

# High Pressure LAMINATES

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## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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Product Name:	High Pressure Decorative Laminates, HPL, (Compact and Benchtop Laminates)
Use:	Decorative surfacing of furniture, toilet partition, benchtops, walls, ceilings, floors and doors

## 2. HAZARD IDENTIFICATION

Not classified as hazardous according to ASCC Criteria, Dust from the dry product is classified as a hazardous substance according to the criteria of Work safe Australia.

UN Number:	None Allocated
Hazchem Code:	None Allocated
Packing Group:	None Allocated
Dangerous Goods Class:	None Allocated
Poisons Schedule Number:	None Allocated

## 3. COMPOSITION/INFORMATION OF INGREDIENTS

Ingredient	CAS No.	Content
Decorative Paper	None	<10%
Kraft Paper	None	<70%
Phenol formaldehyde (PF) resin	9003-35-4	<35%
Melamine formaldehyde (MF) resin	9003-08-1	<15%
Plasticisers	None	<5%
Paper Pigments	None	<5%

Note: The above ingredients are bound together under heat and pressure. The process cures the resin, and bonds all the layers of papers to form a flat sheet.

**4. FIRST AID MEASURES**

Swallowed:	Unlikely to occur, Give water to drink. If abdominal discomfort occurs, seek medical attention.
Eye:	Flush with flowing water for at least 15 minutes, and if symptoms persist, seek medical attention.
Skin:	Wash with mild soap and running water. Remove clothing contaminated with laminate dust.
Inhalation:	If inhaled, remove from the contaminated area, Apply artificial respiration if not breathing.
Advice to Doctor	Treat symptomatically

**5. FIRE FIGHTING MEASURES**

Flammability:	These laminates are flammable but difficult to ignite. Fine airborne dust can ignite so avoid a build-up of dust, keep all storage, and work areas well ventilated. Avoid sources of radiant heat and flame; and avoid sparks and sources of ignition in all electrical equipment, including dust extraction equipment. People must not smoke in storage or work areas.
Fire & Explosion:	Dry laminate dust in high concentrations-in-air and at the temperatures > 204°C ( >40g of dust per m <sup>3</sup> of air) may spontaneously explode.. Burning or smouldering laminates or dust can generate carbon dioxide and other pyrolysis products typical of burning organic material, which are irritating to the respiratory tract.
Extinguishing:	Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use water, CO <sub>2</sub> , foam or dry chemical fire extinguishers and avoid breathing smoke from burning or smouldering material. Prevent contamination of drains or waterways.

**6. ACCIDENTAL RELEASE MEASURES**

Spills and Disposal:	Off-cuts, general waste material and protective plastic film should be placed in containers and disposed of at approved landfill sites, or burnt in an approved furnace or incinerator, in accordance with disposal authority guidelines. DO NOT BURN in barbeques, combustion stoves or any open fires in home as irritating gases are emitted. Dust from the laminates should be cleaned up by vacuuming or wet sweeping.
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**7. STORAGE AND HANDLING**

Storage:	The laminates should be stored in well-ventilated areas away from sources of heat, flame or sparks.
Handling:	Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure Standard:	The Work safe Australia Exposure Standards, published in May 1995 are:
Wood base dust:	5 mg/cubic metre time-weighted average (TWA) measured as inspirable particulates. 10 mg/cubic metre short term exposure limit (STEL) It is also listed as a sensitiser
Formaldehyde:	1.0 ppm (1.2 mg/cubic metre) time-weighted average (TWA) 8 hours 2.0 ppm (2.5 mg/cubic metre) short term exposure limit 15 minutes (STEL). It is also listed as a sensitiser. Category 2 carcinogen (probable human carcinogen).
Parafin Wax:	2 mg/cubic metre time-weighted average (TWA). Keep exposures as low as practicable with the aim of maintaining inspirable laminate dust levels below 1.0 mg/cubic metre (TWA).

## Personal Protection:

- Skin Protection: Wear loose, comfortable clothing. Long-sleeved shirts and trousers are recommended to prevent skin irritation. After handling boards, wash with mild soap and water. Do not scratch or rub the skin if it becomes irritated. Wash work clothes regularly and separately from other clothes. Comfortable lightweight leather or equivalent work gloves (AS 2161) should be worn.
- Eye Protection: Dust resistant safety glasses or non-fogging goggles (AS/NZS 1336/1337) should be worn when machining.
- Respiratory Protection: A class P1 or P2 replaceable filter or disposable half face-piece particulates respirator should be worn when machining. Respirators should comply with AS/NZS 1716 and be selected, used and maintained in accordance with AS/NZS 1715.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance: The products are manufactured as high pressure laminates ranging in thickness from 0.5 mm to 30 mm. Compact laminate is essentially thick sheet of HPL and also known as Solid Phenolic". They are made from layers of phenol formaldehyde resin impregnated papers surfaced with decorative papers impregnated with melamine formaldehyde resin that are bonded together under heat and pressure.
- Odour: Newly manufactured laminates and freshly cut surfaces may have a resin odour
- Boiling Point (°C): Not Applicable
- Vapour Pressure: Not Applicable
- Flashpoint: Not Applicable
- Solubility in Water: Negligible
- Melting Point (°C): Not Applicable
- Specific Gravity (water=1) 1.1 – 1.5
- Flammability Limits: Not Applicable
- Autoignition Temperature°C Does not auto ignite in its intact state
- Early Fire Hazard Indices to AS 1530.3
- Ignitability index: 10 – 14
- Spread of flame index: 0 – 8
- Heat evolved index: 2 – 6
- Smoke developed index 2 – 4
- Average Specific Extinction Area for 10mm Compact as per AS/NZS 3837 : 197.4 M2/Kg  
Classified as Group 3 in accordance with specification C1.10 section 4 of BCA.

