

Processing instructions

EGGER PP Saefy Edging



EGGER PP Safety Edging is a thermoplastic edging product with protective and aesthetic properties for finishing narrow areas on wood-based materials. EGGER safety edging is made of PP (polypropylene) and is homogeneously coloured. A universal bonding agent (primer) is applied to the underside.

Applications / Application Areas

EGGER PP Safety Edging is used to finish narrow areas of laminated wood-based materials such as chipboard, MDF, HDF, and lightweight boards and provides the perfect finishing touch for all decorative surfaces. It can be used in a wide variety of areas: furniture for kitchens, bathrooms, offices and bedrooms and living rooms. In addition to regular use on edge banding machines, EGGER PP Safety Edging is suitable for finishing individually shaped components. Due to the chemical properties of coloured PP, the effect of pressure and heat on dark and intense shades of colour can have an influence on possible discolorations in the milled radius.

Processing

EGGER PP Safety Edging can be machined on commercial edge banding machines using hot-melt adhesive and on machining centres. The individual production steps such as gluing, cutting, milling, machining with a scraper and buffing wheel are all fairly straightforward.

Adhesive / Adhesive application

EGGER PP Safety Edging is coated with bonding agent that is designed for use with EVA, PA, APAO and PUR hot-melt adhesives as well as special PO adhesives. A highly heat-resistant glue should be used if the product is likely to be exposed to high temperatures, e.g. in the kitchen or in shipping containers. Polyurethane hot-melt adhesives are particularly suitable for use in humid areas. Please observe any information provided by your respective adhesives supplier. We also recommend conducting a prior suitability check of the selected adhesive with EGGER edging. The exact quantity to apply varies according to the type of adhesive (see manufacturer's specifications), chipboard thickness, edging material and feed speed. The layer of adhesive should be even and sufficient for small droplets to be squeezed out from under the edge and for the spaces between the chips to be filled. Ensure that there is sufficient adhesive in the pre-melt container so that both the quantity applied and the temperature remain constant. The precise tensioning and parallelism of EGGER Safety Edging gives a sealed, visually perfect joint. The tensioning also ensures optimum adhesion by collecting excess glue in the centre of the rear of the edging and anchoring the glue in the chipboard.

Processing temperature

Processing should be carried out at room temperature. The edges and core boards that are to be machined should be conditioned at normal room temperature (18 - 24° C). If the edges or boards are too cold (e.g. due to storage in unheated places), then the hot-melt adhesive that is applied will come off before the edge band is attached. Therefore, conditioning is required and draughts should be avoided. The processing temperature for the adhesive varies between 90 and 230° C depending on adhesive type. The required processing temperature should be taken from the relevant manufacturer's specifications. When the adhesive temperature is being measured, display errors may occur, in which case the measured temperature may differ from the actual temperature on the coating roller. It is advisable to measure the temperature on the coating roller.

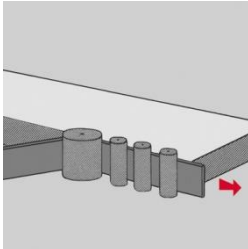
Wood moisture content

The wood moisture content of the core material should be between 7 and 10% for optimal processing.

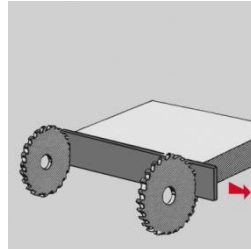
Feed speed

The feed speed is dictated by the processing characteristics of the hot-melt adhesive and how it is applied (jet or roller). Please follow the adhesive manufacturer's instructions. If the feed speed is too high, then the hot-melt adhesive may pull fibres out and prevent wetting of the entire surface of the board material. Furthermore, the coating roller may jump. During edge milling, which is the next process, milling ripples may be produced. If the feed speed is too low, then the interval between application of the adhesive and presentation of the edge is too long. In this case, the temperature falls below the necessary processing temperature and the adhesive will harden before the two surfaces are joined.

