

# RESOPAL® HPL COLOUR

## TECHNICAL DATA SHEET

### 1. MATERIAL DESCRIPTION AND COMPOSITION

RESOPAL HPL Colour is a decorative High Pressure Laminate (HPL) with a coloured core. It is typically used for interior finishing.

#### 1.1 Core

##### 1.1.1 Melamine impregnated core

RESOPAL HPL Colour (Type BTS) meets the requirements for the DIN EN 438 - Part 9 "Classification and specifications for alternative core laminates". In comparison with the general standard design, these laminates have a deep-dyed core. The laminate material is produced with melamine resin impregnated coloured specialty paper instead of with phenol resin impregnated natron Kraft paper. For this reason, the decorative surface as well as the product's core is manufactured exclusively with melamine resin impregnated paper. These paper sheets are pressed under high pressure to create RESOPAL® HPL Colour laminate panels.

##### 1.1.2 Phenol resin impregnated core

RESOPAL HPL Colour (Type HGS) meets all the requirements of the DIN EN 438 - Part 3 "Classification and Specifications for laminates less than 2 mm thick, intended for bonding to supporting substrates". In contrast to the general standard design, these laminates have a black, deep-dyed core. The high pressure laminate produced with phenol resin impregnated Kraft paper. These paper sheets are pressed under high pressure to create RESOPAL® HPL Colour laminate panels.

#### 1.2 Decorative surface

##### 1.2.1 Melamine surface

The surface structures #60 - matte, RM Real Material - matte, irregular stone structure and WH Wooden Heart - matte vertical wood stripes are typical melamine resin surfaces.

##### 1.2.2 Traceless Premium (TP)

The surface structure RESOPAL Traceless Premium is an anti-fingerprint, smooth-matte, low-reflection and soft-touch surface and is designed for use in interior finishing.

### 2. TECHNICAL DATA

Technical Properties (RESOPAL HPL Colour 0.8 mm)

PROPERTIES	TEST METHOD	EINHEIT	BTS	HGS
<b>PHYSICAL AND DIMENSIONAL PROPERTIES</b>				
Bulk density	ISO 1183	g/cm <sup>3</sup>	≥ 1,4	≥ 1,35
Thickness tolerance	EN 438-2-5	mm	± 0.15	± 0.10
Length and width tolerances	EN 438-2-6	mm		+10 / -0
Edge straightness	EN 438-2-7	mm/m		≤ 1.5
Edge squareness	EN 438-2-8	mm/m		≤ 1.5
Evenness / Flatness	EN 438-2-9	mm/m		≥ 1.4
Dimensional stability at elevated temperature				
Longitudinal	DIN EN 438-2-17	%	≤ 0.8	≤ 0.55
Transverse		%	≤ 1.4	≤ 1.05

PROPERTIES	TEST METHOD	EINHEIT	BTS	HGS
<b>MECHANICAL PROPERTIES</b>				
Resistance to immersion in boiling water Appearance Surface	EN 438-2-12	Rating	others: ≥ 4 / TP: 5	others: ≥ 4 / TP: 5
Resistance to impact by small diameter ball	EN 438-2-21	N Index number	no classification according to EN 438	others: ≥ 20 / TP: ≥ 25 others: ≥ 3 / TP: 3 - 4
Postformability (Postforming)	EN 438-2-31/32	Radius	nicht postformbar	
<b>SURFACE PROPERTIES</b>				
Surface defects at points linear	EN 438-2-4	mm <sup>2</sup> /m <sup>2</sup> mm/m <sup>2</sup>	≤ 1 ≤ 10	
Resistance to surface abrasion (wear)	EN 438-2-10	Revolutions	≥ 150	
Resistance to water vapour	EN 438-2-14	Rating	others: ≥ 4 / TP: ≥ 4	
Resistance to dry heat (160°)	EN 438-2-16	Rating	others: ≥ 4 / TP: 5	
Resistance to scratching	EN 438-2-25	Rating	others: ≥ 3 / TP: 4 - 5	
Resistance to staining Groups 1 & 2 Group 3	EN 438-2-26	Rating	others: ≥ 5 / TP: ≥ 5* others: ≥ 4 / TP: ≥ 4	
Lightfastness Appearance Surface	EN 438-2-27	Grey scale	4-5	4-5
<b>FIRE PERFORMANCE</b>				
Fire performance	EN 13501-1	Euro class	no classification	D-s2,d0 (CWFT) TP: no classification
<b>HEALTH AND ENVIRONMENTAL CHARACTERISTICS</b>				
Contact with food				
Formaldehyde emission	EN 717-2	Classification	E1	
VOC Emission	ISO 16000	Classification		
PEFC® / FSC®			FSC® Controlled Wood	

\* Prolonged exposure to hot liquids (tea, coffee, etc.) can lead to staining or spotting on light surfaces.

