CONIPUR 322

Moisture Curing Single Component PUR Binder

Product description
CONIPUR 322 is a moisture curing, solvent free, unpigmented PUR binder of medium viscosity.

It is based on MDI and TDI. The content of monomeric TDI (tolylene di-isocyanate) is very low.

Fields of application
CONIPUR 322 is used as a moisture curing binder for recycled granules for in situ base mats.

Depending on the type of surface, these mats are coated with a CONIPUR top sealer, a structural spray coating or a self levelling coating in order to obtain weather resistant and permanently elastic synthetic coatings.

CONIPUR 322 can also be used for the installation of coloured EPDM granule mats, which are common surfaces for ball game courts, school playgrounds or athletic tracks.

Properties
Due to the medium viscosity, CONIPUR 322 is easily mixed with the rubber granules and there is hardly any run-off of the granules.

CONIPUR 322 is suitable for low and high temperature applications.

The long curing time of CONIUR 322 allows day construction joints to be easily and correctly made.

The yellowing which occurs when CONIPUR 322 is exposed to UV light does not affect its mechanical properties. It is most evident with some colours of EPDM granules. Blue granules will turn to green, grey granules may become yellow beige.

These colour changes occur within the first hours, or days, after application, depending on the weather conditions. After a while the original EPDM colour appears more and more due to the abrasion of the thin layer of CONIPUR 322 on top of the granules.

It is recommended that, in the cases of sensitive colours (blue, beige etc.), a supplementary sealing is applied using the corresponding colour of light stable CONIPUR 2200. Using yellow, red, orange or black granules, the yellowing of CONIPUR 322 is usually not so apparent.

Many millions of square meters applied all over the world, as well as more than two decades of experience with CONIPUR 322, guarantee excellent application characteristics, a high quality and long life expectancy of the finished surface.

Technical data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density, g/cm³ at 23 °C</td>
<td>approx. 1.06</td>
</tr>
<tr>
<td>Viscosity, mPas at 23 °C</td>
<td>approx. 3300</td>
</tr>
<tr>
<td>NCO content, %</td>
<td>approx. 10.2</td>
</tr>
<tr>
<td>TDI monomer percentage, %</td>
<td>&lt; 0.5</td>
</tr>
<tr>
<td>Ready for foot traffic, h</td>
<td>approx. 48</td>
</tr>
<tr>
<td>Substrate and application temperature, °C</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>15</td>
</tr>
<tr>
<td>Maximum</td>
<td>30</td>
</tr>
<tr>
<td>Permissible relative humidity, %</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>40</td>
</tr>
<tr>
<td>Maximum</td>
<td>75</td>
</tr>
</tbody>
</table>

Above figures are guide values and must not be used as a base for specifications!

Application method

The optimal temperature of the material 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 a base layer, mix recycled rubber granules (normally SBR) and CONIPUR 322 in a ratio of 100:21 (by weight) using a forced 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 material is applied using a specially designed paving machine. In order to achieve good surface strength, the rubber granule mat must be compacted thoroughly. If necessary, roll the surface additionally.

Particular attention must be paid to the construction joints, which, if possible, must be made before the material has significantly cured. If this cannot be accomplished cured joints must be primed with CONIPUR 72 and well trowelled.

When applying EPDM layers, the mixing ratio must be 19 parts by weight of CONIPUR 322 and 100 parts by weight of EPDM granules.

The mechanical characteristics decrease if above mentioned quantity of CONIPUR 322 is lowered, and the requirements of DIN V 18035-6 or IAAF specifications might not be met.

The rubber granules must be dry as moisture will accelerate the curing of the binder making installation more difficult or even impossible and may result in the binder foaming, leading to an uneven surface and a weak mat.

The working life and curing time of CONIPUR 322 are influenced by the ambient, material and substrate temperature, as well as by humidity. 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.

When the humidity is below 40 % it may be necessary to carefully mist spray the mat with water to avoid unacceptable cure times, which may impair the quality of the elastic layer.

At low temperatures, curing can be slightly accelerated by use of catalyst. The quantity of catalyst needed depends on the ambient conditions and has to be defined at the job site and may vary daily. As a guide, 0.2 % w/w of ACCELERATOR 10 or 12, as a percentage of the binder, may be used.

For the installation of the granule mats, we recommend the use of recycled rubber or EPDM granules that have been tested and shown to be suitable for use with CONIPUR 322. In order to meet the required standards (DIN V 18035-6 or IAAF), the size of the granules must be between 1-4 mm.

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

The requirements mentioned in DIN V 18035-6 or the governing body specifications, regarding evenness, declivity and water permeability must be met.

On concrete, it is necessary to apply CONIPUR 74 (see product data sheet) before installing in situ rubber granule mats.

The bond strength of the substrate must be at least 1.0 N/mm² (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 322 is supplied in 20 kg pails, 220 kg drums and 1'050 kg totes.

Colour
straw coloured

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 packing unit.

Safety precautions
CONIPUR 322 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 322 meets the requirements of the EC directive 2004/42/EC.