

A photograph showing several curved strips of ABS material. One strip is dark brown, another is light beige, and a third is white with a wood-grain pattern. They are arranged in a circular, overlapping fashion. A semi-transparent grey box is overlaid on the left side of the image, containing the product sheet title.

## Product Sheet

# ABS Natural and Design Finish Edgings

ABS natural and design finish edgings are extruded, thermoplastic edges of high quality with printed decors imitating natural surfaces like wood, stone and others made from a thermal and mechanically stable thermoplastic - ABS (Acrylonitrile-Butadiene-Styrene). It has a protective and decorative function for the edges of furniture boards.

ABS natural and design finish edgings exhibit good interior colour stability, withstand high mechanical forces, fulfil the most stringent qualitative and ecological standards, are harmless towards human health and do not contain heavy metals and phthalates.

## Adhesion Properties:

ABS natural and design finish edgings are coated with a layer of primer on the reverse, which, in combination with a suitable adhesive (based on EVA, PUR, PO or APAO), provides adhesion to the board.

## Protective Top Coating:

ABS natural and design finish edgings are coated with a protective layer which have different gloss levels to improve scratch resistance of the surface.

Alternatively the visible side of the ABS can be coated in different colours with a layer of painted or anodised aluminium, matching the underlying side of ABS, to accomplish a metallic effect and increase mechanical resistance.

## ABS natural and design finish edgings - Parameters:

### Thickness Tolerances

Thickness in mm	Tolerance	
0,45 - 0,6 mm	- 0,05 mm	+ 0,05 mm
0,7 - 1 mm	- 0,10 mm	+ 0,10 mm
1,1 - 1,6 mm	- 0,20 mm	+ 0,10 mm
1,7 - 2 mm	- 0,25 mm	+ 0,15 mm
2,1 - 5 mm	- 0,30 mm	+ 0,15 mm

### Width Tolerances

Width in mm	Tolerance	
All widths	- 0,5 mm	+ 0,5 mm

### Edging Profile Tolerance\*

Profile Tolerance	Internal Test Method
Bottom Side of Edgings	≤ 0,2 mm

\* slight bending in the transverse edge profile ensures optimum bonding with the board by absorbing the adhesive at the center of the edge and minimizing the joint between the edge and the board.

### Roll Length Tolerance\*

	Tolerance
Nominal Length of the Roll	± 1,5 %

\* there can be joints within rolls, they are marked clearly with a green rectangular sticker with the wording "joint in roll" directly on the roll or on the pallette. There will only ever be a maximum of one joint within the roll length.

### Plain Linearity

Longitudinal Deformation	Internal Test Method
All Widths	< 3 mm/1 m



## Qualitative Characteristics

Properties	Values	Standard
Light Fastness	≥ 5	ČSN EN ISO 4892-2
Softening Point (Vicat B 50)	~ 95 °C	ČSN EN ISO 306
Shrinkage	< 1 % at 85 °C for 1 hour	Internal Test Method
Hardness (Shore type D)	~ 73	ČSN EN ISO 868
Chemical Resistance*	1 B	Din 68861-1

\* exception of acetone and ethyl-butyl-acetate

## Surface Finish - Top Coat

Structure	Surface Pattern	Tolerance
Coated Surface: 6° - 30° of Gloss	smooth, wooden pore, pearl	± 5°
Coated Surface: 30° - 60° of Gloss	smooth	± 10°
Coated Surface: 90° of Gloss	smooth	± 10°

## Surface treatment with aluminium foil\*

Application of aluminium foil onto a surface of design ABS edge, could achieve unique colour effects as well as superb anti-scratch resistance.

There are several colour variations and finishes available for the design ABS edge with aluminium foil.

Colour matching will require assessment before it can be embossed to a product.

\*it is measured by a spectrophotometer measuring geometry D8\* and illumination type D65.

Applied aluminium foils are available in several thicknesses, each suited to specific product types.

Protective PE film might be available, depending on what type of ALU film is used on the design ABS edge.

## Colour Tolerances

Visual comparison with reference sample under the following conditions.

