

Terokal

TK 400

NEW

Foam Adhesive for Roofing Membranes

For bonding fleece-backed plastic or elastomeric roofing and waterproofing membranes and bitumen sheeting finished with fine sand as well as for producing composite systems

PROPERTIES

- Especially fast and secure bonding
- Levels out uneven substrates
- Easy application by foam gun
- High yield - low consumption
- Usable at substrate temperatures from -5 °C

USES

TK 400 is used for bonding fleece-backed plastic and elastomeric roofing and waterproofing membranes. Also suitable for bonding fine sanded vapour barriers on trapezoidal sheet metal profiles.

For bonding fine sand-sprinkled bitumen membranes used as intermediate layers on expertly produced and load-bearing substrates such as intact, aged bitumen membranes, mineral-sprinkled, old and new bitumen membranes, concrete, wooden materials, undamaged laminated and unlaminated insulation materials (e.g. rigid polystyrene (PS) foam used as boards, roll-on or folding membranes and rigid phenolic resin (PF) foam).

A secure bond is also achieved on aluminium, galvanized sheet metal, wood and many types of plastic (not on PE/PP).

SUBSTRATE PREPARATION

The surfaces to be bonded must be sound, clean, solid, blister-free, even and free of dust or substances that may impair adhesion. Bonding is also possible on damp substrates, but make sure to remove pooling water.

Mechanically remove sintered layers and cement slurries on mineral substrates (e.g. concrete). Also make sure to mechanically remove any loose mineral sprinkling from bituminous sheeting. Only if the bituminous sheeting is covered with a full-surface sprinkling can reliable adhesion be ensured.



APPLICATION

Please refer to the "Technical Data" for information on application temperatures. Low temperatures delay the curing process. When exceeding the open time, skin formation sets in and this will affect the bond between adhesive and roofing membrane.

Vigorously shake the can before use and then screw it onto the Terotech foam gun. Terotech foam gun XL, equipped with a 60 cm lance, ensures easy and comfortable application. To ensure a reliable bond to the substrate, apply at least three uniform strands of adhesive (min. strand diameter: 30 mm) per m² to be covered.

Please refer to the table on page 3 for the proper number and positioning of adhesive strands.

Immediately after applying TK 400, roll the fleece-backed roofing membrane into the adhesive bed and firmly press it down, e.g. with a soft broom. If the adhesive tends to foam after application (post-expansion), press the roofing membrane down again.

When working at low air humidity (especially at temperatures below 0 °C), the bond strength can be increased and

adhesive curing be accelerated by slightly moistening the lamination or the absorbent substrate with water (do not produce a water film).

Replace the emptied can immediately by a new can of TK 400 Foam Adhesive. Never remove the can forcibly from the gun. If the gun is not used for a longer time, clean it thoroughly with Terostat PU Cleaner.

Important information when using the adhesive with composite systems:

The materials to be bonded must be dry, free of dust, oil, grease and other contaminants. Before applying the adhesive, any release agents present on the surface must be removed. Carry out preliminary adhesion tests.

The curing process can be accelerated by the application of heat. During the curing time, apply some contact pressure (stack pressure is already sufficient) to ensure complete contact of the parts to be joined.

PLEASE NOTE

Please refer to the "Technical Data" for information on application temperatures. Wetness, snow and ice, biting wind and frost may have a detrimental effect on the bond. Therefore do not apply the adhesive in these ambient conditions (see DIN 18 338). Do not heat the can with an open flame and do not store it in blazing sunshine!

Old bituminous roof waterproofing systems with firmly adhering, full-surface mineral sprinkling must be thoroughly inspected with respect to their surface condition and secure positioning. As soon as the construction work has sufficiently progressed, a trial application of the adhesive should always be carried out. Bituminous sheeting with talcum coating and PE sheet lamination as well as PUR in-situ foams are not suitable as substrates. In case of doubt, contact us for advice.

Only apply as many adhesive strands as roofing membranes can be rolled into the fresh adhesive. A strong, reliable bond can only be produced if secure contact has been established. Adhesive strands whose surface has already "reacted" can no longer ensure a firm bond (carry out finger test: the adhesive must stick to the finger). Time the application of the adhesive so that it matches the progress of installation work. TK 400 is a fast-curing bonding system. Obtain the membrane manufacturer's approval for the application of TK 400.

