



NEW GPP HANDBOOK

(2 to 4 June 1998). Outside Europe they shall at least correspond to the UNCED Forest Principles (Rio de Janeiro, June 1992) and, where applicable, to the criteria or guidelines for sustainable forest management as adopted under the respective international and regional initiatives (ITTO, Montreal Process, Tarapoto Process, UNEP/FAO Dry-Zone Africa Initiative).

Verification:

Certificates of chain of custody for the wood fibres certified as FSC22, PEFC23 or any other equivalent means of proof, will be accepted as proof of compliance.

Any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from a recognised body will also be accepted.

Reference European Commission GPP Training Toolkit – Module 3

FURNITURE

Environmental Aspects Natural resources consumption, use of chemical substances.

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Description Indoor furniture: furniture for business purposes, e.g. offices and schools, as well as for domestic purposes. It includes all free-standing or built-in furniture units, which are used for storing, hanging, lying, sitting, working and eating.
Outdoor furniture: includes mainly benches, tables and chairs, excluding other products, whose primary purpose is not to function as furniture (such as streetlights, bike-parks, playgrounds, etc.).

Criteria **Subject matter**

Purchase of furniture produced with environmentally friendly materials and processes.

Wood and wood-based materials

All wood and wood-based materials shall come from legally sourced timber.

Verification: Certificates of chain of custody for the wood certified as FSC9, PEFC10 or any other equivalent means of proof will be accepted as proof of compliance. The legal origin of wood can also be demonstrated with a tracing system being in place. These voluntary systems may be 3rd party certified, often as part of ISO 9000 and/or ISO 14000 or EMAS management system. If wood stems from a country that has signed a Voluntary Partnership Agreement (VPA) with the EU, the FLEGT licence may serve as proof of legality¹¹. For the non-certified wood bidders shall indicate the types (species), quantities and origins of the wood used in production, together with a declaration of their legality. As such the wood shall be able to be traced throughout the whole production chain from the forest to the product. In specific cases, where the evidence provided is not considered sufficient to prove compliance with the requested technical specifications, contracting authorities may ask suppliers for further clarifications or proof.

At least 30% of the solid wood or wood-based materials used shall come from forests that are verified as being managed so as to implement the principles and measures aimed at ensuring sustainable forest management, on the condition that these criteria characterize and are relevant for the products.

In Europe, these principles and measures shall at least correspond to those of the Pan-European Operational Level Guidelines for Sustainable Forest Management, as endorsed by the Lisbon Ministerial Conference on the Protection of Forests in Europe (to 4 June 1998). Outside Europe they shall at least correspond to the UNCED Forest Principles (Rio de Janeiro, June 1992) and, where applicable, to the criteria or guidelines for sustainable forest management as adopted under the respective international and regional initiatives (ITTO, Montreal Process, Tarapoto Process, UNEP/FAO Dry-Zone Africa Initiative).

Verification: Certificates of chain of custody for the wood fibres certified as FSC15, PEFC16 or any other equivalent means of proof will be accepted as proof of compliance. Any other appropriate means of proof, such as a technical dossier of the manufacturer will also be accepted.

Preservatives (only for outdoor furniture)

Wood classified with a durability class of 1 or 2 according to EN 350-or equivalent must not have been treated with preservatives.

Wood not classified with a durability class of or according to EN 350-or equivalent, must not have been treated with substances classified according to Directive 1999/45/EC as carcinogenic (R40, R45, R49), harmful to the reproductive system (R60, R61, R62, R63), mutagenic (R46, R68) or allergenic when inhaled (R42).

The active substances in preservatives must not be based on arsenic, chrome or organic tin compounds.

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Verification:

Bidders must present the durability classification of the timber products together with a list of the preservation substances used for each material present in the furniture and their Safety Data Sheet or equivalent documentation demonstrating compliance with the above criteria. Products carrying the Nordic Swan ecolabel will be deemed to comply.

Plastic parts

All plastic parts \geq 50g shall be marked for recycling according to ISO 11469 or equivalent and must not contain additions of other materials that may hinder their recycling

Verification:

Bidders must provide a description of the plastic materials that are present and the quantities used, the way in which they are labelled and how they are attached to one another or to other materials. Products carrying the Nordic Swan ecolabel will be deemed to comply.

