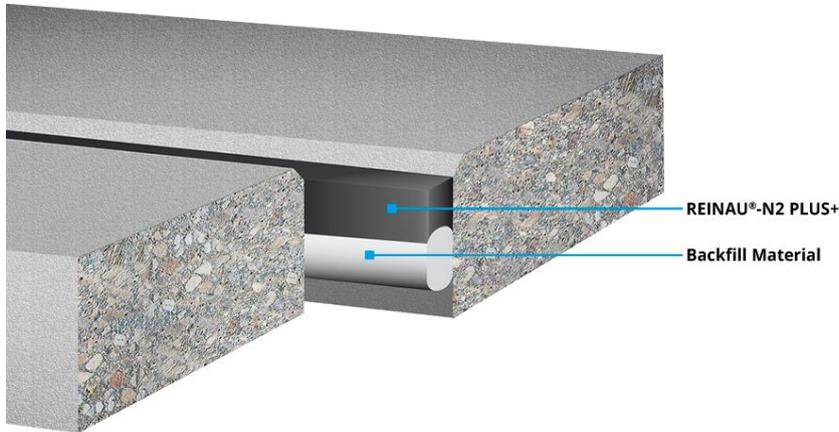


REINAU[®]-N2 Plus+

Product information



Special advantages:

- Fulfils the requirements of DIN EN 14188-1, Type N2.
- Very good plasto-elastic properties.
- Fulfils the requirements of the current TL/TP Fug-StB.
- Successfully passed BAM (German Federal Institute for Materials Research and Testing) **performance test** for functionality and durability over nine test cycles.
- Can be used for changes to joint gap widths of up to 35%.



REINAU[®]-N2 Plus+ is a hot pouring compound based on polymer-modified bitumen.

For a century now, DENSO Group Germany represents experience, quality and reliability for corrosion prevention and sealing technology. The success of the internationally leading corporation is based on the development of the "DENSO-Tape", which was already patented in 1927 as the first product worldwide for the passive corrosion prevention of pipelines. Since then, the DENSO Group Germany establishes and guarantees the highest quality standards with technically trend-setting products. Research, development and production take place exclusively in Germany. Our employees continuously implement safe and individual solutions in a personal cooperation with the customer.

Product application

REINAU[®]-N2 Plus+ joint pouring compound is suitable for casting horizontal and slightly inclined joints in

traffic-bearing road surfaces made from asphalt and, in particular, concrete.

Product data

Type	Plasto-elastic hot pouring compound
Basis	Polymer-modified bitumen
Density	approx. 1.1 g/cm ³
Application temperature	approx. +160 to +180°C (+320 to +356°F) – DO NOT overheat!
Colour	black
Consumption	approx. 1.1 kg/litre filling area
Primer on asphalt/concrete	REINAU [®] plastic resin primer (consumption approx. 0.05 l/m ²)

Application

All work must be carried out in accordance with the specifications of the current **ZTV Fug-StB**.

Joint gap width

When selecting the joint gap width for concrete road surfaces, the guide values in table 1 of the ZTV Fug-StB apply.

Due to increased noise emissions and the risk of mechanical damage to the joint gap edges, joint gap widths of more than 20 mm should not be considered.

Casting depth

The casting depth must be equal to 1.5 times the joint width. To reduce excessive swelling, the casting depth must not exceed 2.5 times the joint gap width with transverse joints.

Preconditions

The road surface on which casting is to be carried out must be kept free of traffic while the work is taking place. Work may only be carried out in dry weather and at a component surface temperature of > 5°C (+41°F).

The subsurface must be dry.

Concrete must be at least 14 days old. The joint edges must be dust-free and must not contain any substances that act as separating agents.

Casting should be carried out as shortly as possible before the road is opened to traffic.

Preparing the joint gaps

If joint filling is present, it must be removed as far as the planned casting depth without damaging the joint edges. In concrete road surfaces, the joint notch must be cut to widen it to the required dimensions. The cutting waste must be removed during or immediately after cutting without causing any damage.

If joints in concrete road surfaces need to be filled early, the shrinkage of the concrete must be taken into account when determining the joint gap width.

On transverse joints, the joint edges must be chamfered to 45° degrees.

A brushing machine must be used for cleaning. Hot air pressure tools must be used if artificial drying or pre-warming of the filling area is needed.

Insertion of the underfill substance

The underfill substance must be inserted deeply enough (without damage) for the necessary casting depth to be achieved. To prevent cracking as a result of three-surface adhesion to the base, the underfill must possess elastic or good sliding properties. In the event of permanent adhesion to the base, the rising crack may generate tension, causing the joint compound to split.

