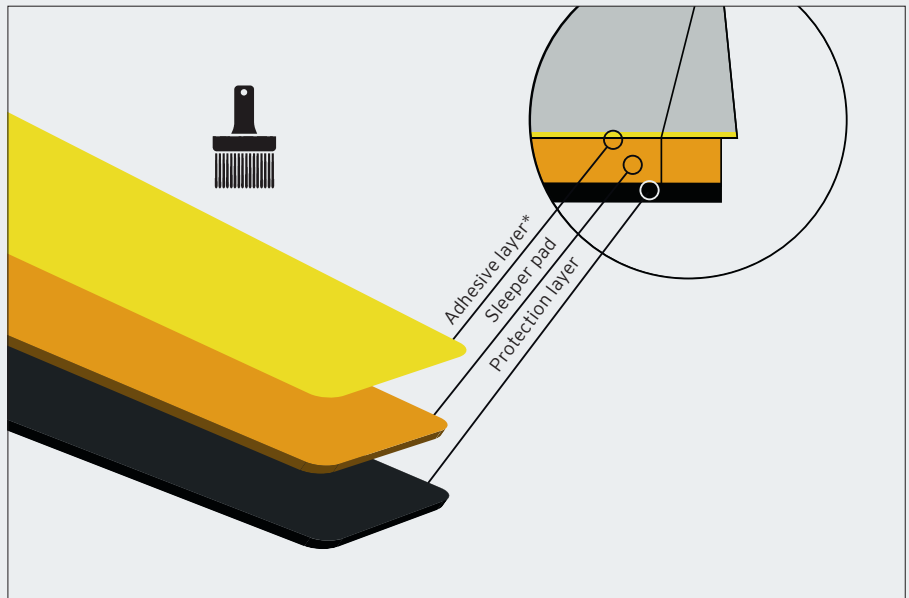


Guideline for Installation of Sleeper Pads onto Steel Sleepers

1. Transport and storage of sleeper pads

Do not remove packing during transport. If the packing gets damaged during transport it must immediately be repaired (e.g. using plastic foil and adhesive tape). All products should be stored in the original packing. If the packing is removed the products must be kept dry. Temperatures below -20°C and above $+50^{\circ}\text{C}$ should be avoided. Do not pile up pallets, parcels and rolls. Remove the packing immediately before installing the product. During installation the products should not be exposed to e.g. water, mud, oil etc. Clean it from dirt if necessary. Due to changing temperatures there could be differences from the nominal dimensions.



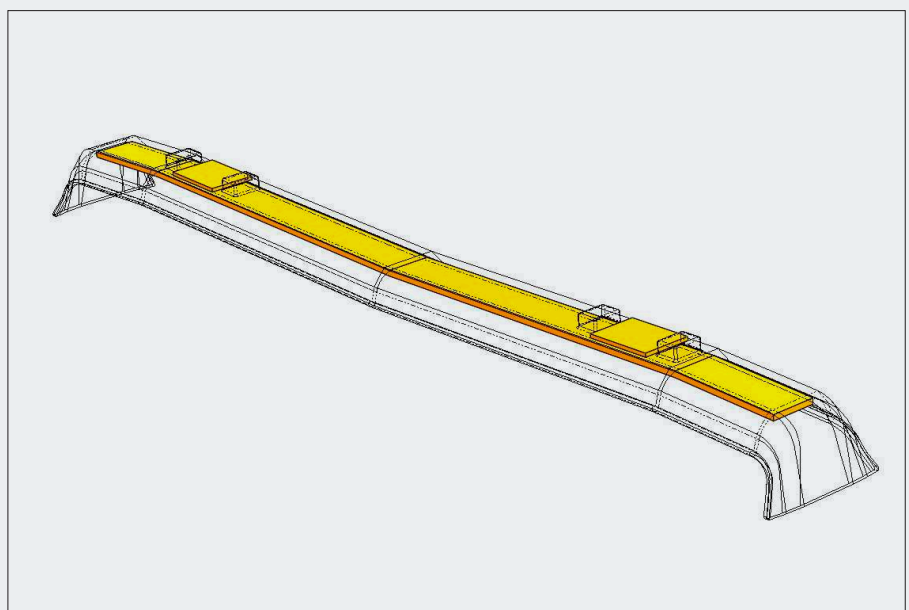
***Bonding process according to the following instruction**

