

CONIPUR EPDM

Single Layer Permeable EPDM System

Fields of application multipurpose fields, school playgrounds, tracks

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.
EPDM layer		CONIPUR 6020	2.4 kg/m ²	paver	CONIPUR 6020 is an aromatic binder, which will yellow when exposed to sun light.
		CONIPUR EPDM granules, 1-3.5 mm	12.5 kg/m ²		For sensitive colours of the granules (e.g. blue, beige, grey) we recommend to use CONIPUR 6080 (highly UV resistant) or CONIPUR 6090 (UV stable, aliphatic).
		Alternative binders: highly UV stable binder CONIPUR 6080 UV stable binder CONIPUR 6090			For further information see "Playground EPDM – Binder Type".
		For the manual installation we recommend to use CONIPUR 4020, CONIPUR 4080 or CONIPUR 4090			
Sealing lacquer	optional	CONIPUR 2210 (anti-skid)	0.30 kg/m ²	spray (in 2 coats)	The application of a top coat improves the slip resistance, the UV-resistance (in case of CONIPUR 6020 or CONIPUR 6080) and facilitates the maintenance
Line paint		CONIPUR 8150	20-30 g/m	spray	

Total thickness of the system approx. 13 mm

Selected technical properties

		conditions	result	requirement	remarks
EN 14877:2006	Force reduction	23 °C	38 %	25-50 %	Data taken from EN test report.
	Modified vertical deformation	23 °C	1.6 mm	≤ 6 mm	
	Friction (sliding coefficient)	dry wet	56 63	55 - 110	
	Tensile Properties	tensile strength elongation at break	0.54 N/mm ² 69 %	≥ 0.4 Mpa ≥ 40 %	
DIN V 18035-6	Standard deformation	0 °C 20 °C 40 °C	1.0 mm 1.2 mm 1.5 mm	0.6-1.8 mm	Data taken from suitability test according to DIN V 18035-6.
	Relative abrasion		27	> 1.0	
	Spike resistance		Class 1	Class 1	
	Remaining indentation		0.5 mm	≤ 1.0 mm	
	Permeability		0.061 cm/s	0.01 cm/sec	
	Ageing	Constant climate with condensation, constant heat (80 °C), combined climate of heat, humidity and light	pass	pass	

Depending on the substrate, rubber source and application conditions or in case of using alternative products, results may vary.

Selected environmental data

		details	result	requirement	remarks
Environmental compatibility according to DIN V 18035-6	DOC	48 h	< 5	≤20	Data taken from suitability test according to DIN V 18035-6.
	Heavy metals	Lead (Pb)	< 0.005 mg/l	≤ 0.04 mg/l	
		Cadmium (Cd)	< 0.0005 mg/l	≤ 0.005 mg/l	
		Chromium _{totale} (Cr)	< 0.005 mg/l	≤ 0.05 mg/l	
		Chromium VI (CrVI)	< 0.008 mg/l	< 0.008 mg/l	
		Mercury (Hg)	< 0.0002 mg/l	≤ 0.001 mg/l	
		Zinc (Zn)	0.74 mg/l	≤ 3.0 mg/l	
		Tin (Sn)	< 0.005 mg/l	≤ 0.05 mg/l	
	Smell		no smell		

Preparation

The bound base layer must fulfil the **relevant standards** with special reference to: flatness, gradients, thickness, load bearing capacity and water permeability.

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

The residual **moisture** of the concrete 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 **tear strength** of the **concrete** must be at least 1.0 N/mm².

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**.

Application

CONIPUR 70 onto the pre-treated **asphalt** substrate using airless spraying equipment or a paint roller.

On **concrete** CONIPUR 4710 or CONIPUR 74 is used. In case of a higher residual **moisture** up to 6 %, CONIPUR 3785 must be used – please refer to the corresponding product data sheets.

Apply only as much primer as can be **re-coated within 24** hours (concrete **8** hours).

If recoating does not take place within the 24 hours (concrete 8 hours) period a **new coat** of primer must be applied in order to avoid poor adhesion.

If the surface 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**.

Allow the solvent to evaporate and the sub base to become **sticky**, before applying the resilient layer.

Mix the CONIPUR EPDM granules and CONIPUR 6020 using a compulsory mixer. Apply the mix using a specially designed paver, to the primed, surface to form the resilient base layer.

For **sensitive** colours of the granules we recommend to use CONIPUR 6080 (highly UV-stable) or CONIPUR 6090 (UV stable, aliphatic). For more information, please refer to "Playground EPDM – Binder type".

The **smoothing** of the surface during application of the binder-granule mix can be facilitated by using CONICA

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.

Allow the EPDM 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.

Optionally, the surface can be sealed with CONIPUR 2210 anti-slip top coat. The best way to apply CONIPUR 2210 is with an airless spray machine.

In order to obtain an uniform surface, two spray coats from opposite directions are required. This is the only way to ensure that the granulate is completely sealed. Further information can be found in the corresponding 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 for installing the in situ base layer is e.g. Plano Matic and Mixmatic from SMG, Vöhringen/Germany.