

MORE FROM WOOD.

Quality management ISO 9001

E EGGER

Coding: VH ABS EN
Revision: 02, ID 453
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Processing instructions

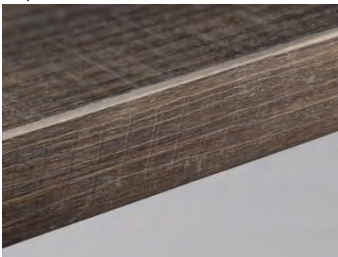
EGGER ABS Edging



EGGER ABS edge banding tape is a thermoplastic edging product with protective and decorative properties for finishing narrow areas on wood-based panels. EGGER ABS edging is made of ABS (Acrylnitril-Butadien-Styrol) and is uniformly coloured through. A universal bonding agent (primer) is applied to the reverse.

Uses / Areas of Application

EGGER ABS edging is used to finish open 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 range of applications: furniture for kitchens, bathrooms, offices and bedrooms, living rooms and teenager rooms, exhibition builds and shopfitting systems. EGGER ABS edging is also suitable for finishing individually shaped freeform components. Due to the chemical properties of coloured ABS, 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 ABS edging can be processed on conventional edge banding machines using hot-melt glue systems, as well as on automated machining centres. The individual processing steps such as gluing, trimming, milling, scraping and buffing are all quite straightforward. EGGER ABS edging is not suitable for cold glue activation processes using white PVA glue.

Adhesive / Adhesive application

The primer coating on EGGER ABS edging is configured for use with EVA, PA, APAO and PUR hot-melt adhesives. Adhesives that are highly heat resistant should be used where the product is likely to be exposed to critically high temperatures, e.g. in the kitchen or when exporting furniture in shipping containers. Polyurethane hot-melt adhesives are particularly suitable for use in damp conditions. Always follow the instructions of the respective adhesive supplier. The amount of glue required varies depending on the type of adhesive (see manufacturer's specifications), the board density, the edging material and the feed rate. The adhesive should be applied evenly and in sufficient quantity so that small beads can be pressed out under the edging tape and any gaps in between the wood chips are filled. It is essential that the premelter contains a sufficient amount of adhesive to ensure that both, the glue spread and the temperature remains constant. Due to the precise pretensioning and plane-parallelism of EGGER ABS edging, a tight, almost invisible seam is achieved. Pretensioning also ensures optimum bonding by taking up any excess glue at midpoint on the back of the edging and the anchor points of the glue to the chipboard.

Processing temperature

The work should be carried out at room temperature. Prior to processing, the edge banding tapes and substrates should be conditioned at normal room temperature (18 – 24°C). If the edging or boards are too cold (e.g. due to storage in unheated areas), the hot-melt adhesive applied will set before the edge band is attached. Therefore, conditioning is essential and draughts should also be avoided. The processing temperature for the adhesive varies between 90 and 230°C depending on the type of adhesive. Please refer to the individual manufacturer's specifications for the relevant processing temperatures. When measuring the adhesive temperature, display errors can occur and the temperature measured may differ from the actual temperature on the application roller. It is recommended that the temperature be taken on the application roller.

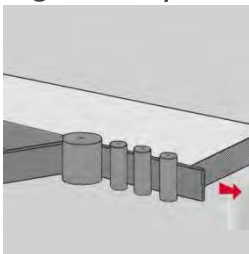
Wood moisture

The optimum wood moisture for processing board material is between 7 and 10%.

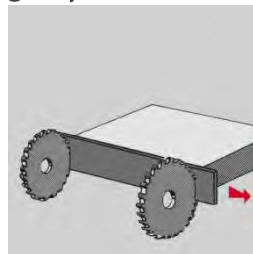
Feed rate

The feed rate is defined by the processing characteristics of the hot-melt adhesive and the method of application (spray nozzle or roller). Please follow the adhesive supplier's instructions. If the feed rate is too high, the hot-melt adhesive may become stringy in consistency, preventing full saturation of the board material. Furthermore, this can cause the application roller to jump and may lead to chatter marks during the subsequent edge milling process. If the feed rate is too low, the interval between adhesive glue application and affixing of the edge banding tape 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.