## 10. STABILITY AND REACTIVITY

- Chemical Stability: Stable under recommended conditions of storage
- Conditions to Avoid: Avoid heat, sparks, open flames and other ignition sources
- Material to Avoid: Incompatible with oxidising agents (eg. nitrates) and acids (eg. hydrochloric acid)
- Hazardous Decomposition Products: May evolve toxic gases (carbon/ nitrogen oxides, ammonia, formaldehyde, hydrocarbons) when heated to decomposition. May also evolve hydrogen cyanide.
- Hazardous Reactions: Polymerization is not expected to occur

## 11. TOXOLOGICAL INFORMATION

### HEALTH HAZARD INFORMATION

Formaldehyde gas may be released under some conditions. However, in well-ventilated storage areas and workplaces, the concentration of formaldehyde is unlikely to exceed the World Health Organisation standard of 0.1 ppm for the general environment and it will be well below the Worksafe Australia occupational Exposure Standard of 1.0 ppm. Laminate dust will be given off from machining the product, and gas and vapour may be produced from heat processing. The known health effects from laminate dust and formaldehyde are as follows:

#### Laminate Dust:

Dust and splinters may cause irritation of the nose and throat, eyes and skin. Some woods may also be sensitisers, and some people may develop allergic dermatitis or asthma. Inhalation of laminate dust may increase the risk of nasal and Para nasal sinus cancer. Laminate dust has been evaluated by the International Agency for Research on Cancer (IARC) as group 1, carcinogenic to humans.

#### Formaldehyde:

Formaldehyde gas and dilute solution of formaldehyde in water are irritating to the nose and throat, eyes and skin. The solutions are also sensitisers and contact dermatitis has been reported. Formaldehyde has been evaluated by the International Agency for Research on Cancer (IARC) as group 2A, probably carcinogenic to humans. The IARC again evaluated formaldehyde in June 2004 and concluded that: "There are adequate data available from humans for an increased risk of nasopharyngeal cancer" and that formaldehyde should now be classified as Group 1, carcinogenic to humans.

Worksafe Australia has listed Formaldehyde as Sensitiser and Category 2 carcinogen (probable human carcinogen) as "those substances for which there is sufficient evidence to provide a strong presumption that human exposure may result in the development of cancer. This evidence is generally based on appropriate long term animal studies, limited epidemiological evidence or other relevant information"

Exposures to laminate dust produced from machining the products, and gas and vapour from heat processing with inadequate ventilation may result in the following health effects:

#### Health Effects:

Acute:

Swallowed: Unlikely to occur but swallowing the dust may result in abdominal discomfort.

Eye: The dust, gas and vapour may be irritating to the eyes causing discomfort and redness.

Skin: The dust, gas and vapour may irritate the skin, resulting in itching and occasionally a red rash.

Inhalation: The dust, gas and vapour may irritate the nose, throat and lungs, especially in people with upper respiratory tract or chest complaints such as asthma. Inhalation of airborne particles from other sources in the work environment, including those from cigarette smoke, may increase the risk of contracting the lung disease associated with exposure to dust from this product. Borg manufacturing thus recommends that all work and storage areas be well ventilated, smoke free zones and other airborne contaminants be kept to a minimum.

Chronic: Repeated exposure over many years to uncontrolled laminate dust may increase the risk of nasal cavity cancer. Inhalation of laminate dust may also increase the risk of lung fibrosis (scarring). There are also increased risks of respiratory and skin sensitisation from laminate dust and formaldehyde resulting in asthma and dermatitis respectively. But if the work practices noted in this SDS are followed and exposure to airborne dust are kept to a minimum, no chronic health effects are anticipated.

**12. ECOLOGICAL INFORMATION**

Environment: Limited ecotoxicity data was available for this product at the time this report was prepared. Ensure appropriate measures are taken to prevent this product from entering the environment.

**13. DISPOSAL CONSIDERATIONS**

Waste Disposal: Reuse where possible. Not regulated as a hazardous waste by Australian environmental authorities. Off-cuts and general waste material should be placed in containers and disposed of at approved landfill sites or burnt in an approved furnace or incinerator in accordance with disposal authority guidelines. Do not burn in barbecues, combustion stoves or open fires in the home as irritating gases may be evolved.

Legislation: Dispose of in accordance with relevant local legislation.

**14. TRANSPORT INFORMATION**

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

No special transport requirements are considered necessary.

**15. REGULATORY INFORMATION**

Poison Schedule: A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

AICS: All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

**16. OTHER INFORMATION**

Respirators: In general, the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn, ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

Combustible - Explosive  
Carbonaceous Dust: Carbonaceous/organic dusts have the potential, with dispersion, to present an explosion hazard if an ignition source exists. All equipment used to handle, transfer or store this product MUST BE cleaned thoroughly prior to cutting, welding, drilling or exposure to any other form of heat or ignition sources. If bulk stored, containers should be ventilated on a routine basis to avoid vapour accumulation (where applicable, eg for flocculants).

Abbreviations: HPL: High Pressure Laminate  
CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds. CNS - Central Nervous System.  
IARC - International Agency for Research on cancer.  
M - moles per litre, a unit of concentration.  
mg/m<sup>3</sup> - Milligrams per cubic metre.  
ppm - Parts Per Million.  
TWA/ES - Time Weighted Average or Exposure Standard.

Health Effects from Exposure: It should be noted that the effects from exposure to this product would depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that, it is impractical to prepare a Chem Alert report, which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Personal Protective Equipment Guidelines: The recommendation for protective equipment contained within this Chem Alert report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

**CONTACT:**

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