- ✓ Evaluation in the light box under day light (D65 – daylight light source)
- ✓ Reference and produced samples are placed at the distance of 2-3 cm to each other.
- ✓ The angle between the control sample and the table is 75 ° with the evaluator facing from the front and evaluating the samples from a distance of about 70 cm.
- ✓ It is recommended (due to possible metamerism effect) to evaluate the sample under different light sources (D65 – daylight, A – bulb light, F11 – fluorescent light).

## Application of Functional Layer Based on EVA

	Quantity	Tolerance
Colour Shade*	160 g/m <sup>2</sup>	± 10%

\* please follow information specified in Product Sheet for Functional Layer (PS FL ENG – valid version) – to select right colour and application.

Width of applied functional layer can be max 1mm narrower (from each side of the edgings) than the width of the edgings.

Minimum recommended thickness of edgings for transparent functional layer is 0,8 mm (please see PS FL ENG – valid version)



## Application of Hot Melt Based on EVA

	Quantity	Tolerance
Colour Shade*	160 g/m2	± 10%

\* please follow information specified in Product Sheet for Functional Layer (PS FL ENG – valid version) – to select right colour and application.

## Processing

Technology	Comments
Sawing	yes
Cross Cutting	yes
Top Coating	yes (except for design edges with ALU foil)
Radius Milling	yes
Buffing	yes
Pre-Milling	yes
Machine Gluing	yes
Milling Direction	machine direction, opposite direction
Bending 0,45 - 0,9 mm Edging	Yes, radius min. 50 mm
Bending 1 mm - 3 mm Edging	Yes, radius min. 60 mm

## Application:

ABS natural and design finish edgings are suitable for all types of furniture, mainly for areas with high potential of wear. ABS natural and design finish edgings are specified for interior application.

## Gluing Techniques:

- Machine bonded with use of suitable glues - EVA, PO, PUR and APAO.
- Machine bonded with use of laser, hot air or infra-red heating – ABS edgings with applied functional layer, based on EVA or PO that ensures required adhesion to the boards (please always follow information in Product Sheet for Functional Layer – PS FL ENG – valid version).
- Manual bonding machine with hot air nozzle - ABS edgings with applied functional layer.
- Manually, with the use of contact adhesives.

## Gluing Conditions:

Moisture level of the edgings and boards should be between 8 – 15%.

Temperature of the boards, edgings and environment during gluing: min. 15°C, this is to eliminate any damage to the material which adversely affects the strength of the joint therefore the board and edge need to be heated slowly.

## Stress Whitening:

Some colours of ABS natural and design finish edgings can exhibit stress whitening on the worked surfaces (radius milling mainly). Correct settings of gluing machine and additional buffing can minimise this effect. Please contact your local area sales manager for more information.



## Surface Defects:

Potential surface defects of ABS natural and design finish edgings are evaluated under daylight from the distance of 70cm (potential defects should not affect visual appearance of the surface from this distance). Surface defects can be classified like: black specs, dots, lumps, dents, cracks, waves, colour changes, gloss level changes, printing defects, etc.

## Cleaning:

For cleaning of ABS natural and design finish edgings from the glue residues we recommend special cleaning agents based on hydrocarbons and alcohol (free of aromatic substances and solvents). We recommend cleaning agents Hraniclean 01 and RI408 for manual cleaning and RI006 LP 163/93 for machine application.

For cleaning of surfaces of ABS natural and design finish edgings, we recommend standard household cleaners or alcohol (do not use cleaners containing acetone or ethyl-butyl-acetate).

## Storage Conditions:

Store under appropriate conditions – temperatures between 15 - 25°C, relative humidity 55 - 60%, in closed packaging to protect against direct sunlight. We strongly recommend making an application trial for the ABS natural and design finish edgings older than 12 months after delivery date.

## Disposal:

**ABS natural and design finish edgings and boards covered with ABS natural and design finish edgings can be disposed according to the regulation of each country – e.g. incinerated or landfilled.**

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**Company Hranipex strongly recommends to every customer to execute their own testing of ABS plain colour edgings for the planned methods and application. Indicated data serves for orientation only and do not represent any specification, or give warranty to the edge banding characteristics.**

We keep the right to change or update information in this Product Sheet at any time.

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