Technical data sheet

TDS 05.19DEU Thermo Kleber

Packaging:

- Gun box 750 ml

Color:

- Yellow

Product:

One-component polyurethane foam specifically developed for the requirement of highly efficient adhesive bonding of light insulation materials and decorative elements made of polystyrene to vertical structures. It is excellent in creating a heat shield (masonry-PUR-EPS). The resulting foam has an excellent structure even at +5 °C.

Properties:

- Fast curing, dimensionally stable;
- Uniform structure, excellent sound and thermal insulation.
- Excellent adhesion capacity to concrete, plaster, masonry, polystyrene, non-softened PVC, including modified asphalt felts etc.

Usage:

- Adhesive bonding of insulation materials and decorative polystyrene elements
- Adhesive bonding of EPS and plinth XPS
- Highly efficient adhesive bonding and assembly of insulation materials
- Suitable for filling in joints between thermal-insulating boards made of EPS, XPS and mineral fibres (so called wools)

Specifications			
Base	-	polyurethane	(4,4 diphenylmetane diisocyanate)
Density	kg/m^3	15 - 25	(according to ISO 7390)
Insulation value	mW/m.K	30-35	(according to DIN 52612)
Thermal conductivity coefficient λ	W/mK	0.035	(according to CSN EN 72 7012-2)
Heat resistance	°C	–40 / +90	(after curing)
Gun temperature for application	°C	above +5	(optimum +10 to +20)
Thermal scope of use	°C	+5 / +35	(optimum +15 to +20)
Time to create non-adhesive shell	minutes	8 - 12	(depending on the temperature and relative humidity)
Curing time	minutes	40 - 50	(at 23°C / 55% air rel. humidity)
Dimensional stability	%	-5%<DS< 0%	
Diffusion resistance factor μ	-	approximately 28	Insignificant, the foam is spread over the entire area of an insulating material!
Equivalent diffusion thickness	m	0.446 m	
Griping to polystyrene	MPa	~ 0.14	To white and grey EPS

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Gripping to concrete	MPa MPa MPa MPa	~ 0.10 ~ 0.16 ~ 0.11 ~ 0.11	To dry concrete without penetration Pre-penetrated concrete, duly dry Pre-penetrated concrete with consequent moistening and short drying Light-weight block with penetration
Fire response class	-	F	Classification according to CSN EN 13 501-1
Gross calorific value	MJ/kg	28.81	According to CSN EN ISO 1716
Adhesive with when applied	mm	30 – 40	
Box spreading capacity	m^2 m^2	4 – 6 5 – 8	At ø 4 cm (uneven base – brick masonry without plaster e.g. solid brick, plaster (brizolit)) At ø 3 cm (even base – plastered masonry, precise blocks Porotherm, Heluz, Citherm etc. bricked by means of thin-layer mortar as well as cellular concrete blocks and foam light-weight blocks)

Restrictions:

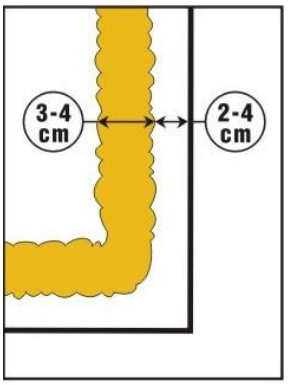
Not recommended for the use under water and in closed areas, zero adhesion to PE, PP, silicone, Teflon and greasy bases. Do not heat the foam or base at low temperatures. Do not apply on the bases covered with hoar frost. **Do not apply on wet bases!** When stored at low temperature, we recommend heating the box before use at the room temperature for 1 hour. **Do not apply at strong wind!**

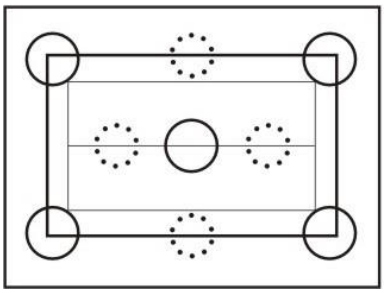
Base material:

Penetrate the base such as brick masonry or concrete with Primer S2802A preparation before adhesive bonding. The penetration coat dries after approximately 2-4 hours. A dusty base decreases the gripping capacity of the adhesive foam. Properly penetrated and dried surface is not moistened anymore!!! The moisture of the base accelerates and increases expansion but at the same time impairs the regular foam structure which results in a lower stiffness and bigger pores. Cover the equipment and other surfaces endangered by dirtying.

Instructions:

Screw on the application gun with a NBS thread. Shake the box thoroughly (at least 30 times). Set the required dosing by a locking screw. Never put the outflow of the gun tube directly on the base/insulating material but keep it about 1 cm above the insulating material during PUR adhesive application.





When bonding polystyrene boards, apply the foam on the perimeter of the board with the distance of 2-4 cm from the board edge preferable to ensure that after attaching the board to the base and its pressing in, the foam is not pressed out over the edge of the board on its perimeter but it is only pressed to the edge of the board. Supplement the pattern by at least one strip in the centre of the board in the direction of its longer dimension, i.e. at the place where wall plug can appear in the centre of the board in the design. Do not apply the foam in the shape of “X” or “W”! These patterns miss the places with wall plug joins. The recommended seam diameter for bonding insulating components is 3-4 cm depending on the unevenness of the base. The board must be covered with the PUR foam at the rate of 20% after its pushing into the base with a prevailingly anchored system and at least at the rate of 40% with a bonded system with auxiliary anchoring. Attach the board to the wall and approximately 2 minutes after the foam application push in and align the board by means of a long batten. The flatness of the board surface can be repeatedly corrected for approximately 20 minutes upon their bonding depending on the ambient temperature (air and base).

Note: A longer delay between the PUR foam application and attaching to the base reduces the gripping capacity. Generally, all kinds of PUR foams start creating a non-adhesive shell after approximately 5 minutes which decreases the gripping capacity. A lack of space on the scaffolding at heights and wind do not allow to prepare several EPS boards with PUR foam in advance.

Thermal scope of use +5 °C to + 35 °C. Further technological tasks can be carried out approximately 2 hours after adhesive bonding.

Caution:

Clean the non-cured foam by a PU Foam Cleaner; the cured foam can be mechanically removed. Use protective equipment at work. Protect the base from staining by paper or foil.

The cured PUR foam is not resistant to UV radiation. The resistance depends on the duration of exposition to direct sunlight (approx. from 14 days to 3 months). After this period the foam structure is impaired by further climatic effects (rain, frost, etc.) and UV radiation.

Cleaning:

Material: Non-cured foam – Distyk, PU foam cleaner.
Hands: water and soap, hand cream.

Update:

Updated on:
Drawn up on: 15.06.2017

The product conforms to specifications during the warranty period. The information and data provided are based on our own experience, research and objective testing and we assume that they are reliable and accurate. However, the company cannot know the various applications where and under which conditions the product will be applied, nor the application methods used, therefore under no circumstances warrants beyond the scope of this information as to the suitability of the products for certain uses or use procedures. The above information is of a general nature. Each user is obliged to make sure that they are suitable for their own tests. For further information please contact our technical department.