CONIPUR 4080

Moisture Curing Single Component PUR Binder with High Colour Stability

Product description
CONIPUR 4080 is a moisture curing, solvent free, unpigmented PUR binder of medium viscosity.

Exposed to UV light, CONIPUR 4080 exhibits a high colour stability – however it is not aliphatic – not 100% colour stable.

Fields of application
CONIPUR 4080 is used as a moisture curing binder for coloured EPDM granules. It is used for the manual construction of in-situ EPDM layers for multipurpose surfaces and children's playgrounds.

For bigger surfaces, which are installed with a paver, we recommend the use of CONIPUR 6080 or CONIPUR 6090 (please refer to the according technical data sheet).

Properties
Due to the medium viscosity, CONIPUR 4080 is easily mixed with the EPDM granules and the run-off from the granules is minimized.

Due to the special field of application CONIPUR 4080 features a long processing time, so that the joints can be adjusted easily for a rather long time.

CONIPUR 4080 exhibits a high colour stability. Nevertheless, depending on the colour of the EPDM slight colour changes of the installed resilient layer can occur.

To avoid this (temporary) discoloration, we recommend the use of our aliphatic binder CONIPUR 4090 (installation by hand) or CONIPUR 6090 (paver installation). Please refer to the document "EPDM binder type".

Technical Data

Density	DIN 53217, at 23 °C	g/cm^3	approx. 1.06
Viscosity	at 23 °C	mPas	approx. 4000
NCO content	DIN 53185	%	approx. 6.15
TDI monomer percentage	DIN 55956	%	< 1.0
Ready for foot traffic	at 23°C / 50 % rel. hum.	h	approx. 32
Substrate and application temperature	minimum maximum	°C °C	15 30
Permissible relative humidity	minimum maximum	% %	40 75
Above figures are guide values and may not be used as a base for specifications!			

Application method
CONIPUR 4080 is a single component product where the ideal temperature before and during application is between 15 and 25 °C.

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

For the installation of an EPDM layer, mix EPDM (grain size 1-3.5 mm) with 20 % CONIPUR 4080 using a compulsory mixer rotating at approximately 300 rev/min, for 3-5 minutes. Ensure that the mixer reaches the sides and bottom areas of the mixing vessel.

The homogenous mix is applied using a trowel. In order to achieve good surface strength, the rubber granule mat must be compacted thoroughly. If necessary, use a compaction roller.

Special attention must be paid to the construction joints, which must be carefully reworked using a smoothing trowel. If a joint connection has to be made to an already cured section, it must be primed beforehand with CONIPUR 4080 or CONIPUR 72 and reworked thoroughly. Otherwise flaws will develop at the joints, which can lead later on to cracks in the surface.

The reduction of the binder ratio is not recommended, as the mechanical characteristics decrease and might even fall below the requirements of the relevant standard.

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

The granules must be dry, otherwise, humidity acts as a catalyst and accelerates the chemical reaction with the binder, causing the binder to foam, the formation of a non-homogeneous layer and of poor mechanical properties.

The ambient temperature, the temperature of the material and the substrate and the humidity of the air are of decisive importance for the curing of CONIPUR 4080. At low temperatures and humidity, the speed of reaction is reduced resulting in a longer pot life, re-coating interval and open time. At the same time, the viscosity increases requiring increased mixing time and a higher consumption. At high temperatures and humidity, the speed of reaction is accelerated and the contrary is true.

For the installation of an EPDM layer, we recommend the use of EPDM granules that have been tested and proven to be suitable for use with CONIPUR 4080.

In order to achieve the properties required in accordance with the relevant standard, the quantities and granulate sizes defined in the system data sheets must be used.

Cleaning agent
Re-usable tools must be cleaned carefully with CLEANER 40 or other suitable solvents (e.g. butyl acetate) before curing has taken place. Never use water or alcoholic solvents as cleaners on uncured materials.

Substrate condition
CONIPUR 4080 is used as highly colour stable binder for the installation of an EPDM layer on an in-situ installed elastic layer or on a bound subbase.

Substrates to be covered have to be dry, load bearing, free of loose particles and substances, which impair adhesion such as oil, grease, paint or other contaminants.

The bound subbase must fulfil the requirements according to DIN V 18035-6 in regards of compaction, flatness, gradients and permeability.

On concrete, it is necessary to apply CONIPUR 74 or CONIPUR 4710 (solvent free) (see product data sheets) before installing in situ rubber granule mats. The bond strength of the substrate must be at least 1.0 N/mm^2 (check with an approved pull off tester e.g. Herion, load rate 100 N/s).

The residual moisture of the substrate 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.

On asphalt, primer CONIPUR 70 must be used. Never use CONIPUR 74 on asphalt.

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

Pack size
CONIPUR 4080 is supplied in 20 kg plastic pails or 220 kg drums

Colour
colourless

Storage
Store in original closed packing, under dry conditions at a temperature range of 5-25 °C.

Do not expose the drums to direct sunlight.

Before use, please see "best before" date on the pail / drum.

Safety precautions
CONIPUR 4080 is non-hazardous in its cured condition.

For protective measures, transport regulations and waste management please refer to the Material Safety Data Sheet of the product.

CONIPUR 4080 meets the requirements of the EC directive 2004/42/EC.

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