

PROCESSING INSTRUCTIONS

EGGER SECURITY EDGING ABS



EGGER Security Edging ABS is a thermoplastic edging product with protective and aesthetic properties for finishing narrow areas on wood-based panels. EGGER Security Edging is made of hard ABS and is stained. A universal bonding agent is applied to the rear as standard (primer).

Uses / Applications

EGGER Security Edging ABS is used to finish narrow areas of laminated wood-based materials such as chipboards, MDF and HDF boards and is 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's rooms, exhibition fittings and shop systems, cabinet fronts, carcass elements, etc. EGGER Security Edging ABS is also suitable for finishing individually designed furniture components.



Processing

EGGER Security 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 the scraper and finishing wheel are all quite straightforward. EGGER Security Edging is not suitable for processing in a cold-glue activation process with white PVA glue.

ADHESIVE / ADHESIVE LAYER

EGGER Security Edging ABS is coated with bonding agent that is designed for use with EVA, PA, APAO and PUR hot-melt adhesives. An extremely heat-resistant glue should be used if the product is likely to be exposed to critically high temperatures, e.g. in the kitchen or in shipping containers. Polyurethane hot-melt adhesives are particularly suitable for use in humid areas. Always follow the instructions of the respective adhesive supplier. The exact quantity to apply varies according to the type of adhesive (see manufacturer's specifications), board thickness, edging material and feed speed. The layer of adhesive should be applied evenly and in sufficient quantity 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 remains constant. The precise tensioning and parallelism of EGGER Security Edging ABS 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.

WORKING TEMPERATURE

The work 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 and 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 even attached. Draughts should therefore also be avoided. The working temperature for the adhesive varies between 90 and 230°C depending on type of adhesive. Refer to the manufacturer's specifications for the relevant working temperatures. 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.

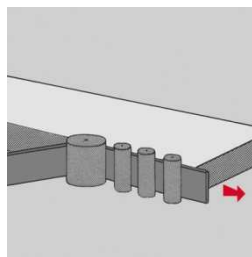
WOOD MOISTURE CONTENT

For processing the board material, the optimum wood moisture content is between 7 and 10%.

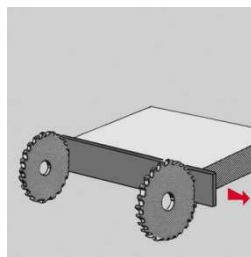
FEED SPEED

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 supplier's instructions. If the feed speed is too high, then the hot-melt adhesive may pull fibres out and prevent wetting of the complete 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.

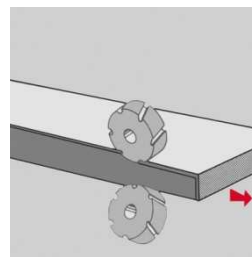
WORKING PROCEDURE WITH THE EDGE BANDING MACHINE



Gluing

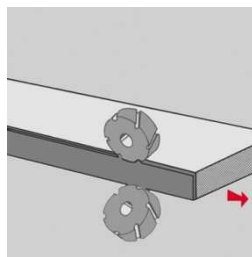


Cutting

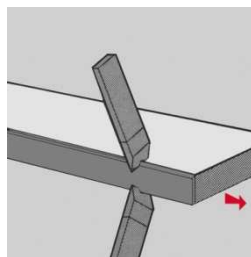


Pre-milling

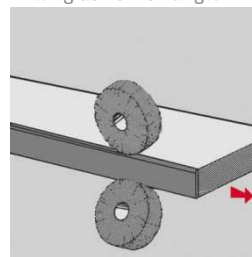
Milling at 18-20° angle



Milling



Finishing



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

Cutting is performed using saw blades with pointed teeth on one side. Saw blades with teeth on both sides are only of limited use 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 lubricating effects occur, reduce the speed of the milling cutter or increase the feed. To facilitate waste extraction, coarse upcut milling can be carried out. Fine-milling should always be performed as downcut milling.

SCRAPER PROCESSING

As the ABS material tends to fade in colour after scraping, the scraper blade should not exceed of 0.1 - 0.2 mm. Milling tools with a high true running accuracy will produce the required milling accuracy ("without blade marks"). DIA milling tools are effective in this area. A hot-air unit can be used to further optimise the scraper processing, particularly with critical colours.