Surface coating of wood, plastic and/or metal parts

The products used for surface coating shall:

- Not contain hazardous substances that are classified according to Directive 1999/45/EC as carcinogenic (R40, R45, R49), harmful to the reproductive system (R60, R61, R62, R63), mutagenic (R46, R68), toxic (R23, R24, R25, R26, R27, R28, R51), allergenic when inhaled (R42) or harmful to the environment (R50, R50/53, R51/53, R52, R52/53, R53), cause heritable genetic damage (R46), danger of serious damage to health by prolonged exposure (R48), possible risks of irreversible effects (R68).

For phthalates: No use is allowed of phthalates that at the time of application fulfil the classification criteria of any of the following risk phrases (or combinations thereof):

R60, R61, R62, in accordance with Directive 67/548/EEC and its amendments.

- Not contain aziridine
- Not contain Chromium (VI) compounds
- Not contain more than 5% by weight of volatile organic compounds (VOCs).

Verification:

Bidders must present a list with all surface treatment substances used for each material present in the furniture and their Security Data Sheet or equivalent documentation demonstrating compliance with the above criteria. Furniture carrying the Nordic Swan ecolabel (if they comply with the criteria R17 of the Ecolabel) will be deemed to comply.

Adhesives and glues

The VOC content of adhesives used in the assembly of furniture shall not exceed 10% by weight.

Verification:

Bidders must present a list with all adhesives used in the assembly of furniture and their Security Data Sheet or equivalent documentation where the amount of VOCs is displayed demonstrating compliance with the above criteria. Furniture carrying the Nordic Swan ecolabel will be deemed to comply.

Polyurethane foams

The blowing agents of polyurethane foams (PUR-foams) must not be CFC, HCFC, HFC or methylene chloride.

Verification:

Bidders must present a declaration by the foam manufacturer of compliance with this criterion.

Packaging materials

Packaging must consist of readily recycled material, and/or materials taken from renewable resources, or be a multi-use system.

All packaging materials shall be easily separable by hand into recyclable parts consisting of one material (e.g. cardboard, paper, plastic, textile).

Verification:

Bidders must provide appropriate documentation to demonstrate compliance with these standards.

Durability, reparability, fitness for use and ergonomics

Furniture must meet [insert relevant national/international quality standards] or equivalent regarding serviceability (e.g. safety, abrasion resistance, tensile strength, light fastness, rub fastness, deformation by compression, ergonomics).

Verification:

Bidders must provide appropriate documentation to demonstrate compliance with these standards.

Reference | [European Commission GPP Training Toolkit – Module 3](#)

23	OFFICE AND SCHOOL FURNITURE
Description	Furniture for offices and schools including: chairs, desks, tables and armchairs.
Criteria	<p>Raw Materials Require a certificate on the origin of the wood.</p> <p>Production process In the production process CFC must not be used in the foams constituting the finished product. Wastes that contain more than 5% of organic compounds (glue, solvents, etc.) must be treated and disposed of in authorised sites. In the final product Cadmium, Chrome VI, Mercury, Lead, Arsenic must be absent. R must be <4; where R corresponds to: quantity of solvents in the finished product + quantity of solvents from dilution and cleaning – quantity of solvents recycled or captured and incinerated (expressed in kg/dry extract deposited). Wastewater from surface treatment of metals must comply with the regulation and in any case the sum of the heavy metals (Zn + Cu + Ni + Al + Fe + Cr + Cd + Pb + Sn) in the non deposited wastewater must be <15 mg/l with element specific thresholds. The energy necessary for the transformation of raw materials must not exceed 800 Mjoules. Chipboards treated with formaldehyde must belong to category 1, according to European Norm 312a/97. Panels containing the polymer diphenyl methane 4,4 isocyanate must not present measurable fragments of the monomer.</p> <p>Packaging Packaging must be made of easily recyclable materials and/or from renewable resources. Require plans for the management of packaging in the phases of: product planning, transport, and recollection after delivery.</p> <p>General The single parts constituting the piece of furniture and spare parts, for at least 5 years from the end of production, must be made available. Parts weighting more than 50 g must be separable in order to facilitate a correct disposal at the end of the useful life of the product. In pieces weighting more than 50 g plastic parts must be permanently labelled as well as in pieces weighting less than 50 g but with a total mass >10% of the entire product. Together with the product must be supplied information on correct disposal and recycling of the product.</p>
Reference	NF Environnement
24	OFFICE FURNITURE AND PANEL SYSTEMS
Description	New office furniture and panel systems; and remanufactured office furniture and panel systems.
Criteria	<p>The product must meet or exceed all applicable governmental and industrial safety and performance standards. The product must be accompanied by readily available information that actively promotes to the customer the option of remanufacturing once the product has served its end-use. Customers may be informed of remanufacturing options by means such as: sales literature, product catalogues, tagging of product, packaging inserts, customer information kits, or electronic media. The product must not emit VOCs which will result in an indoor air concentration of greater than 0.5 mg/m³ when tested in accordance with the ASTM D5116-90 and must not emit formaldehyde which will result in an indoor air concentration of greater than 0.5 mg/m³, when tested in accordance with ASTM D5116-90. It must be manufactured in such a manner that liquid surface coatings are stored in controlled storage areas and not contain or be manufactured with plastic foam that is manufactured or formulated using CFCs or HCFCs. The product must include stamps on all new rigid major moulded plastic components with an unexposed surface area large enough to incorporate a legible code, indicating the composition code to facilitate future recycling efforts. These stamps must be added as new furniture parts are designed or old equipment is replaced. For example, the stamps must be added to all new dies, moulds, and extrusion equipment used for plastic manufacturing. If incorporating new wood components, the product must be manufactured only from woods, either in solid or veneer form, that have been harvested or traded in accordance with the Convention on International Trade in Endangered Species (CITES), where applicable. Products must be manufactured at a facility that has carried out a solid waste audit, prepared a waste reduction action plan, and instituted a means to track progress towards waste reduction and diversion from disposal of materials such as metals, plastics, fabrics, wood, leather, fibreglass, and glass. This requirement applies to the manufacturing process waste as a</p>

