



## TECHNICAL DATA SHEET

### 1 - IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY/UNDERTAKING

**Identification of the substance or preparation:**

Name: GRAVOSTRAL

**Company/undertaking identification:**

Registered company name: GRAVOTECH MARKING SAS.

Address: 56, avenue Jean Jaurès.10600.La Chapelle Saint Luc. France.

Telephone: +33 (0)3 25 41 65 65. Fax: +33 (0)3 25 79 04 25.

e-mail : [info@gravograph.fr](mailto:info@gravograph.fr)

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**Emergency telephone: +33 (0)1 45 42 59 59.**

Association/Organisation: INRS / ORFILA <http://www.centres-antipoison.net>.

**Use of the substance/preparation:**

Decorative High Pressure Laminates

### 2 - HAZARDS IDENTIFICATION

This information describes the composition of GRAVOSTRAL and gives advice for their handling, processing, use, and disposal. It covers all HPL grades as described in EN 438. GRAVOSTRAL are not classified as hazardous substances and therefore they do not require a special marking nor a description by a safety data sheet.

### 3- DESCRIPTION

The materials referred to are high pressure decorative laminates (HPL) according to the European Standard EN 438 and to ISO 4586.

**GRAVOSTRAL**

GRAVOSTRAL are sheets consisting of layers of kraft paper impregnated with thermosetting resins and of a lacquered aluminium foil on the surface; all is pressed and bonded together by means of high pressure (9 MPa) and heat (150°C).

**4- STORAGE AND TRANSPORTATION**

Storage and transportation should be carried out in accordance with the General Processing Recommendations for GRAVOSTRAL; no special precautions need to be taken.

For transportation, GRAVOSTRAL is classified as a non-hazardous product; no labelling is required.

**5- HANDLING AND MACHINING OF GRAVOSTRAL**

The usual safety requirements of fabrication and machining should be observed with regard to dust extraction, dust collection, and fire precautions.

Because of the possibility of sharp edges protective gloves should always be worn when handling laminates. The contact with dust from GRAVOSTRAL does not present any special problems, however a small percentage of personnel may be sensitive or even allergic to machining dust in general.

**6- ENVIRONMENTAL AND HEALTH ASPECTS IN USE**

Decorative laminates are cured and therefore chemically inert.

GRAVOSTRAL formaldehyde emission level is far below the limit for wood based materials. Due to their very low permeability GRAVOSTRAL bonded to wood based substrates act as a barrier against possible formaldehyde emissions coming from the substrates.

There is no migration affecting foodstuffs and, consequently, GRAVOSTRAL are approved for contact with foodstuffs.

The decorative surfaces are resistant to common household solvents and chemicals and have therefore been used for many years in applications where cleanliness and hygiene are important.

**7- GRAVOSTRAL IN FIRE SITUATIONS**

Laminates are difficult to ignite and have properties that retard "spread of flame", thus prolonging evacuating time. Due to incomplete burning, as with many organic materials, hazardous substances are to be found in the smoke. However, HPL are capable of meeting the best performance for organic surfacing materials specified in the French standard NFF 16101 (= at least class F2 for smoke density and toxicity). In dealing with fires involving laminates the same fire fighting techniques should be employed as with other wood based building materials.

**8- WASTE DISPOSAL**

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

**9- TECHNICAL DATA**

**9.1 PHYSICAL/CHEMICAL CHARACTERISTICS**

PROPERTY	TEST METHOD (EN 438: 2005)	PROPERTY or ATTRIBUTE	UNIT	VALUES
Thickness	EN 438-2.5	thickness	mm	0,9 ± 0,1
Resistance to surface wear	EN 438-2.10	wear resistance	revs	≤ 20
Resistance to immersion in boiling water	EN 438-2.12	mass increase	%	≤ 7
		thickness increase	%	≤ 9
		appearance	rating	≥ 3
Resistance to dry heat	EN 438-2.16	appearance	rating	≥ 3
Dimensional stability at elevated temperature	EN 438-2.17	cumulative dimensional change	% long. % transv.	≤ 0,45 ≤ 0,90
Res. to cracking (thin laminates)	EN 438-2.23	appearance	rating	≥ 4
Resistance to scratching	EN 438-2.25	force	rating	≥ 1
Lightfastness	EN 438-2.27	contrast	grey scale rating	≥ 4
Formability (for PF type)	EN 438-2.32	radius	mm	(*)
Density	ISO 1183	density	Kg/m <sup>3</sup>	~ 1.500

**9.2 FIRE AND EXPLOSION DATA**

**9.2.1 Flash point** None

**9.2.2 Smoke and Toxicity** HPL are classified F2 when tested according NF F 16 101.

## GRAVOSTRAL

**9.2.3 Flammability** GRAVOSTRAL are not considered to be flammable. They will burn only in a fire situation, in presence of open flames.

**9.2.4 Extinguishing media** GRAVOSTRAL are considered as class A material. Carbon dioxide, water spray, dry chemical foam can be used to extinguish flames. Water dampens and prevents rekindling. Persons in fire situations should wear self breathing apparatus and fire protective clothing.

**9.2.5 Explosion hazards** The machining, sawing, sanding and routing of GRAVOSTRAL produce class ST-1 dust. Safety precautions and adequate ventilation must be observed to avoid airborne dust concentration.

**9.2.6 Explosion limits** Dust levels should be kept below 60 mg/m<sup>3</sup>

**9.2.7 Protection against In the case of fire** GRAVOSTRAL shall be treated as wood explosion and fire based materials.

**9.2.8 Storage and transport** GRAVOSTRAL are classified as non-hazardous for transportation purposes and there are no specific requirements.

**9.2.9 Machining** Use gloves to protect from sharp edges and safety glasses to prevent eye injuries. No special working equipment is necessary, except protections to minimize dust exposure in case of sheet machining.

**9.2.10 Disposal considerations** Waste material should be handled according to local regulations. Burning is permitted in approved industrial incinerators.

**9.2.11 Working areas** General dust regulations are applicable.

**9.2.12 Additional remarks** GRAVOSTRAL as received are solid sheets and there would not be any health hazards associated with them.