

Recommendations for installing and fitting carpet made by MALTZAHN Carpet Innovation GmbH in residential and contract locations

The information contained in the following carpet installation guidelines is general in nature. Only when carpet is properly installed in compliance with applicable standards, like, for example, the German "Allgemeinen Technischen Vorschriften " ATV / VOB Teil C DIN 18 365", and the latest technical bulletins and standard procedures respectively, will you be able to enjoy both the carpet's quality throughout its life-cycle and its guaranteed usage properties.

These carpet installation recommendations serve as additional information for experienced carpet fitters and do not claim to be exhaustive. When using accessories, e.g. adhesives or smoothing compounds, should anything appearing in these guidelines differ from the manufacturer's recommendations or specifications then the latter shall be binding. Materials used must be compatible with one another and have no detrimental effect on the flooring or the construction as a whole. It is the responsibility of the carpet planner and fitter to use matching products and to designate sufficiently sized test areas to help eliminate potential errors.

A carpet fitter's responsibility to exercise due care and diligence requires him to inform, prior to starting work and if necessary in writing, the client or carpet planner of any concerns or misgivings he may have.

Subfloors

The most important types and standards of screeds are summarised in DIN 18 560. The range of screeds and subfloors include: cement screed, anhydrite screed, concrete, mastic asphalt screed, magnesium oxychloride screed, terrazzo, marble, ceramic, chipboard, wooden flooring, prefabricated screeds etc.

Checking the subfloors

Before installing textile floor coverings, the contractor (fitter) must carefully check the subfloor to ascertain whether a particular covering can be used. When checking the subfloor, the carpet fitter is required to make known any concerns or misgivings he may have in writing.

Examples include:

- significant unevenness
- cracks in the subfloor
- subfloor not dry enough
- subfloor not firm enough
- subfloor surface too porous and too rough,
- soiled subfloor surface caused by, for example, oil, wax, varnish, paint remnants
- incorrect subfloor surface height as compared to the height of connecting components
- subfloor temperature not suitable
- room climate not suitable
- no heating logbook for underfloor heating systems
- underfloor heating system temperature measurement points not marked
- perimeter isolation strip overlap not sufficient

If carpet is to be laid on wooden floors (including parquet, chipboard etc.), due care must be exercised when ascertaining the properties and suitability of the subfloors.

Caution

Failure to check the subfloor may lead to damage during or after installation.

Old wood floors that have been waxed or oiled have a tendency to cause adverse reactions after having carpet laid on top of them. This can be detrimental to the strength of the bonding and can lead to the release of odours, impair the ambient air etc. For this reason, it is essential old layers of wax and paint are removed completely.

As for wood constructions, care must be taken to ensure the subfloor can be rear-ventilated as this is the only way moisture can be prevented from damaging the construction in the long run. Special baseboards allowing rear ventilation are stocked by flooring suppliers for this installation method.

Moisture check

Subfloors, with the exception of asphalt constructions, contain a certain degree of household moisture. Once these parameters have been exceeded, which means the subfloors are too moist, any moisture prevalent at the time of installation may cause future damage. For this reason, it is essential the subfloor moisture content is checked using a suitable measurement procedure (CM Method) before carpet is installed. The respective parameters have to allow for the recognized rules of the field. In the case of underfloor heating, clients are required to provide a logbook showing the heating and cooling activity. In addition, carpet fitters are required to measure moisture at marked points (without heating pipes).

Primers and levelling compounds

Subfloors to which levelling compounds do not permanently bond must be primed with appropriate primers: e.g. very thick, very smooth or very porous and highly absorbent subfloors etc. A primer is always required for anhydrite and magnesium oxychloride screeds.

Old subfloors

Installing carpet on old subfloors

Floors that have already had a floor covering glued to them in the past must have any residual adhesive or other contamination completely removed to create a solid, smooth surface. These surfaces must be thoroughly vacuumed immediately before a primer is applied to ensure dust is removed from the pores of the subfloor. Once this has been done, first the primer and then an absorbent levelling compound must be applied immediately. The suitable levelling compound as well as the recommended thickness and the water quantity required can be found in the guidelines issued by the manufacturer of the levelling compound.

Underlays

The insulating underlays available on the market are, as a rule, suitable for contract locations. Insulating underlays are often marked as to their suitability for castor chairs. Please be aware, the indentation behaviour, the castor chair suitability and the fire behaviour can be negatively affected. For further information on ways to help prevent your carpet from being damaged, please consult our technical support team. Underlays must be installed so that their edges and seams are not congruent with the seams of the floor covering.