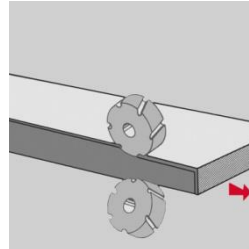
Working procedure with the edge banding machine



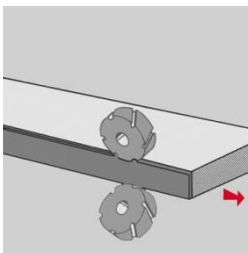
Gluing



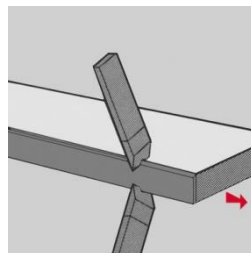
Cutting



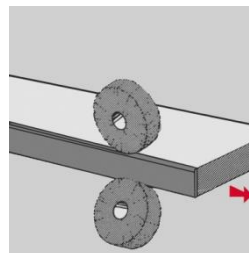
Pre-milling



Milling bevel rounding



Scraper processing



Buffing

Pressure rollers

Taking into account the conditions in the machine, there must be an adequate number of pressure rollers, which must also be set up correctly to achieve an optimum joint.

Cutting

Chop saw blades with one-sided pointed teeth are used for the chop cutting. Use of chop saw blades with teeth on both sides is limited as they can cause splinters, especially when the edges are thin.

Milling

Four- to six-blade cutters with a diameter of approx. 70 mm and a rotational speed of between 12,000 and 18,000 rpm should be used. The exact choice depends on the characteristics of the cutter and the machine. Blunt tools running at inappropriate speeds can damage the edges. If any smears occur, reduce the speed of the milling cutter or increase the feed. Fine-milling should always be performed against the feed.

Scraper processing

The PP plastic displays good quality when processed with the scraper. The scraper blade should be of a maximum of 0.1 - 0.15 mm, milling tools with a high true running accuracy will produce the required milling accuracy ("without blade marks"). Diamond-tipped milling tools are effective in this area.

Buffing

EGGER PP Safety Edging is highly suitable for processing in a radius with buffing wheels. Any lightening of colour caused by scraper machining can simply be polished away using the buffing wheels. In the case of downcut machining, they should be set at a speed of rotation that is diminished by approx. 50% to reach about 1400 rotations/min. In order to avoid too high heat generation and the resulting lubrication, we recommend selecting a contact pressure that is not too high.

Furthermore, the buffing wheel removes any dirt (adhesive residue) from the surface and/or the edge angle. Any adhesive remnants can be easily removed using electronically controlled separating agent spray units; this also reduces blade wear.

Extraction

PP chips may become charged with static during milling, and thus attach themselves to material and to machine components. An extraction capacity of approx. 2.5 m³/s is thus required and the use of tools with optimised chip removal is recommended.

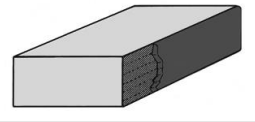
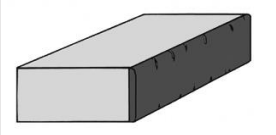
Edging with protective foil

The use of commercially available release agents, coolants and cleaning agents is recommended for the processing of edges which are provided with a peel-clean foil to protect the surface. The release agent can be sprayed onto the first pressure roller or directly onto the board and edge surface after application of the edge band. Should the protective foil peel off when processing on a continuous edgebander, it is recommended to check and clean the copy shoes, as well as to consider the use of a lubricant to minimise friction between the protective foil and the copy shoe. If a lubricant is used on films with imprint, the suitability should be checked in advance. To protect the edge banding tape from external influences for as long as possible, it is recommended to remove the protective foil not until after the furniture has been assembled.

To protect and maintain the UV resistance of the protective foil, the original packing should be used when storing the edge banding tape over a period of several months.

The selected protective foil coating can be recycled and disposed of under observation of official rules and regulations.