BUFFING

EGGER Security Edging ABS can easily be buffed with the finishing wheel. Any colour fading caused by scraper machining can simply be polished away using the finishing wheel. Furthermore, the finishing 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

Thermoplastic chips may become statically charged, and thus attach themselves to material and to machine components. Compared to other thermoplastic materials, the static charge of ABS is very low. A suction power of approx. 2.5 m³/s is therefore required.

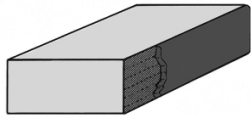
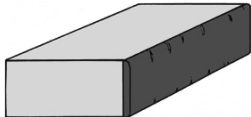
MANUAL PROCESSING

Manual processing of EGGER Security Edging ABS can easily be carried out using a gluing press or edge press. However this process requires the use of special adhesives, such as two component dispersion adhesives, contact adhesive, varnish adhesive or PU adhesive. Here, the relevant types and guideline values should be obtained from the manufacturer of the hot-melt adhesive concerned. Alternatively, edges can be processed using small edge banding machines or manual banding devices.



Illustration: Using the "Kantenknirps" edge banding machine www.kantenknirps.de

RECTIFYING PROCESSING PROBLEMS

<p>1. Edge can be easily removed by hand. Residue of hot-melt adhesive on the chipboard. The lattice structure of the adhesive coating roller is visible.</p>	<ul style="list-style-type: none"> ▪ Room temperature too low or draught in the area between application of the hot-melt adhesive and the pressure roller ▪ Edge material too cold (outdoor storage) ▪ Hot-melt adhesive temperature too low ▪ Feed speed too slow ▪ Contact pressure of coating rollers too low ▪ Not enough adhesive applied
<p>2. Edge can be easily removed by hand. Residue of hot-melt adhesive on the chipboard. The hot-melt adhesive surface is completely smooth (edge slips off)</p>	<ul style="list-style-type: none"> ▪ Board and/or too cold ▪ No bonding agent, or wrong/insufficient bonding agent ▪ Unsuitable hot-melt adhesive used
<p>3. Edge can be easily removed by hand. Most of the hot-melt adhesive is left behind on the edge.</p>	<ul style="list-style-type: none"> ▪ The board material is still storing excessive thermal energy (e.g. after earlier veneering or laminating of the board surfaces)
<p>4. No adhesive on the glue edge at the front of the board and the edge is split by a few millimetres at the front.</p> 	<ul style="list-style-type: none"> ▪ The adhesive coating roller is not close enough to the edge of the board. No adhesive has been applied to the first part of the edge because the roller has been held back at the front edge of the board. ▪ Increase amount of adhesive applied
<p>5. Milling ripples can be seen.</p> 	<ul style="list-style-type: none"> ▪ Feed speed too high ▪ Cutting speed too low ▪ Use upcut milling ▪ Increase number of cutters on miller ▪ Increase rotational speed ▪ Post-process with scrapers and finishing wheel
<p>6. On thick edge boards, the colour in the milled area has faded a little.</p>	<ul style="list-style-type: none"> ▪ Cutting speed too low ▪ Adjust the scraper station (max. 0.1 – 0.2 mm) ▪ Post-process with finishing station ▪ Warm up the milled area in the hot air station (re-work)
<p>7. Stress whitening in the radius during machine centre processing.</p>	<ul style="list-style-type: none"> ▪ Edge fed in too cold ▪ Increase heater power or reduce feed rate ▪ Increase geometry or use a thinner edge material

CLEANING

EGGER Security Edging ABS 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.

DISPOSAL

Thermal reuse is highly feasible due to the high calorific value of the product. Waste from EGGER Security Edgings ABS can be incinerated together with chip waste in systems approved for this purpose. The process produces no chlorine compounds. The process complies with the stringent TA Luft limit values. Even chipboards with ABS edging attached can be disposed of without any problem. There is no need for time-consuming waste separation and/or edge removal.

Further information on EGGER Security Edging ABS can be found in our product data sheet.