

## Technical data sheet - ABS edge UNI colour

ABS edging is high-quality thermoplastic edging made of maximum resistant and thermally stable ABS (Acrylonitrile Butadiene Styrene).

### Benefits:

ABS edging UNI colours is in interior colourfast, has high impact strength and can withstand heavy loads.

### Ecology:

ABS edging UNI meets the strictest quality and environmental EU standards. It contains no heavy metals, phthalates and does not causes harm.

### The production process:

ABS edging UNI colours is produced by extrusion technology, together with the calibration or Cylinder drum process.

### Engraving:

ABS edging is engraved during the manufacturing process.  
Engraving creates required surface (Pore, pearl, smooth, etc.).

### Lacquering

ABS edging UNI Colours can be in the manufacturing process lacquered with the UV varnish.  
In the manufacturing process, two different kinds of lacquer are used. One is the gloss topcoat that creates a gloss 5 - 60°. Another is a high gloss shine that creates a 90° gloss. Both types of lacquer are highly resistant to scratches.

### Surface defects:

Changes to the surface of ABS edging UNI colours must not visibly interfere with surface perception from a distance greater than 70 cm.

Surface defects are meant to be e.g.: body contrast, dots, bumps, dents, breaks, waves, cracks, colour change, gloss changes etc.

### Adhesion properties and edgebanding:

ABS UNI colour edging is on the bottom side applied with a layer of primer. Hranipex-primer in combination with hot-melt adhesive guarantees perfect adhesion between the edging and the furniture board.

## Tolerance, Properties and Parameters ABS edges UNI Colors:

### Edging thickness tolerance

In mm thickness	Tolerance	
0.45 to 0.7 mm	- 0.10 mm	+ 0.10 mm
0.8 to 1 mm	- 0.15 mm	+ 0.10 mm
1.1 to 1.6 mm	- 0.20 mm	+ 0.10 mm
1.7 to 2 mm	- 0.25 mm	+ 0.15 mm
2.1 to 5 mm	- 0.30 mm	+ 0.15 mm

### Edging width tolerance

In mm width	Tolerance	
11 to 14 mm	- 0.2 mm	+ 0.2 mm
15 to 31 mm	- 0.3 mm	+ 0.3 mm
above 32 mm	- 0.5 mm	+ 0.5 mm

### Tolerance of edging profile

Specification of the concave	Tolerance
Concave's bottom side	min. 0.01 - max. 0.15 mm
Concave's upper side	max. 0.5 mm

## Tolerance:

### Coverage thickness on 0.45 mm UNI colors edging

Tint	Tolerance
Dark shade	95%
Light shade	85%

### Parallelism level

All width
< 3mm/1m

### Deviation in color

Color shade	Maximum allowed deviation from reference sample delta E*
white	max. 0.8 delta E*
bright colors	max. 1.0 delta E*
dark colors	max. 1.5 delta E*

For measuring is used spectrophotometer with measuring geometry \* D8 and with set type of exposure D65.  
Accuracy of the meter: repeatability delta E\* 0.01.

## Surface finish

Structure	Surface	Tolerance
Unpainted structure 2° - 10° gloss	smooth, engraving, pearl	-
Coated structure 6° - 30° gloss	Pore, pearl	tolerance: ± 5°
lacquered structure 6° - 60° gloss	smooth	tolerance: ± 5°
Lacquered structure 90 ° gloss	smooth	tolerance: ± 10°

## Application of the EVA based functional layer

Color shade	Quantity	Tolerance
natural	160 g/m <sup>2</sup>	10%
white	160 g/m <sup>2</sup>	10%
black	160 g/m <sup>2</sup>	10%
brown	160 g/m <sup>2</sup>	10%

## Application of the EVA based melt adhesives

Type	Quantity	Tolerance
Natural	160 g/m <sup>2</sup>	10%
Black	160 g/m <sup>2</sup>	10%
Low-melting adhesive	160 g/m <sup>2</sup>	10%

The layer width of hot melt glue or functional layer can be up to 1mm smaller in width from each side of the ABS Plain colour edge.