Rectifying processing problems

| Error | Cause | Measures |
|--|---|--|
| 1. Edge banding can easily be removed by hand. Hot-melt adhesive remains on the chipboard. The grid structure of the adhesive application roller is visible. | <ul style="list-style-type: none"> ▪ Ambient temperature too low, or draught in the area between the coating of thermoplastic glue and the pressure roller ▪ Edging material too cold (outdoor storage) or lack of conditioning ▪ Hot-melt adhesive temperature too low ▪ Feed rate too low ▪ Contact pressure of application rollers too low ▪ Not enough adhesive applied | <ul style="list-style-type: none"> ▪ Increase room temperature, avoid draught ▪ Warm up edging material ▪ Increase hot-melt adhesive temperature ▪ Increase feed rate ▪ Increase contact pressure of application rollers ▪ Increase amount of adhesive applied |
| 2. Edge banding can easily be removed by hand. Residue of hot-melt adhesive on the chipboard. The hot-melt adhesive surface is completely smooth (edge slips off). | <ul style="list-style-type: none"> ▪ Surface and/or edge too cold ▪ Unsuitable hot-melt adhesive used | <ul style="list-style-type: none"> ▪ Warm up surface and/or edge ▪ Use another hot-melt adhesive |
| 3. Edge banding can easily be removed by hand. Most of the hot-melt adhesive is left behind on the edge. | <ul style="list-style-type: none"> ▪ Board material is still storing excessive heat energy (e.g. after earlier veneering or laminating of the board surfaces) | <ul style="list-style-type: none"> ▪ Cool down board material |
| 4. The front edge of the board has had no adhesive applied, or a few millimetres of the edge have splintered.  | <ul style="list-style-type: none"> ▪ The adhesive application roller protrudes too far into the line of the board. No adhesive has been applied to the first part of the edge because the roller has been restrained strongly at the board's front edge. | <ul style="list-style-type: none"> ▪ Adjust the setting of the adhesive application roller |
| 5. Milling ripples are visible  | <ul style="list-style-type: none"> ▪ Feed rate is too high and/or rotational speed is too low | <ul style="list-style-type: none"> ▪ Lower feed rate ▪ Use upmilling-mode ▪ Increase number of cutters on milling tool ▪ Increase rotational speed ▪ Post-process with scrapers and finishing wheel |
| 6. On thick edge banding, colour has slightly faded in the milled area. | <ul style="list-style-type: none"> ▪ Rotational speed is too low | <ul style="list-style-type: none"> ▪ Increase rotational speed ▪ Adjust the scraper station (max. 0.1 - 0.2 mm) ▪ Rework with finishing station ▪ Warm up the milled area in the hot air station (rework) |
| 7. Stress whitening in the radius during machine centre processing. | <ul style="list-style-type: none"> ▪ Edging tape too cold to process | <ul style="list-style-type: none"> ▪ Increase heater power or reduce feed rate ▪ Increase geometry or use a thinner edging material |

Cleaning

EGGER PP Safety Edging is easy to clean using commercial cleaning agents designed for plastic surfaces. The use of petrol, thinners, acetic acid, nail polish remover or similar solvent-based or alcohol-based fluids may dissolve the surface and should therefore be avoided.

Handling waste

Waste from EGGER PP Edging may be disposed of as residual waste. If the wood leftovers obtained are picked up by a disposal company for purposes of further utilisation, only a small share is usually allowed to be wood-based materials with PP edging. It should be agreed with the disposal company how high the share of PP and other so-called impurities may be.

The thermal recycling of PP edging is also possible as a rule, and reasonable on the basis of the high heating potential of the leftovers. EGGER PP Edging may be recycled thermally together with chip leftover in approved facilities. As a rule, wood-based materials with PP edging resulting from production may also be thermally recycled.

Further information on EGGER PP Safety Edging can be found in our product data sheet.

Provisional note:

These processing instructions were prepared based on the best available information and with due diligence. The information provided is based on practical experience, in-house testing and reflects our current level of knowledge. It is intended for information only and does not constitute a guarantee in terms of product properties or its suitability for specific applications. We accept no liability for any mistakes, errors in standards, or printing errors. In addition, technical modifications may result from the continuous development of EGGER PP Safety Edging, as well as from changes to standards and public law documents. Therefore, the content of these processing instructions cannot serve as instructions for use nor as a legally binding agreement. Our General Terms and Conditions apply.