



CONIPLAY AI

Water Impermeable Fall Protection for Splashparks

Fields of application

fall protection surface for water parks, splash parks, pool decks, paths, changing rooms, etc.

System data

		product	consumption	application	remarks	
Primer	for asphalt	CONIPUR 70	0.15 kg/m ²	airspray or roll	In case of the residual moisture in concrete of > 4%, CONIPUR 3785 must be used.	
	for concrete	CONIPUR 4710 (CONIPUR 74)	0.20 kg/m ²	airspray or roll		
		A surface preparation by blasting or grinding (incl. the necessary post-treatment) is usually required. For further information see the product data sheets or contact our Technical Service.				
Fall Protection Layer	30 mm	CONIPUR 4020	1.5 kg/m ²	trowel	For other shock pad thicknesses (≠ 30 mm) the amount of binder and rubber can be adapted proportionally. For questions or more information, please contact our Technical Service.	
	optional, for fall protection	recycled rubber granules, 2-6 mm	19.5 kg/m ²			
		Depending on availability also larger granules, shred, crumb and/or fibres can be used which have an impact on the recommended binder consumption. When using a mixture of rubber granules and fibres please do contact our Technical Service For paver installation CONIPUR 6020 is used				
Comfort layer	can be installed without the base layer	10 mm	CONIPUR 4020	1.9 kg/m ²	trowel	Depending on customers' wish or requirements, this layer can be built with EPDM granules, recycled EPDM granules or recycled black rubber granules. ATTENTION: when using a different type of recycled EPDM or recycled black rubber granules, the consumption of binder and / or granules might differ considerably!
			CONIPUR EPDM granules, 1-3.5 mm	9.6 kg/m ²		
		or				
			CONIPUR 4020	1.3 kg/m ²	trowel	
			CONIPUR technical, recycled EPDM C granules, 1-4 mm	6.5 kg/m ²		
or						
	CONIPUR 4020	1.5 kg/m ²	trowel			
	recycled-rubber-granules, 1-4 mm	7.3 kg/m ²				
		For paver installation CONIPUR 6020 is used				

Pore Sealer		CONIPUR 2400 (CONIPUR 203)	1.0 – 1.4 kg/m ² (1,5 - 1,8 kg/m ²)	rubber/metal wiper (or paver)	Depending on the temperature and porosity of the base layer, the consumption may vary.
	Alternatively, CONIPUR 210 can be used in combination with EPDM powder. The powder must be checked for compatibility before use. Mixing ratio PUR : EPDM powder approx. 65 : 35 – depending on the quality of the EPDM powder and the temperatures CONIPUR 210 can be added up to a ratio of 70 : 30 PUR : EPDM powder				
Wear Layer	1 st layer	CONIPUR 210	1.0 kg/m ²	notched squeegee	We recommend to apply 2.5 kg/m ² CONIPUR 210 in two layers , to ensure that enough granules are broadcasted into the coating and to create a uniform surface . EPDM net consumption for both layers, a total amount of approx. 4.4 kg/m² EPDM granules must be calculated including the excess quantity.
		CONIPUR EPDM granules, 0.5-1.5 mm	2.5 kg/m ² (net consumption)	broadcast	
	2 nd layer	CONIPUR 210	1.5 kg/m ²	notched squeegee	
		CONIPUR EPDM granules, 0.5-1.5 mm	2.5 kg/m ² (net consumption)	broadcast	
Top Sealer		CONIPUR 2210 AB or CONIPUR 2210	0.3 kg/m ²	spray	
		CONIPUR 2210 AB reduces the risk of germs being carried over the floor and provides no breeding ground for microorganisms.			

Total thickness of the system approx. 30 + 10 + 4 mm = 30 mm fall protection layer (if required)
10 mm comfort layer,
4 mm coating layer

Depending on the required HIC value and the required stability of the systems, **other thicknesses** for the fall protection layer will have to be chosen. For high HIC values, the thickness of the base layer may exceed 100 mm.

As HIC values largely depend on the installation, neither values nor test certificates are given here. As your partner, **CONICA offers** you HIC measurements of your samples in our laboratory. Please contact your responsible sales manager or our Technical Service.

Preparation

Substrates to be coated have to be firm, dry, load bearing and free of loose and brittle particles and substances, which impair adhesion such as oil, grease, rubber skid marks, paint or other contaminants.

In addition, the subbase must fulfil the relevant standards with special reference to flatness, gradients, thickness, water permeability and load bearing capacity.

CONIPLAY AI is a **water impermeable** surfacing system and requires a **water permeable base layer**. In case of a **water impermeable base layer**, a drainage or a slope of at least 2 % must ensure that (rain) water can drain off easily. Stagnant moisture must be avoided.

See also "Playground – Subbases".

The **tensile strength** of the subbase must be at least **1.0 N/mm²**.

The residual **moisture** of the subbase must not exceed **4 %** (check with CM equipment), which corresponds to maximum 75 % relative humidity according to ASTM F 2170. If using the calcium chloride test, the maximum allowable vapour emissions is 4.0 lbs. as per ASTM F 1869.

The **temperature** of the **base course** must be at least **3 °C** above the current dew point temperature.

The optimal **temperature** of the material before and during application is between **15 and 25 °C**.

Consumption

For the different grain sizes and thicknesses of the [fall protection layer](#) we recommend the following consumptions:

SBR Layer in mm	qty SBR in kg / m ²	quantity of binder in kg /m ²
		2 - 6 mm
30	19.5	1.50
40	26.0	2.00
50	32.5	2.50
60	39.0	3.00
70	45.5	3.50
80	52.0	3.90
90	58.5	4.40
100	65.0	4.90
110	71.5	5.40
120	78.0	5.90
130	84.5	6.40

The quantities specified are mere [recommendations](#) and do not constitute guidelines. In case of other rubber types (with fibres, different shape of the granules, different grain size, etc.) the amount of binder must be adjusted.