2. Bonding of sleeper pads onto steel sleepers by adhesive

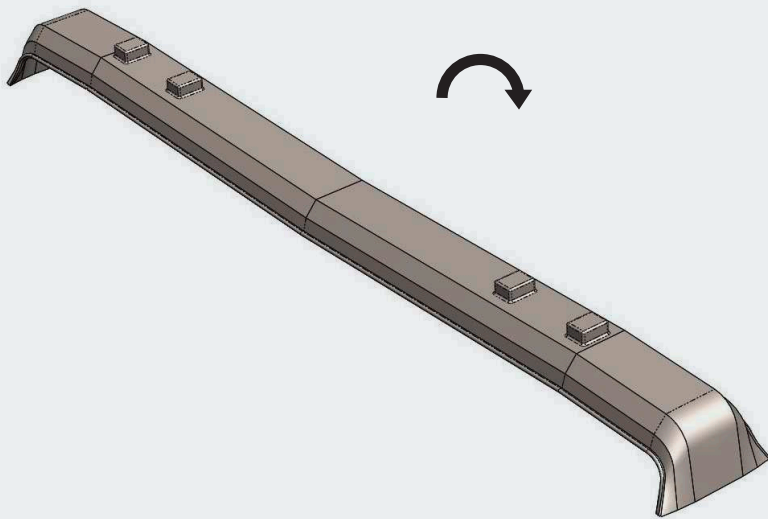
The pads can be bonded onto the sleeper after already manufactured steel sleeper.

2.1 Adhesive

The adhesive is made available with pads by Getzner Werkstoffe. The adhesive contains no thinner. Follow the safety data sheet and instructions for use.



Installation



Put the sleeper up side down.

2.2 Steel Sleeper

The bonding-surface of the sleeper has to be dry and clean. It should be rather level and smooth (the rougher the more adhesive is required). The surface may not have depressions. Please consider also the instructions for use of adhesive.

2.3 Carrying out

Put the sleeper upside down and clean the surface if it is necessary. The surface must be free from oils and fats. Prepare the adhesive as described in the instructions for use. Please mind temperature and pot life!



Put the glue onto the sleeper.



Place the sleeper pad onto the steel sleeper.

The prepared adhesive is put on the ballast side of the sleeper. If the pad is divided in parts, the joints also have to be bonded. The required amount of adhesive is given by the roughness of the steel surface. Normally per sleeper is used 1/2 to 2 kg adhesive. The coated pad is placed centred on the sleeper.



Load the surface with at least 50 kg during curing time.

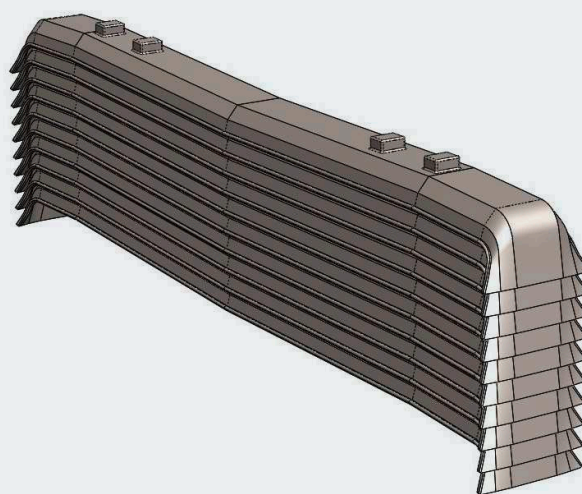
During curing time the pad is even loaded on the whole surface with at least 50 kg or fixed with adhesive tape. After bonding there should be no cavities, which are not filled up with adhesive. The total thickness of adhesive should not be more than 5 mm, because the stiffness of the system could be influenced.

3. Storage of padded sleepers

Usually sleepers with sleeper pads are stapled on top of each other and can be stored outside. The wooden intermediate layers in the staples should be wide, a minimum of 5 cm is a must. The pressure of the sleeper pad must not be greater than about 1 N/mm², depending on the sleeper pad type. It is recommended to staple no more than 10 padded sleepers on top of each other.

4. Transport of padded sleepers

Attention has to be paid during transportation to avoid mechanical damage.



All information and data is based on our current knowledge. Further information can be found in our actual under sleeper pad brochure.