Primer

REINAU® plastic resin primer is applied with a brush or sprayer, and should form a film completely covering the edges of the filling area. No excess liquid should be allowed to collect on the underfill substance. We therefore recommend applying the primer first and then inserting the underfill substance.

The primer must be completely dried through before the joint compound is applied. The drying time is dependent on climatic conditions and can be between 30 minutes and several times this amount. If there is a longer gap between applying the primer and commencing casting, it may be necessary to fine-clean the joints again.

The use of **REINAU® plastic resin primer** is generally recommended.

Melting

Melting of the pouring compound must take place in a double-walled melting kettle with stirrer, cover and indirect heating system. The heating process should be carried out slowly, with the first filling reaching approx. 1/3 of the total volume.

Then more material can be added to the liquid compound.

The melting temperature must be maintained with continuous stirring. The temperature of the joint compound must be regulated by a thermostat; you must be able to monitor the temperature at all times.

Ensure that the indicated melting temperature of 160-180°C (+320 to +356°F) is not exceeded in any location at any point, otherwise separation and/or degradation of the pouring compound may occur. This can render the material unusable. If the compound cannot be applied the same day, the kettle must be completely emptied.

Cooled **REINAU® N2 Plus+** compound may only be melted a maximum of twice.

Joint casting

Casting machines for hot casting must have a feed pump. Normally, the joint filling area is filled mechanically in a single step.

Depending on the filling cross-section, it may be necessary to cast in two steps; in such cases, the surface of the first layer must not be contaminated. In concrete road surfaces, hot-applied joint compounds must be cast in such a way that a tray-like indentation of min. 1 mm and max. 6 mm is created under the road surface.

The joint compound must not come into direct contact with vehicle wheels except at transverse joints.

Casting can be done manually in exceptional cases if the construction elements are highly inaccessible or for small residual parts of the total project. The joints must be filled without air pockets. The joints must be filled flush. Residues must be scuffed off without impairing the adhesion to the joint edges. Excess material must not be removed in a hardened state.

Delivery format and packaging

Pack type	Article number	Content
Siliconised boxes	100 72 554	25 kg

Storage/package disposal

Store the container upright and protect from moisture and direct sunlight. In these storage conditions, the storage life of **REINAU®-N2 Plus+** is virtually unlimited.

REINAU® plastic resin primer can be stored for at least a year in its original sealed container. Tin and steel packaging (with all residue removed, no sludge/powder/drips

remaining) is disposed of via **KBS**; empty plastic and paper packaging is disposed of by **Interseroh**.

Health and safety

The regulations relating to the melting and application of hot-poured bitumen-based compounds must be observed. Ensure that vapours generated during the melting process cannot be inhaled.

When using **REINAU® plastic resin primer**, all safety measures applicable to the handling of solvent-containing paints and primers must be complied with.

Hazard warnings and safety advice on the packaging must be followed. Further information can be found on the relevant safety data sheets.

Typical technical material properties of REINAU® N2 Plus+ Based on tests of determined values in line with EN 14188-1 – table B.1

Properties	Test procedure	Unit	Result information	Value or stated value
Softening point	EN 1427	°C/°F	MDV	+95 to +105 (+203 to +221)
Density at +25°C (+77°F)	EN 13880-1	g/cm ³	MDV	1,05 - 1,15
Cone penetration	EN 13880-2	0.1 mm	MDV	40 - 85
Ball penetration and elastic resilience	EN 13880-3	%	MDV	30 - 60
Heat resistance, cone penetration	EN 13880-4	0.1	MLV	40 - 100
Heat resistance, elastic resilience	EN 13880-4	%	MLV	≤ 60
Flow length, starting	EN 13880-5	mm	MLV	≤ 3
Flow length following heat exposure	EN 13880-5	mm	MLV	≤ 3
Resistance to fuel storage mass changes	EN 13880-8	%	MLV	NRD
Compatibility with asphalts	EN 13880-9	-	Passed	Passed
Adhesion and stretch capacity - Tensile stress - Adhesion and stretch capacity	EN 13880-13	N/mm ² -20°C (-4°F)	MLV Passed	≤ 0.75 Passed
Adhesion and stretch capacity - Tensile stress - Adhesion and stretch capacity	EN 13880-10	N/mm ² +/- 0°C (+32°F)	MLV Passed	≤ 0.48 Passed
Adhesion and stretch capacity (cold climate equipment) - Tensile stress - Adhesion and stretch capacity	EN 13880-7	N/mm ² +25 (-20°C) 77 (-4°F)	MLV Passed	NRD
MDV- The target value defined by the manufacturer with a permissible degree of deviation MLV - The limit value defined by the manufacturer based on the requirements of the European standard NRD - No result defined				

This product is manufactured by TIB Chemicals AG for DENSO GmbH. REINAU® is a registered trademark of TIB Chemicals AG.

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