

GRÀCIA

by JM Massana - JM tremoleda & E Juanola
Sustainability (1/3)

m114

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AIM

This document provides information deemed relevant from the point of view of the environment, human health and toxicity. The aim of this self-declaration is merely to provide information and justification that this product is environmentally preferable over other similar products on the market.

ENVIRONMENTAL VALUES

Chair made from beech and oak plywood, curved and varnished, with a steel frame, finished in chrome. Zinc-plated screws. The pieces used to attach the feet to the seat are made from Polyamide 6 and thermoplastic Polyurethane.

Optional HPL (High Pressure Laminate) writing table made from wood subproducts (cellulose) and thermosetting resin.

1. Both the steel, wood and polymers can be recovered via recycling.
2. The frame can be separated from the seat, making it easy to maintain or repair and to separate waste.
3. The adhesive used for the plywood is Resin Urea Formaldehyde in powder form and water-soluble.
4. The company supplying the beech wood used has a PEFC Chain of Custody certificate, ref. FCBA/03-00208 (controlled felling of wood of 100% French origin).
5. The optional cushion is made from solid polyurethane attached to the wooden seat using cyanoacrylate. This cyanoacrylate has been polymerised and is therefore chemically inert and not dangerous. It is classed as a solid chemical substance, non-toxic and not water soluble. An allergic reaction is not deemed possible. Although certain considerations must be followed when disposing of this product: (EWC): 08 04 09 Waste adhesives and sealants containing organic solvents or other dangerous substances; 08 04 06 In small quantities can be disposed of in the general waste. Before they are catalysed, cyanoacrylates can irritate the eyes, skin and respiratory system when applied in liquid form. The supplier of this adhesive is certified as complying with the REACH regulation.

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6. Polyurethane basically comprises urethanes and isocyanates, toxic in liquid form or as particles when inhaled. But solid polyurethane with its external skin, once catalysed and fully reacted after its injection process, becomes chemically inert. The Spanish Health Ministry has only established exposure limits for isocyanates in liquid form. This product is therefore not deemed dangerous. Nor is a purge required of toxic products deemed dangerous. In any case, urethane appears on the European Union's harmonised classification of 1st and 2nd category carcinogens and mutagens, as per Royal Decree 363/1995. Regarding the workplace and according to the Spanish Ministry of Health, polyurethane incurs the risk of chronic pulmonary disease and, according to some studies, carcinogenic risk in the workplace when manufacturing this preparation, in this case the place where the Gràcia chair is manufactured.
7. The decomposition of polyurethane can produce isocyanates, carbon monoxide, nitrogen oxides and hydrogen cyanide. In the case of combustion, firefighters must use self-contained breathing apparatus in enclosed spaces. Polyurethane polymer dust may irritate the eyes and lungs. Suitable hygiene controls and personal protective equipment (PPE), as well as gloves, dust masks, breathing apparatus, mechanical ventilation and protective clothing and goggles must be used.
8. Should polyamide burn, without a flame or incompletely, toxic mixes of gases are released that mainly contain CO, CO₂ and nitrogen oxides. The following is also produced: amines, nitriles, aliphatics and aromatic hydrocarbons, aldehydes, ketones, acids, ammonia and hydrogen cyanide. Take suitable protective measures, such as using an independent breathing system.
9. Formaldehyde may cause allergic reactions. Formaldehyde may cause irritation to the eyes, nose and throat after exposure between ranges of 0.3 and 3.6mg/m³. Possible association between exposure to formaldehyde and cancer according to several studies. This depends on the period of exposure and the concentration of the compound present at the time of exposure. The main risk is through inhalation and ingestion. As per CEPA 1999, it is classed as a toxic preparation in paragraphs b and c. (Information from the Canadian Environmental Protection Act, 1999).
10. HPL can be re-used as energy by burning. It has a very low formaldehyde content (below the admissible limit of <0.4 mg/h m²), and is composed of wood subproducts. It's suitable for use with foods.
HPL board is almost fireproof (class F2) but can burn at very high temperatures. Its ashes are not toxic.
11. Complies with REACH - Regulation (EC) No. 1907/2006 of the European Parliament and of the Council, of 18 December 2006, due to the following: Mobles 114 declares that it maintains a correct channel of communication with its suppliers and that GRÀCIA products do not contain raw materials that need to be registered, they do not contain any substances on the SVHC list (Substances of Very High Concern) published by ECHA (European Chemical Agency) in the quantities specified (the annual manufacture of GRÀCIA products does not produce more than 1 tonne of these substances of very high concern). For all these reasons, GRÀCIA products are deemed to comply with the requirements of the REACH regulation. The frame has been finished in chrome and therefore contains chrome and nickel, fixated and therefore stabilised or chemically inert. Restrictions regarding the production, sale and use of these substances only apply in the case of direct and prolonged contact with the

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user's skin. The screws have been electroplated with zinc, contain chromium VI, fixated and therefore stabilised or chemically inert. Restrictions regarding the production, sale and use of this substance only apply in the case of direct and prolonged contact with the user's skin. Cyanoacrylates can irritate the eyes, skin and respiratory system when in liquid form; i.e. only at the time they are produced or applied. They may induce sensitivity via inhalation.

12. The polyurethane complies with Directive 95/28/EC relating to the burning behaviour of materials and U.T.A.C. ST 18-502/1 - 1985 type A.
13. The supplier of injected polyurethane has CGM-00/120 certification for Environmental Management.
14. The company making the chrome for the stool ring has been declared Environmentally Suitable (Decree 50/2005).
15. The manufacturer of the HPL board has ISO 14001 certification for its waste management system.