

Material Safety Data Sheet

Product:

Decorative High Pressure Laminates (HPL)

This information covers all HPL grades as described in EN 438. HPL is not classified as hazardous substance and therefore do not require special marking and/or description by a safety data sheet.

Product details:

Standard Number: BS EN 438-1:2016

Title: High-pressure decorative laminates (HPL). Sheets based on thermosetting resins (usually called laminates).

Descriptors: Laminates, Decorative materials, Thermosetting polymers, Plastics, Sheet materials, Designations, Classification systems, Selection, Cleaning, Hygiene, Materials in contact with food, Plastics sheet.

Title in French: Stratifiés décoratifs haute pression (HPL). Plaques à base de résines thermodurcissables (communément appelées stratifiés). Introduction et informations générales

Title in German: Dekorative Hochdruck-Schichtpresstoffplatten (HPL). Platten auf Basis härtpbarer Harze (Schichtpresstoffe). Einleitung und allgemeine Informationen

Description:

HPL are sheets made of thermosetting resins impregnated cellulose fibrous material (Paper) bonded together under high pressure and heat process. The process, defined as the simultaneous application of heat ($\geq 120^{\circ}\text{C}$) and high specific pressure ($\geq 5\text{ MPa}$) provides flowing and subsequent curing of the thermosetting resins to obtain a homogenous non-porous material ($\geq 1,35\text{ g/cm}^3$), with the required surface finish.

About 60 % of HPL is paper and the remaining is phenol-formaldehyde resin, fully cured for core layers and melamine-formaldehyde resin, fully cured, for décor surface layer. Both resins are thermosetting and irreversibly interreacted cross linked chemical bonds. The result is non-reactive totally stable material.

Maintenance:

HPL does not need any maintenance. HPL is extremely durable, it does not oxidize, it does not corrode, it does not rot and it does not wear out. HPL does not require any surface treatment or protection.

Handling and machining of HPL

Regular wood processing requirements are considered when fabrication HPL sheets, such as dust extraction and collection, fire Precautions according to local or municipal regulations at country of fabrication. Protective gloves and safety glasses must be worn during handling and fabrication due to sharp edge of HPL. protective gloves should always be worn when handling laminates. In case of allergy to machining dust, respiratory gear must be worn. Please see your physician or seek medical assistance in case of excessive allergy or in case of contact with eyes.

HPL in fire

Laminates are difficult to ignite, do not melt nor create burning droplets and have properties that retard "spread of flame", thus prolonging evacuating time. HPL can meet the best performance for organic surfacing materials specified in the French standard NFF 16101 (i.e. at least class F2 for smoke density and toxicity). The same firefighting techniques should be employed as with other wood based building materials.

Fire and explosion data:

HPL is not considered flammable material. It will burn only in a fire

Ignition temperature Approx. 400 °C

Flash point : None

Protection against fire and explosion: In the case of fire, HPL shall be treated as wood based materials.

Thermal decomposition Possible above 250 °C, toxic gases may be emitted, e.g .carbon monoxide, carbon dioxide, ammonia.

On NF F 16 101. HPL is safe material.

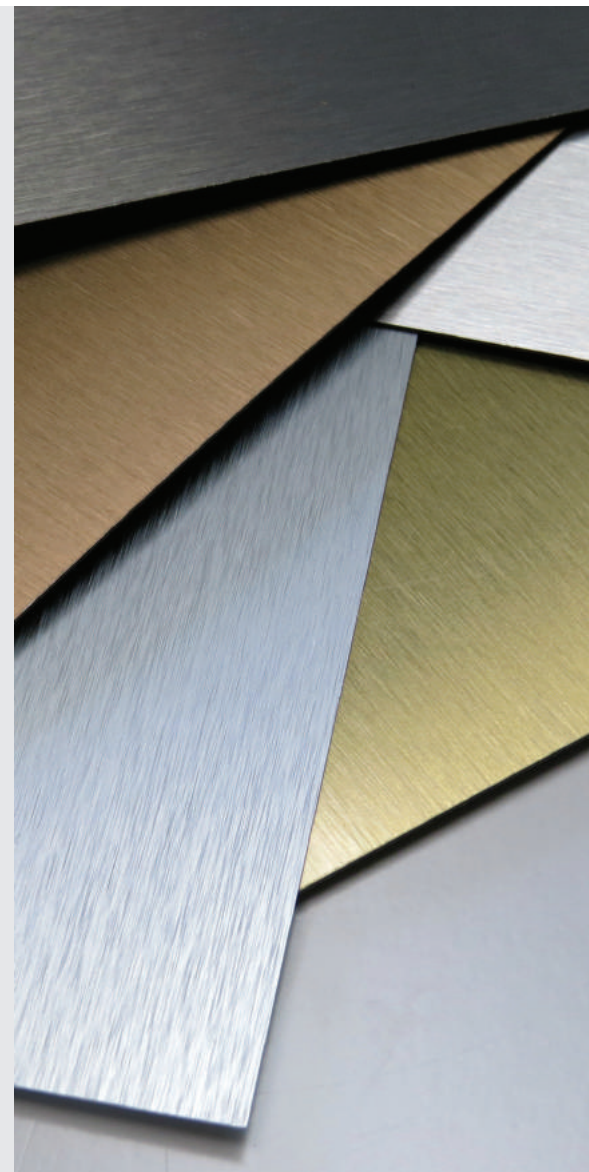
Extinguishing media: HPL is considered as class A material. Carbon dioxide, water spray, dry chemical foam can be used to extinguish flames. Water dampens and prevents rekindling. Wear self breathing apparatus and fire protective clothing.

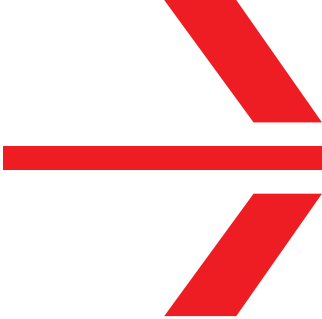
Smoke and Toxicity HPL is classified F2 when tested according to NF F 16 101 situation, in presence of open flames.

Explosion limits Dust below 60 mg/m³

Explosion hazard : HPL machining, sawing, sanding routing produces class ST-1 dust.

Safety precautions and adequate ventilation must be observed to avoid airborne dust concentration.





Storage and Transportation:

HPL can be easily and conveniently stored on wooden pallets or in wooden crates with no special recommendations or requirement. No special precautions need be taken.

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Recycling & Disposal of HPL:

HPL can be recycled, used as fillers or can be transformed into moulds together with virgin resins.

HPL waste can be brought to controlled waste disposal sites according to current national and/or regional regulations.

Environmental and health aspects in use of HPL

Emission in use HPL surfaces do not require maintenance. No harmful emissions are released during machining or use. Formaldehyde emission levels are far below the standard for indoor air quality.

HPL is fully cured thus chemically inactive, it is resistant to common household cleaning solutions and light chemicals. HPL is safe contact in contact with food as no migration of elements happen from or through HPL thanks to its extreme low permeability. HPL surface is non-porous and it can be cleaned with normal or hot water with soap, it can be disinfected with regular disinfectants or by using steam therefore it is safe and convenient to use in hospitals

Decorative laminates are often used in applications where cleanliness and hygiene are particularly important, such as hospitals and kitchens. HPL are suitable for contact with foodstuffs. The solid and non-porous HPL surfaces prevent particles of food or chemical products from penetrating and depositing. They are easy to clean

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