For the prevention of aesthetic damage, we recommend that all stains be removed immediately. In the case of residues left behind, it is possible to remove these with a "Magic Eraser".

TP = Traceless Premium

Rating 5: no visible change  
 Rating 4: slight change only  
 Rating 3: moderate change  
 Rating 2: obvious change  
 Rating 1: major change

BTS: B (Laminate with coloured core), T (Thin laminate < 2 mm), S (Standard Quality)

HGS: H (Horizontal Application), G (General Purpose), S (Standard Quality)

### 3. STORAGE AND TRANSPORT

RESOPAL HPL Colour must be stored in an enclosed storage area at normal indoor conditions (18-25°C and

50-65% relative humidity). In addition, RESOPAL HPL Colour must be protected from humidity and mechanical damage. Stacks of panels should be stored with full surface coverage and with edges flush, and kept horizontal on a level support which has been covered with plastic film. The top panel of each stack must also be covered with plastic film and weighted down with a protective panel.

The user must also ensure the compliance with these storage conditions every time a panel is removed from the stack. If, for an extended period of time, RESOPAL HPL Colour is not stored flat, warping or deformations may occur.

RESOPAL HPL Colour must be transported on a horizontal, flat, level base of sufficient size (e.g., pallet) which has anti-slip/anti-skid protection. In addition, RESOPAL HPL Colour must be protected from humidity and mechanical damage. RESOPAL HPL Colour may not be rolled in the carton for shipping purposes.

RESOPAL HPL Colour is not considered to be hazardous material as far as transport terms are concerned; the identification is therefore not required.

### 4. HANDLING AND PROCESSING OF RESOPAL® HPL COLOUR

The usual safety provisions regarding dedusting and fire protection must be complied with in the processing and finishing of RESOPAL HPL Colour. Because of the possibility of sharp edges, protective gloves should always be worn when handling RESOPAL HPL Colour panels. Contact with dust from RESOPAL HPL Colour does not cause any particular problems; however, there is a limited number of people who may have an allergic reaction to processing dust of all kinds (and thus also to HPL dust).

#### 4.1 Conditioning

Before its installation, RESOPAL HPL Colour must be acclimatised on a level surface under the following conditions for at least 5 days (8 - 10 days in winter) in the rooms in which they are to be installed. The indoor climate should be normal (temperature 18 to 25°C; relative humidity 50 bis 65 %). These climatic conditions should be maintained even with the use of the area later on.

Because of its material composition, RESOPAL HPL Colour (BTS) panels with a melamine resin impregnated core reacts more strongly to climatic differences between the front and back of the composite elements as well as to general climate changes. The evenness/flatness can be influenced more strongly by tensions within the material. For this reason, RESOPAL® HPL Colour is not suitable for areas which are subject to strong climatic fluctuations with respect to temperature and humidity. In addition, direct heat influences and the drying effect caused by the flow of warmth or air from heating or air-conditioning systems should be avoided.

RESOPAL HPL Colour (HGS) panels with a phenol resin impregnated core behave in much the same way as RESOPAL HPL when it comes to climate changes; consequently, the general processing guidelines applicable to RESOPAL HPL must be complied with.

#### 4.2 Technical Application Information

In contrast to the standard design, RESOPAL HPL Colour laminate panels (Type BTS) are slightly harder and somewhat more brittle because of the exclusive use of melamine resin. To some extent, this can lead to increased tool wear when machining RESOPAL HPL Colour (Type BTS) laminates.

