

# CONIPUR SP

## IAAF Certified Structural Spray Coating System

**Fields of application** athletic tracks, multipurpose and school sports

### System data

		product	consumption	application	remarks
<b>Primer</b>	for asphalt:	<b>CONIPUR 70</b>	0.15 kg/m <sup>2</sup>	spray	CONIPUR 74 is used for pre-fabricated concrete parts, e.g. for curb stones and drainage systems. Otherwise, CONIPUR 3785 has to be used (please see Technical Data Sheet for details or consult our Technical Service).
	for concrete:	<b>CONIPUR 74</b>	0.20 kg/m <sup>2</sup>	spray	
<b>Base layer</b>		<b>CONIPUR 322</b>	1.7 kg/m <sup>2</sup>	paver	
		Recycled rubber granules, 1-4 mm	8.0 kg/m <sup>2</sup>		
<b>Spray coating</b>	Top layer	<b>CONIPUR 217</b> (CONIPUR 216/322)	1.2 kg/m <sup>2</sup> (0.4/0.8 kg/m <sup>2</sup> )		Please pay attention to the CONICA recommendation on the EPDM particle size.  At low temperatures, it may be possible to reduce the share of the rubber powder.
		CONIPUR EPDM granules, 0.5-1.5 mm	0.8 kg/m <sup>2</sup>	spray (in 2 coats)	
		CONIPUR EPDM powder, 0.0-0.5 mm	0.05 kg/m <sup>2</sup>		
<b>Sealing lacquer</b>	optional (for most colours)	<b>CONIPUR 2200</b> (CONIPUR 2210)	0.25-0.30 kg/m <sup>2</sup>	spray (in 2 coats)	In case of sensitive colours (e.g. blue, grey), it is necessary to seal the surface with pigmented CONIPUR 2200 or CONIPUR 2210 (anti-skid) in order to increase the colour stability.
<b>Line paint</b>		<b>CONIPUR 8150</b>	20-30 g/m	spray	

**Total thickness of the system** approx. 13 mm (11 + 2 mm)

### Selected technical properties

		conditions	result	requirement	remarks
<b>EN 14877</b>	Force reduction	23 °C	38 %	25-60 %	Data taken from suitability test according to EN 14877
	Modified vertical deformation	23 °C	1.8 mm	≤ 3 mm	
	Friction (sliding coefficient)	dry wet	99 57	80 – 110 55 - 110	
	Permeability		water permeable		
	Spike resistance - EN 14810	tensile strength elongation at break	0.72 N/mm <sup>2</sup> 59 %	≥ 0.4 N/mm <sup>2</sup> ≥ 40 %	
	Ageing	requirements after exposure to heat and hot water – EN 13817 and EN 13744	met		
Ageing	requirements after exposure to UV light according to EN 14836	met			
<b>ASTM F 2157-08</b>	Flammability behaviour		pass	pass	Data taken from ASTM test report. Class A is the best possible classification for athletic track systems.
	Classification		Class A		

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

### Selected environmental data

		details	result	requirement	remarks
<b>Environmental compatibility according to DIN V 18035-6</b>	EOX		29 mg/kg OS	100 mg/kg OS	Data taken from suitability test according to DIN V 18035-6.
	DOC	24 h	39 mg/l	≤ 50 mg/l	
	Heavy metals	Lead (Pb)	< 0.001 mg/l	≤ 0.025 mg/l	
		Cadmium (Cd)	< 0.0002 mg/l	≤ 0.005 mg/l	
		Chromium <sub>total</sub> (Cr)	< 0.001 mg/l	≤ 0.05 mg/l	
		Chromium VI (CrVI)	< 0.008 mg/l	≤ 0.008 mg/l	
		Mercury (Hg)	< 0.001 mg/l	≤ 0.001 mg/l	
		Zinc (Zn)	0.3 mg/l	≤ 0.5 mg/l	
Tin (Sn)	< 0.02 mg/l	≤ 0.04 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 tear resistance of the **concrete** must be at least 1.0 N/mm<sup>2</sup>. 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 **temperature** on 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

Apply **CONIPUR 70** onto the pre-treated water **permeable asphalt** sub-base using airless spraying equipment. Apply only primer in areas where the base layer will be installed within the next 24 hours.

For **precast concrete parts** such as curbs and drainage systems, **CONIPUR 74** is applied preferably with a low-pressure airless device (for further information see product data sheet).

**CONIPUR 3785** is used for **fresh concrete surfaces** such as ball joints, net posts, pole vault entry boxes, take-off beams, etc. **CONIPUR 3785** is applied by rolling, or better with a rubber squeegee and by uniform rolling or brushing on the previously prepared substrate. Puddling or thick layers are to be avoided.

For the first layer the **consumption** must be least **0.5 kg/m<sup>2</sup>** - do **not** sand.

To ensure the adhesion of the following polyurethane-based layer, the **2nd layer** of **CONIPUR 3785** (consumption min. 0.35 kg/m<sup>2</sup>) 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 **24 hours** (**concrete** 8 hours). If the application of the base layer does **not** take place **within** the **24 hours** (**concrete** 8 hours) period, a new coat of primer has to be applied in order to avoid poor adhesion.

Allow the solvent to evaporate and the base course to become **sticky**, before applying the following layer.

Mix the recycled rubber granules (grain size 1-4mm) with **CONIPUR 322** using a specially designed mixer. Apply the

mixed material with a specially designed paver onto the primed surface. Let the base layer cure. The curing process depends on temperature and humidity.

After curing, prepare and apply the spray-coat. Thoroughly mix **CONIPUR 217** (**CONIPUR 216/322**), **CONIPUR EPDM granules** and **CONIPUR EPDM powder** and fill the mixed material into a spray machine, specifically designed for spraying this kind of mixture.

Spray the mix onto the surface in **two coats** from **opposite** directions to obtain the specified coverage rate.

We recommend applying pigmented **CONIPUR 2200** or **CONIPUR 2210** (anti-skid) as a top coat. Sealing extends life and simplifies maintenance (easier and more cost-effective cleaning in the long term).

The top coat is sprayed in **two coats** from **opposite** directions with an approximate consumption of total **0.30 kg/m<sup>2</sup>**. 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 for installing the in situ base layer and for spraying is e.g. PlanoMatic, MixMatic and StructurMatic from SMG, Vöhringen/Germany.