; afterwards, immediately consult a physician.

**Table II Mixing Ratios, IPANEX Sealing Screed (Indoors, e.g. basements)**

Structure	Sand/Cement Mixing Ratio Dry Mixture	Qty of IPANEX per 100 lts of Dry Mixture	Minimum Coating Thickness	IPANEX Consumption
Priming coat (adhesive slurries)	1 (50 lts sand, 50 lts cement)	lts	5 cm	25 ltr/m <sup>2</sup>
Plaster (impervious mortar)	1 67 lts sand, 33 lts cement)	lts	0 cm	52 ltr/ m <sup>2</sup>

**Notes:** Type CEM I cement

**Sand:** uncrushed, washed natural sand; 0-8 mm, to DIN 4226

**Table III Mixing Ratios, IPANEX Screed (outdoors, e.g. balconies)**

Structure	Sand/Cement Mixing Ratio Dry Mixture	Qty of IPANEX per 100 lts of Dry Mixture	Minimum Coating Thickness	IPANEX Consumption
Priming coat (adhesive slurries)	1 (50 lts sand, 50 lts cement)	lts	7 cm	35 ltr/m <sup>2</sup>
Waterproof Screed	1 75 lts sand, 25 lts cement)	lts	0 cm	4 ltr/ m <sup>2</sup>

**Notes:**

**Notes:**Type CEM I cement

**Sand:** uncrushed, washed natural sand; 0-8 mm. to DIN 4226

**Version 11/18**

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