Installing carpet

Before cutting carpet, it must be checked first for any flaws, fading, colour matching and all other visible defects. When checking, any normal production and installation related tolerances are not a cause for complaint. maltzahn must, before cutting, be informed immediately of any possible defects the carpet may have. We cannot be held responsible for any visible defects once carpet has been cut or laid,

Using multiple carpet rolls

When using multiple carpet rolls, the roll label must be checked for the dye lot. Furthermore the roll sequence should be checked and adhered to when dividing up the rolls to ensure colours are matched at the edges.

Acclimatisation

To ensure the perfect fit, textile floor coverings (though not needlefelt carpet) and the appropriate adhesive should be acclimatised for approximately 48 hours prior to installation.

The subfloor surface temperature should not be lower than 15 degrees centigrade. The temperature of floors with underfloor heating should be between 18 °C and 22 °C. Room temperature should not exceed 18 °C. Furthermore, relative room humidity should not rise above 65%. These climatic conditions must be maintained three days prior to the surface being prepared and at least seven days after installation and fitting. To maintain these conditions, clients should have a dehumidifier running in the room in question.

Floor coverings and adhesives should be adapted to the temperature of the subfloor.

Needlefelt carpet and acclimatisation:

As polyamide fibres absorb moisture from the surrounding environment, products may swell in high humidity and then shrink when needlefelt carpet is dried from below. Therefore to acclimatise, needlefelt carpet, it should only be removed from its packaging when installation is about to begin. To prevent swelling, care should be taken to ensure individual lengths are bonded to the subfloor immediately after unrolling.

Laying out the carpet

Unless otherwise agreed, the carpet fitter will determine how the carpet rolls are divided up and the direction in which each roll is laid. However, it is vital the pile is run in the same direction throughout the room. To avoid future disputes, pile direction should be agreed upon with all parties.

Trimming tufted unicolour cut pile and loop pile carpet

It is essential that carpet edges are trimmed. Care must be taken to ensure the pile of each length of carpet runs in the same direction. The edges of cut pile and loop pile carpets must be straightened by cutting between the rows of chain warps using a special loop pile cutter or a hooked blade knife. Once the carpet has been accurately cut it can be folded back and stuck to the subfloor. (see Gluing individual carpet lengths).

The edges of loop pile carpet should be reinforced wherever they come in to contact with finishing profiles and stone floors etc.

Patterned and printed carpet

The installation of patterned carpet requires more time and expertise than that of unicolour carpet. This should be taken into consideration when calculating the time needed to install patterned carpet.

When estimating the amount of carpet needed, it is essential the following aspects are considered. Wherever a pattern finishes at a door then the first length can be ordered in full (plus an approx 10 cm allowance for cutting waste). All other lengths must be ordered allowing for full pattern repeats. This is the only way to ensure all lengths will be long enough.

Before gluing, the carpet lengths necessary for the room should be laid out next to each other. In doing so, it is essential to pay heed to the length or roll sequence. When installing tufted carpet, the edges should be cut, using a steel rule, at the fringe of the pattern. Laying out the carpet lengths next to each other makes it easy to recognise any pattern mismatches – these cannot be wholly avoided as carpet is subject to inevitable process variations, see DIN 18 365. Lengths of patterned carpet can only be accurately joined if each one does not exceed a maximum deviation of 0.35 per cent. This means 10 running metre lengths of carpet are allowed a tolerance of 3.5 centimetres. Horizontal tolerances of up to 4 cm are permissible for carpet with a width of 4 running metres. Experienced carpet fitters can compensate for such tolerances by stretching the carpet during fitting. This can be done using a mini restretcher or similar tools.

Lining up the pattern

The trimmed carpet lengths are laid, pattern matched, next to each other in the middle of the room. Depending upon the shape and size of the room, the carpet lengths are folded back and then, in accordance with the adhesive manufacturer's guidelines, completely covered with a sufficient amount of high quality dispersion adhesive (class EC 1) using a notched trowel. After the adhesive has been applied, the carpet lengths must, after allowing for the room climate and the length of the carpet, be positioned immediately or after short wait (airing time) onto the adhesive bed (see Gluing individual carpet lengths) Carpet in the middle of the room must be matched exactly and held in place with nails or a gripper strip.

Caution

To prevent damage to the heating system, nails may not be used in rooms with underfloor heating.