For the processing of RESOPAL HPL Colour, the processing recommendations for RESOPAL HPL Colour and the tool recommendations by LEUCO Ledermann GmbH & Co. KG should be followed. In the case of printed decor layers, it is possible that, depending on the angle of the cutter, a differently coloured layer will become visible during the shaping/cutting process. The flatter the cutting angle, the more clearly visible this differently coloured layer will be.

RESOPAL HPL Colour is not postformable.

In the manufacture of composite elements to be used with RESOPAL HPL Colour, special attention must be paid to readjusting the tension by means of appropriate counteraction. For this reason, it is advisable to use identical RESOPAL HPL Colour material to create stabilising layers.

If unsymmetrical composite elements are produced, this is within the processor's responsibility. In such cases, it is recommended to pre-test its practicality for each intended use prior to production.

When RESOPAL HPL Colour is installed in combination with RESOPAL HPL / Compact with a phenolic brown core, testing must be performed to ensure that the decor colour's potential deviation is within the desired specifications between the two products.

Moreover, it is also important that the "General Handling and Processing Guidelines for HPL" with respect to storage and processing are followed when processing RESOPAL HPL Colour.

## 5. AVAILABLE PRODUCTS

Dimensions:	3050 x 1320 mm 3650 x 1320 mm
Thickness:	0.8 mm
Textures:	3050x1320: 60, TP, WH, RM 3650x1320: 60, TP
Decors:	see RESOPAL HPL Colour Collection
Cores:	Cool White, Cool Grey, Light Brown, Deep Black

## 6. MAINTENANCE, CARE AND CLEANING

RESOPAL HPL Colour panels are not subject to corrosion or oxidisation. They require no further surface treatment (for example, with lacquer/varnish or other coating). All decorative RESOPAL HPL Colour surfaces can be cleaned with a mild soap or detergent solution. Stubborn stains can generally be removed with solvents. Do not use abrasive cleansers (e.g., scouring powder).

Prolonged exposure to hot liquids (tea, coffee, etc.) can lead to staining or spotting on light surfaces of RESOPAL Traceless Premium surfaces.

For the prevention of aesthetic damage, we recommend that all stains be removed immediately. In the case of residues left behind, it is possible to remove these with a "Magic Eraser".

For further information please read the directions in the data sheets "Cleaning and Maintenance of RESOPAL HPL" and "Cleaning and Maintenance of RESOPAL Traceless Premium".

## 7. ENVIRONMENTAL AND HEALTH ASPECTS TO BE CONSIDERED WHEN USING THE PRODUCT

RESOPAL HPL Colour is a cured and thus inert thermosetting plastic material. The release of formaldehyde from RESOPAL HPL Colour is well below the statutorily permitted limit for (engineered) wood-based materials. There is no migration into food and RESOPAL HPL Colour has therefore been approved for contact with foodstuffs. The decorative surfaces are resistant to all standard household cleaning agents and solvents; This is the reason why the material has been used for many years in application areas where cleanliness and hygiene are a top priority.

The sealed surface of RESOPAL HPL Colour can be disinfected simply with the use of hot water, steam and all disinfectants that are commonly used in hospitals and other specialised areas of application. RESOPAL HPL Colour panels are products and not chemical substances and therefore the REACH regulation does not apply. It is nevertheless important to ensure an exchange of information with the raw material suppliers in regard to REACH-relevant components.

## 8. WASTE DISPOSAL AND ENERGY RECOVERY

RESOPAL HPL Colour can be taken to controlled waste disposal (landfill) sites which comply with the current national and/or regional regulations.

Due to their high calorific value (18 - 20 MJ/kg)\*), RESOPAL HPL Colour laminates are particularly suitable for thermal recycling. In a complete combustion process at 700°C, the panels burn to form water, carbon dioxide and nitrogen oxides. RESOPAL HPL Colour laminates thus meet the requirements for energy recycling pursuant to Section 8 of the German Materials Recycling Act/ Closed (Substance) Cycle and Waste Management Act (Kreislaufwirtschaftsgesetz). The conditions for efficient combustion processes are provided in modern, officially approved industrial incinerators. The ashes from these combustion processes can be disposed of at controlled waste disposal sites.

All information provided in this product data sheet is based on the current state of technical knowledge but does not represent a guarantee. The suitability for specific purposes or applications cannot be guaranteed.