For the [10 mm comfort layer](#) we recommend as follows:

- 9.6 kg/m² CONIPUR EPDM, 1.0 – 3.5 mm with 1.9 kg/m² CONIPUR 4020 [or](#)
- 6.5 kg/m² CONIPUR technical (recycled) EPDM C, 1.0 – 4 mm with 1.3 kg/m² CONIPUR 4020 [or](#)
- 7.3 kg/m² recycled rubber granules, 1.0 – 4.0 mm with 1.5 kg/m² CONIPUR 4020

Depending on the [quality](#) of the granules used – especially valid for technical recycled EPDM and black rubber granules – the [consumption](#) of the granules and/or the binder can [vary significantly!](#)

The quality of the granules depends on different factors, for example

- raw material used for the production of the granules
- bulk density
- sieve line (grain size distribution)
- share of powder

Application

Apply [CONIPUR 70](#) onto the pre-treated water [permeable asphalt](#) sub-base using airless spraying equipment.

For [precast concrete](#) parts such as curbs and drainage systems, [CONIPUR 4710](#) or [CONIPUR 74](#) is applied preferably with a low-pressure airless

device (for further information see product data sheet).

Allow the solvent to evaporate and the base course to become [sticky](#), before applying the following layer. Depending on the prevailing humidity of the air, this is the case after about two hours.

[CONIPUR 3785](#) is used for [fresh concrete surfaces](#) with a higher humidity level. [CONIPUR 3785](#) is applied by rolling or spraying. Puddling or thick layers are to be avoided.

For the first layer the [consumption](#) must be least [0.5 kg/m²](#) - do [not](#) sand. Puddling or thick layers are to be avoided.

To ensure the adhesion of the following polyurethane-based layer, the [2nd layer](#) of [CONIPUR 3785](#) (consumption min. 0.35 kg/m²) must be [sprinkled](#) with [oven-dried quartz sand](#) (grain size 0.3-0.8 mm). Unbound quartz sand must be removed after curing (see product data sheet for further information).

Apply only primer in areas where the following layer will be installed within the next [12 hours](#). If the application of the base layer does [not](#) take place [within](#) the [12 hours](#) period, a new coat of primer has to be applied in order to avoid poor adhesion.

For the [fall protection layer](#) mix the rubber granules, shred, crumb and/or fibres with [CONIPUR 4020](#) using a compulsory mixer. Install the base mat at a [consistent density](#) to the specified thickness using a [hand trowel](#) and a screed.

Let the layer [cure](#) (harden) so that foot traffic or equipment do not leave any indentations. The curing process depends on temperature and humidity. If there is sufficient humidity in the air, curing is normally finished overnight.

The maximum [re-coating](#) interval of the [fall protection layer](#) is [48 hours](#). In case the comfort layer is installed after this interval, the surface has to be primed with [CONIPUR 72](#).

If the fall protection layer is [soiled](#) (dust, sand), the surface must be cleaned and [CONIPUR 72](#) must be applied after it has dried completely. The [CONIPUR 72](#) primer must also be used after [rain](#).

Mix the [CONIPUR EPDM](#) or [CONIPUR technical \(recycled\) EPDM C](#) or black recycled rubber granules with a share of [20 %](#) by weight of [CONIPUR 4020](#) using a compulsory mixer. Install the top layer using a hand trowel and a screed.

As this layer is reworked with a 4 mm coating layer, a thickness of 10 mm is sufficient.

Allow the comfort layer to [cure](#) (harden). The curing process depends on temperature and humidity. Do not allow [foot traffic](#) until the surface is sufficiently cured. If there is enough humidity in the air, curing is normally finished overnight.

The **smoothing** of the surface **during application** of the binder-granule mix can be facilitated by using our **SMOOTHING AGENT**, which is used to moisten the trowel. It is a very pure product with low odour. As the trowel only needs to be moistened, the consumption can be very low.

If the comfort layer is **soiled** (dust, sand), the surface must be cleaned and CONIPUR 72 must be applied after it has dried completely. The CONIPUR 72 primer must also be used after **rain**.

Close the **pores** of the comfort layer with **CONIPUR 2400** (CONIPUR 203) (see product data sheets) by using a rubber or metal wiper or a specially equipped paving machine.

If the pore-sealed surface was exposed to rain, if it was **wet** or if the recoating **interval** of **24** hours was **exceeded**, an **adhesion test** with primer CONIPUR 72 (approx. 50 - 80 g/m²) must be carried out. If the adhesion test is not satisfactory, please contact our technical service.

If the pore sealed surface is **soiled** (dust, sand), the surface must be cleaned and CONIPUR 72 must be applied after it has dried completely.

After curing, apply **1.0 kg/m² CONIPUR 210** with a notched squeegee. Broadcast the surface with dry **CONIPUR EPDM** granules to excess (grain size 0.5 – 1.5 mm) before curing takes place. Remove the excess CONIPUR EPDM granules (re-use for broadcasted coatings possible) when the coating has cured.

For the second layer apply **1.5 kg/m² CONIPUR 210** and proceed as before.

The surface is **sealed** with **CONIPUR 2210 AB** or CONIPUR 2210.

The top coat is sprayed in **two coats** from **opposite** directions with an approximate total consumption of **0.30 kg/m²**.

Further information and application instructions are shown in the product data sheet.

Remarks

For further information, please refer to the technical data sheets of the products or contact our Technical Service.

For application conditions please see our *“General Application Guidelines for Sports Systems Indoor and Outdoor”*.

Suitable machinery is e.g. Plano Matic (paver) and Mixmatic (mixer) from SMG, Vöhringen/Germany.