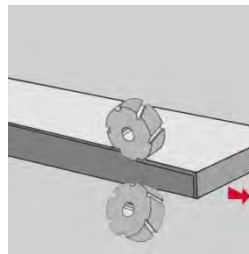
Edgebander processing sequence



Gluing



End trimming

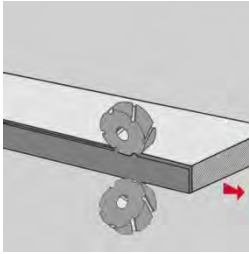
Pre-milling:
Pre-mill head at 15–20° angle

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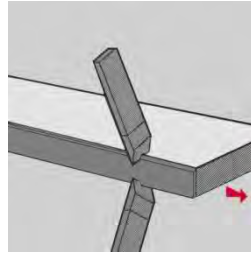
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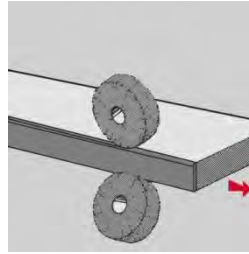
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Radii / bevel milling



Scraper Finishing



Buffing

Pressure rollers

Whilst taking into account the specification of the machine, to achieve an optimum seam appearance there must be an adequate number of pressure rollers, which are adjusted to the correct setting.

End trimming

The end trim cut is performed using standard set saw blades with pointed teeth. Saw blades with alternate tooth sets are only of limited use as they can cause splintering, particularly when working with thin edge banding.

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 incorrect speeds can damage the edging. If any smears should occur, the speed of the milling cutter should be reduced or the feed rate increased as necessary. To facilitate waste extraction, pre-milling can be carried out in up-milling mode. Precision milling should always be performed in down-milling mode.

Scraper processing

As ABS as a material tends to slightly fade in colour after scraping, the scraper blade should not exceed 0.1 – 0.2 mm. The process requires an almost precise milling accuracy (“without chatter marks”) which can be achieved with milling tools of high concentricity. DIA (diamond tipped) milling tools have proved to be particularly effective. Hot-air units can be used to further optimize scraper processing, particularly where the colour is critical.

Buffing

EGGER ABS edging can easily be polished in a radius with buffing wheels. Any colour fading resulting from the scraper finishing can simply be polished away using buffing wheels. Furthermore, buffing wheels remove possible contamination (adhesive residue) from the surfaces and/or deburr the edges. Adhesive glue remnants can easily be removed using electronically controlled separating agent spray units; this also reduces scraper blade wear.

Extraction

Thermoplastic remnants can build-up static charge and become attracted to material and machine components. Compared to other thermoplastic raw materials, the static charge of ABS is very low. A suction power of approx. 2.5 m³/s is therefore required.

Manual processing

Manual processing of EGGER ABS edging can easily be carried out using glue press clamps or edge presses. However, this process requires the use of special adhesives, such as two component part dispersion adhesives, contact adhesive, glues suitable for lacquered or varnished surfaces or PU adhesives. The relevant types and guideline values should be obtained from the respective adhesive manufacturer. Alternatively, edge banding can be processed using small edge banding units or manual hand-held edge banding devices.

Edging with protective foil

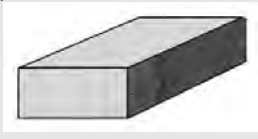
The use of commercially available release agents, coolants and cleaning agents is recommended for the processing of edges which are provided with a peel-clean foil to protect the surface. The release agent can be sprayed onto the first pressure roller or directly onto the board and edge surface after 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.

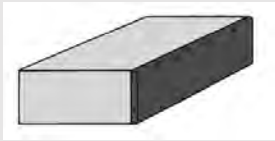
To protect and maintain the UV resistance of the protective foil, the original packing should be used when storing the edge banding tape over a period of several months.

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



Error	Cause	Measures
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

EGGERABS edging is easy to clean using conventional cleaning agents suitable for plastic surfaces. The use of petrol, thinners, acetic acid, nail polish remover or similar solvent-based or alcohol-based substances may partially dissolve the surface and should therefore be avoided.

Handling waste

Waste from EGGER ABS 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 ABS edging. It should be agreed with the disposal company how high the share of ABS and other so-called impurities may be.

The thermal recycling of ABS edging is also possible as a rule, and reasonable on the basis of the high heating potential of the leftovers. The process produces no chlorine compounds. EGGER ABS Edging may be recycled thermally together with chip leftover in approved facilities. As a rule, wood-based materials with ABS edging resulting from production may also be thermally recycled. There is no need for time-consuming leftovers separation and/or edge removal.

Further information on EGGERABS edging can be found in our technical data sheet.

Provisional note:

These processing instructions have been carefully drawn up to the best of our knowledge. 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 Edging, as well as from changes to standards and public law documents. The contents of these processing instructions should therefore not be considered as instructions for use or as legally binding. Our General Terms and Conditions apply.