## Specifications

Specifications	Comments	Standards for testing
Lightfastness	6	DIN EN ISO 4892-2
Softening point (Vicat B 50)	95°C	DIN EN ISO 306
Shrinkage	< 1% at 85°C within 1 hour	According to the ABS granulate manufacturer
Rockwell hardness	110 N/mm <sup>2</sup>	DIN EN ISO 2039-2
Hardness Shore type D	~ 73	DIN EN ISO 868
Impal toughness, 23°C	No chase	DIN EN ISO 179-2
Impal strength, 23°C	17 KJ/m <sup>2</sup>	DIN EN ISO 179-2
Bending e-modulus	2300 MPa	ASTM D 790
Resistance to abrasion (Erichsen methods no. 318 1)	4 - 6 N	Custom method
Chemical resistance	1 B	Din 68861-1
Index flammability	B2 (flammable as wood)	DIN 4102-1
Bleaching on the breaking	Medium	Producer ABS granulate

## Processing

Method	Comment
Cutting	Yes
Trimming	Yes
Lacquering	Yes
Milling radius	Yes
Polishing	Yes
Pre-milling	Yes
Machine edgebanding	Yes
Milling edgebanding	Upstream, downstream
Bending the 0.45 to 0.9 mm	From the edge radius 30 mm, 50 mm on varnished
Bending 1 mm to 1.5 mm	From the edge radius 40 mm, with 60 mm on varnished
Bending 1.6 mm to 2 mm	From the edge radius 50 mm, 60 mm on varnished
Bending 2.1 mm to 3 mm	From the edge radius 60 mm, 60 mm on varnished

### Use:

Use of ABS UNI colors is virtually unlimited and is therefore suitable for all types of furniture, especially in stressed areas that are exposed to a large extent of wear. They are not only suitable for edgebanding of flat surfaces, but also for all the possible shapes of curves, without depending on whether we need external or internal radius. Choice is up to you.

ABS Plain colours edges are for interior use only!

### Methods of edgebanding:

- Machine edgebanding with use of adhesives based on EVA, PO, PUR or APAO.
- On laser edgebanding machines - ABS edging with special functional coating layer based on EVA or PO, to ensure the necessary adhesion between the edge and the furniture board.
- Manually, using hand held machine with a hot air gun - ABS edging with a layer of hot-melt adhesives based on EVA.
- Manually using contact adhesive.

Temperature setting of hot melt adhesive during edgebanding is as per manufacturers recommendations. ABS edging UNI color has a concave angle that ensures a flawless joints.

### Working environment during edgebanding:

Moisture and humidity of used material and edging during edgebanding: between 8 - 15%.

Temperature of used material and edging in a temperature: a minimum of 15 °C.

**Surface resistance:**

ABS un-lacquered UNI colors edging during mechanical use is prone to surface damage. Most of the damage can be removed by polishing.

ABS lacquered UNI colors edging is during mechanical use highly resistant to surface damage.

**Whitening during use:**

Some colour shades of ABS UNI color edging during mechanical use are moderately prone to whitening on the worked area. This effect can be minimised by correctly adjusting the edgebanding machine and by a subsequent polishing.

**Cleaning:**

To remove residues of melt adhesive we recommend use of special cleaning products based on hydrocarbons and alcohol, free of aromatic substances and solvents. For over all use we recommend use of normal household cleaner or alcohol based cleaners (except for acetone and ethyl-butyl acetate according to DIN 68861, part 1, number 1b).

The Hranipex Company recommends their cleaners HRX 01 and RI 408 - for manual use and RI 006 LP 163/93 for machine use.

**Storage:**

ABS edging UNI colors should be stored at a temperature of 15 - 25 °C, humidity 55 - 60%, in sealed containers, avoiding the influence of weather conditions and dust.

Correctly stored edging has a virtually unlimited life. Nevertheless, we recommend that edging over 24 months old be subject to testing of adhesion.

**Disposal:**

Residues of ABS edging UNI colors can be disposed together with the remains of chipboard, as well as boards edged with ABS edging can be disposed of in facilities provided. For example, in incinerators or landfills approved for that purpose.

All these parameters are based on supplier's technical data sheets of materials and parts used to produce UNI colors ABS edging, also based on technological capabilities in the production of ABS edging, and based on our experience during testing and processing ABS edging and during the certification UNI edging in Zlín - institute for testing and certification.

At different ways of edgebanding and using different types of machines, the parameters for the correct processing of ABS edging may vary. Therefore we recommend that each customer tests the parameters of ABS edging UNI colors in common practice.

Updating the data sheet was done in Hranipex Komorovice on 01 11<sup>th</sup> 2012<sup>th</sup>