CLEANING

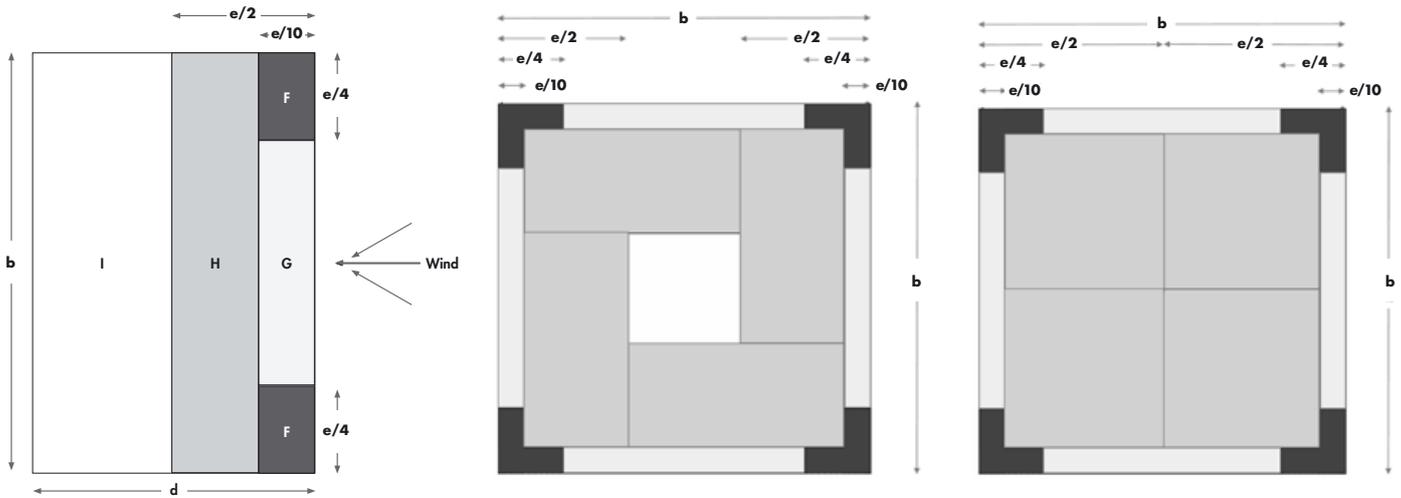
Replace an emptied can immediately by a new can of TK 400. Never remove the can forcibly from the gun. If the gun is not used for a longer time, clean it thoroughly with Terostat PU Cleaner as follows: Screw the PU cleaner can onto the gun. Cautiously pull the trigger of the gun. As soon as the cleaner exits from the gun opening, release the trigger and allow the cleaner to act for 1 to 2 minutes. After that, pull the trigger again until the cleaner that flows out has a

clear colour. Repeat the operation 2 to 3 times. Immediately remove fresh foam stains from the valve, the trigger or the gun with PU cleaner. If fresh foam gets into contact with the skin, immediately remove the foam mechanically and wipe the rests off with vegetable oil (salad oil). After curing, the adhesive can only be removed mechanically.

TECHNICAL DATA

Material base:	polyurethane, 1-component
Colour:	green
Consistency:	self-expanding foam
Application temperature (air/substrate temperature):	-5 °C to +45 °C (ideally +20 °C)
Adhesive temperature:	at least 0 °C, ideally +20 °C (do not heat the can above +40 °C)
Required amount:	Bonding of roofing membranes/composite systems on even substrates: approx. 45 ml/m ² (3-strand application) Higher consumption in case of higher wind uplift force (see table). Above 20 m building height: do a building-specific individual calculation.
Adhesive strand diameter:	approx. 30 mm when applied
Curing time:	full cure after approx. 60 min.
Tack-freeness of the surface:	after 9-11 minutes
Tensile strength (between timber boards):	approx. 8 N/ m ²
Peel strength between fleece-backed roofing membrane and timber board:	> 150 N/50 mm
Temperature resistance:	-40 °C to +100 °C
Packaging content:	750 ml
Shipping unit:	12 cans
Shelf life:	TK 400 can be stored for 18 months in a cool, dry place at 20 °C (date of manufacture: see bottom of the can).
Transport:	When transporting the foam can by car, keep it in the boot wrapped in a piece of cloth. Never transport it in the back of the car. The can contains flammable propellants, therefore store it upright.
Cleaner:	Terostat PU Cleaner

DIVISION INTO ZONES ACCORDING TO DIN 1055-4



e = b oder 2h, whichever value is smaller

b = crosswind dimension

h = building height

Example $e = 2h$
with inner area

Example $e = b$
without inner area

The roof area must be subdivided into zones from all sides. Also refer to the current version of the WOLFEN Guide and to the Guidelines for the Planning and Execution of Roofs with Waterproofing, appendix I, resp. DIN 1055-4.

RECOMMENDATIONS FOR BONDING* INSULATION BOARDS WITH TK 400

Height of the roof area in m	Inner area (I)	Inner edge area (H)	Outer edge area (G)	Corner area (F)
	Number of adhesive strands/m			
Wind zone 1, all terrain categories				
up to 20 m	3	3	4	5
above 20 m	Individual calculation	Individual calculation	Individual calculation	Individual calculation
Wind zone 2, terrain categories 2 to 4				
up to 12 m	3	3	4	5
above 12 m up to 20 m	3	3	5	6
above 20 m	Individual calculation	Individual calculation	Individual calculation	Individual calculation
Wind zone 3, terrain categories 2 to 4				
up to 12 m	3	3	5	6
above 12 m up to 20 m	3	4	6	7
above 20 m	Individual calculation	Individual calculation	Individual calculation	Individual calculation

* In the case of buildings where internal pressure is to be expected, buildings in wind zone 4 or terrain category 1 in wind zones 2 and 3, it is always necessary to do a building-specific individual calculation in compliance with DIN 1055-4. When bonding mineral fiber insulation materials to the substrate, it is always necessary to use one additional strand/m; when bonding mineral fiber insulation boards with each other, use 2 additional strands/m. Full-surface bonding is not permissible!

In case of questions, please consult our advisory service.

Technical hotline:

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The above information, in particular recommendations for the handling and use of our products, is based on our professional knowledge and experience. As materials and conditions may vary with each intended application and thus are beyond our control, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for the intended application method and use. Legal liability cannot be accepted on the basis of the contents of this Technical Data Sheet or any verbal advice given unless there is evidence of wilful intent or gross negligence on our part. This Technical Data Sheet supersedes all previous issues.

Please refer to our Safety Data Sheet for warnings, safety advice and transport labelling.

Apart from the information given, it is important to also observe the relevant guidelines and regulations of various organizations and trade associations as well as the respective DIN standards. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity unless specified otherwise. Please note that in other climatic conditions hardening may be accelerated or delayed.

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