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	<p>minimum.</p> <p>The product must be accompanied by information describing procedures for repairing or replacing worn parts and for ordering replacement parts and, indicating where parts and service may be obtained following the discontinuation of the product line. This information may be provided in the form of sales literature, product catalogues, tagging of product, packaging inserts, customer information kits, or electronic media.</p> <p>Remanufactured office furniture and panel systems must:</p> <ol style="list-style-type: none"> be completely upgraded to an "as new" condition, by undergoing the following steps: inspection of components; disassembling, where necessary, of components to their original elements; repair or replacement, where necessary, of damaged pieces; and re-upholstery and repainting as required; where electrical components are incorporated, be manufactured in such a manner that all used electrical wiring, wiring harnesses, plug adaptors, outlets, and power entries are removed and replaced with new electrical components.
Reference	Environmental Choice Canada
25	TABLES, DESKS, CHAIRS
Criteria	<p>Raw materials</p> <p>Varnishes and glues used on the product must contain small amounts of organic solvents. In the case of wood water-based varnishes and UV-hardened varnishes can be used. To reduce the use of varnishes and glues containing organic solvents it is possible to request products with surfaces covered with materials not containing organic solvents.</p> <p>Metal components can be painted using either water-based paint or powder paint.</p> <p>A percentage in weigh of the final product must be produced using materials form recycling or reuse.</p> <p>Production process</p> <p>If organic solvents have to be used, the producer has to demonstrate that varnishes and glues are recycled.</p> <p>The producer must have an environmental management system.</p> <p>Durability</p> <p>The producer must supply product instruction for maintenance and cleaning recommending the use of lower environmental impact products and practices. It should be possible to repair the product and spare parts should be made available. Different materials constituting the product should be separable in order to facilitate recycling and proper disposal.</p>
Reference	Danish EPA Guidelines
26	WOODEN OUTDOOR FURNITURE
Description	<p>Outdoor furniture consisting of at least 90% wood by weight. Included are wooden chairs, tables, armchairs, benches and sofas. Are not included playground equipment, hammocks, fixed benches or flower boxes, or outdoor furniture with any kind of padding or textiles.</p>
Criteria	<p>Requirements on timber</p> <p>Timber may only be treated with wood preservatives (fungicides or insecticides) approved for this type of use in Denmark, Finland, Iceland, Norway or Sweden. The use of preservatives not approved in these States in any phase of the manufacturing process is not admitted.</p> <p>All timber furniture constituents must consist of certified timber from sustainable forestry, certification is to be conducted by a neutral third party. The following standards are currently known: Swedish FSC-standard (Forest Stewardship Council standard) (1998), Levende Skogs standard for bærekraftig skogsbruk i Norge (Norway) (1998), SMS 1001 Application of certification scheme at alternative implementation levels, SMS 1002-1 (Finland) (1997).</p> <p>Requirements on timber in wood-based board</p> <p>At least 5% of the constituent timber taken on an annual basis must be based on raw wood material certified by a third party in accordance with a valid forestry standard, or at least 50% by weight of the raw wood material in the board must be sawdust, plane shavings and/or waste timber from sawing and/or recycled fibre.</p> <p>Requirements on chemical products in wood-based board</p> <p>Chemical products in wood-based board must not be classified as carcinogenic, teratogenic, toxic, allergenic, or as being harmful to the reproduction system, in Denmark, Finland, Iceland, Norway or Sweden. The maximum permitted content of free formaldehyde is 0.3% by weight. The free formaldehyde content of adhesive for plywood and glue-laminated wood board may be up to 0.5% by weight. Halogenated organic binding agents, halogenated organic flame-retardants, polychlorinated</p>