When in the adhesive base, the two lengths can, using a mini restretcher, now be to pattern matched (stretched). The lengths can thus be pattern matched in both directions right up to the walls. Carpet alignment must be done relatively quickly as once the adhesive has set, it is no longer possible to stretch carpet. After, and during, stretching, carpet must be rubbed or rolled completely before the next

length can be laid. This method is used to fit each carpet length until an exact pattern matched is created in the room.

Gluing individual carpet lengths

In high traffic domestic and object locations, it is recommended that the whole carpet is adhered to the subfloor. When choosing the most suitable adhesive, the underside of the carpet, the subfloor and the required function are three factors that have to be taken into consideration. Always take care to use high quality “**very low emission adhesives**” e.g. **EC 1 adhesives**.

Applying the adhesive

The amount of adhesive to be used depends on the properties of the subfloor, the specific weight of the adhesive and the composition (roughness) of the underside of the carpet. The adhesive is applied over the entire surface with notched trowel. The shape of the notches is specified by the adhesive manufacturer. When applying the adhesive, it is important to take care no clumps of adhesive settle in any slight indentations in the subfloor. Depending upon the type of adhesive used, carpet can be laid in the adhesive bed after application once the airing time has elapsed (excess water in the adhesive has to be allowed to escape into the air). It is essential to make sure there is sufficient adhesion on the underside of the carpet.

Conductive carpet installation guidelines

In recent years, conductive carpet has often been laid without using techniques designed to permit conductivity. It is therefore recommended the following method is used to aid installation: The subfloor must be checked and prepared as previously described. After fully drying out, the levelled subfloor is then primed with a conductive primer. Once the primer has dried, copper grounding tape (10 x 0.08 mm) is glued using a conductive adhesive to the conductive primer in the vicinity of the intended earthing point either every 30 m² or every 7 running metres from the centre. The copper grounding strip should protrude approximately 1 running metre into the room and be of sufficient length to reach the earthing point(s). Caution: electrical connections may only be carried out by qualified electricians. The carpet, as previously described in these guidelines, is then installed as specifically required for the carpet type and pattern. Sufficient conductive adhesive (EC 1) must obviously be used to glue carpet to the subfloor.

Caution

Protective coverings may only be mounted after the adhesive has set.

Installation on stairways

When purchasing carpet, a vital factor is its suitability for stairs (see symbol on label). It is essential to choose carpet that is durable enough to withstand the expected traffic. If necessary, special nosings can be fixed to the stairs. Pile direction – down the stairs – is a factor when estimating the quantity of carpet required. This means cut pile carpets must be laid on the tread with the pile pointed towards the front edge should nosings not be mounted. The pile direction has to be in the opposite direction whenever nosings are used. The nosing must be rounded off to a radius of at least 10 mm.

Due to the wide variety of materials and types of stairs, it is not possible here to provide detailed information on how to prepare the subfloor.

The carpet must be cut for each individual stair allowing for an extra 1 - 2 cm on all sides. Gluing the carpet to the tread can be done with a suitable class EC 1 dispersion adhesive. If carpet has to be laid around the nosing then it is vital dispersion contact adhesive is used.

Sufficient dispersion adhesive should be applied, using a notched trowel, to the stair. After allowing for airing time, the carpet should be laid and then, once the adhesive has set, trimmed to fit the shape of the stair.

When using contact adhesives (dispersion-based), a sufficient amount of dispersion contact adhesive must be applied to both the stair and the underside of the carpet. After the airing time or after both adhesive surfaces have dried, the carpet is then laid and smoothed out. Once this has been done the carpet can then be trimmed to fit the contours of the stair.

Cleaning

It is not only a nice gesture to pass on cleaning and maintenance guidelines. You are obliged to hand them over and if necessary prove you have done so. A powerful upright vacuum cleaner with a motorised brush bar is required for use in commercial locations. Please refer to our detailed maintenance and cleaning guidelines.

Preventative measures such as the provision of sufficiently sized dirt trapper mats and cleaning zones reduces the amount of dirt entering a location and has to be taken into consideration at the planning stage.

Castor chair suitability

Office chairs must have castors specifically designed for use on the respective floor coverings. DIN EN 12529 distinguishes between two types. Only use type H castors (for hard) on textile floor coverings. The use of unsuitable castors will result in increased wear and tear. The technical information provided by maltzahn applies explicitly to the use of castors that comply with the aforementioned standards.

Limitation of the installation guidelines

The manufacturer can accept no responsibility for potential damages incurred through non-compliance with these guidelines.

Claims for damages are excluded in such cases.

The information contained in these guidelines is general in nature.

Should there be any uncertainty, we recommend spaces are designated for testing and trial fittings.