biphenyls, alkyl phenols, phthalates, aziridine and polyaziridines may not be added to the chemical product. Pigments and additives based on lead, tin, cadmium, chromium VI, mercury and their compounds may not be added to the chemical product. The aromatic solvent content may not exceed 1% by weight. The content of alkyl phenol ethoxylates or other alkyl phenol derivatives in the chemical product may not exceed 0.6% by weight. Alkyl phenol derivatives are defined as substances that produce alkyl phenols during decomposition.

The total amount of constituent chemical substances classified as environmentally hazardous according to the relevant regulations in Denmark, Finland, Iceland, Norway or Sweden, or according to the EU directive 67/548/EEC with specific conditions must be < 0.5 g/kg of board. The requirement applies to the chemical composition of the chemical products at the point they are added to the board product.

Other requirements on chemical products in wood-based board

Solvents used in the cleaning of production equipment may not contain halogenated hydrocarbons, alkyl phenol ethoxylates or > 1 % by weight of aromatic compounds.

Requirements on energy consumption, emissions and recycled material in wood based board

The total consumption of electrical energy, total consumption of energy from other sources, and the proportion of recycled material in the product must be assessed according to the requirements shown in the table below. The board producer should calculate total consumption of electrical energy and total consumption of energy from other sources for board production, and use the values as a basis from which to calculate the points rating.

Parameter	Limit values (kWh/Kg)	Points rating (P)			
		1	2	3	4
Consumption of electrical energy (kWh/kg)	1.4	(0-0.35)	(0.35-0.70)	(0.70-1.05)	(1.05-1.4)
Consumption of energy from other sources (kWh/kg)	3	(0-0.75)	(0.75-1.5)	(1.5-2.25)	(2.25-3.0)
Proportion recycled material (%)		(100-75)	(75-50)	(50-25)	(25-0)
Requirement for plywood	P≤9				
Requirement for other types of board	P≤7				

The board producer must supply the following documentation:

Energy consumption in kWh/kg of board, to include primary board production and production of any principal constituent raw materials. Principal raw materials refer to any material making up > 5% by weight of the finished board. Energy consumed in the acquisition of the raw materials should not be included in the calculation, for board production, the energy calculation should be based on data from the point the raw materials enter the firm, until the finished product, before any surface treatment.

Requirements on emissions into the air in the production of wood-based board

Emissions of CO₂ < 0.6 kg/kg of board.

Emissions of SO₂ < 0.5 g/kg of board.

Emission values must encompass primary board production as well as production of the relevant principal constituent raw materials. Principal raw materials refer to any material making up > 5% by weight of the finished board. Emissions from the acquisition of the raw materials should not be included in the calculation.

Requirements on emissions to water in the production of wood-based board

COD emission to water must be <20 g COD/kg of product (unfiltered sample).

Requirements on metals

Metals must not be coated with cadmium or compounds containing cadmium.

Requirements on plastic

The outdoor furniture must not contain chlorinated plastic material.

Plastic parts weighing more than 50 g must be marked for recycling in accordance with ISO 11469 or an equivalent standard.

The plastic parts must not contain other materials that may interfere with the recyclability of the plastic material.

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Requirements on Wood Preservatives - surface treatment and impregnation

The requirements apply to chemical products with their composition at the point at which they are added to the outdoor furniture product.

Any chemical surface treatment and impregnation products used in the outdoor furniture must not be classified (on inhalation) as carcinogenic, teratogenic or allergenic, or as being harmful to the reproduction system according to the EU classification system directive 67/548/EEC with specific conditions and changes.

Organic chlorine compounds, halogenated organic binding agents, halogenated organic flame retardants, phthalates, aziridine and polyaziridines and creosote, along with pigments and additives based on arsenic, lead, boron, tin, cadmium, copper, chromium, mercury and their compounds may not be added to the chemical product. The aromatic solvent content may not exceed 1% by weight. Agents used for impregnation may contain a maximum of 2% by weight of substances that fulfil the criteria for environmental harmfulness according to the EU classification system directive 67/548/EEC with specific conditions and changes.

Impregnation agents may contain a maximum of 5% by weight of organic solvent.

Impregnation of Classes M and A (Nordiska Träskyddsrådet's (Nordic wood preservatives council) classification system) is not permitted. (Class M corresponds to Class P8/H5, and Class A to Class P8/H5 according to European standards EN 335 and EN 351.)

The outdoor furniture producer must have a system for controlling the quantity of wood preservative entering the outdoor furniture on impregnation.

One of the following two requirements must be met for surface treatment:

- agents used for surface treatment may contain a maximum of 3% by weight multiplied by the efficiency (see appendix 3 of the criteria), of substances that fulfil the criteria for environmental harmfulness according to the EU classification system directive 67/548/EEC with specific conditions and changes. Surface treatment agents may contain a maximum of 7% by weight multiplied by the efficiency, of organic solvents;
- outdoor furniture may be treated with a maximum of 5 g/m² of substances that fulfil the criteria for environmental harmfulness according to the EU classification system (directive 67/548/EEC with specific conditions and changes). The amount of organic solvent added in surface treatment must not exceed 12 g/m² of surface.

Specific requirements on maintenance products

The following requirements apply to maintenance products, which the manufacturer/supplier should recommend. The manufacturer must specify the recommended product's trade name.

Products recommended for use in maintaining the outdoor furniture may contain a maximum of 2% by weight of substances that fulfil the criteria for environmental harmfulness according to the EU classification system directive 67/548/EEC with specific conditions and changes.

Biocides contained in maintenance products must not be bioaccumulative, surface treatment agents may contain a maximum of 5% by weight of organic solvents.

Halogenated organic compounds, halogenated organic flame retardants, phthalates, aziridine and polyaziridines, along with pigments and additives based on lead, tin, cadmium, chromium VI, mercury and their compounds may not be added to the chemical product.

Requirements on adhesives

Adhesive may contain a maximum of 5% by weight of organic solvent. Halogenated organic compounds, halogenated organic flame retardants, phthalates, aziridine and polyaziridines, along with pigments and additives based on lead, tin, cadmium, chromium VI, mercury and their compounds may not be added to the adhesive.

Usage properties

Any wooden part of the outdoor furniture that comes into contact with the ground must be protected in such a way as to ensure that no water is absorbed by the wood. Any metal parts used in the outdoor furniture must not contain material that can rust or discolour the furniture.

Consumer information

The manufacturer/supplier of the outdoor furniture must inform the consumer as to the best way to use, maintain and store the outdoor furniture.

The outdoor furniture must be supplied with written instructions (to the consumer), clearly indicating: The area of use/end user the outdoor furniture is intended for, how the outdoor furniture should be stored during the time of year it is not used (the winter season), the maintenance practices, how the outdoor furniture should be dealt with at the end of its useful life.

	<p>Packaging Chlorinated plastics may not be used.</p> <p>Waste management during production Wood-based waste produced during the production of the outdoor furniture must be recycled. Recycling refers to re-use in a new product, energy recovery and composting. Wood-based waste containing biocides must be handled in the way stipulated by the national authorities in the country where the outdoor furniture is produced.</p>
<p>Reference</p>	<p>Nordic Swan</p>
<p>27 Description</p>	<p>PANEL BOARDS</p> <p>Panel board products, generally for indoor use as well as use in further processed products such as furniture. Some of the materials specifically addressed in this standard are: timber; gypsum and other minerals; plastics; glasses (excluding fibreglass products); aluminium; steel; engineered wood and natural fibre products. Exterior siding or cladding, or materials with a structural function in buildings is not covered.</p>
<p>Criteria</p>	<p>Materials Wood The following requirements apply for each type of material contained in the finished product. The geographical origin of pre-consumer recycled and virgin fibre material must be documented, allowing confirmation of origin throughout the supply chain. Fibre may be sourced from any combination certified fibre, plantation wood fibre, cellulose fibre, return fibre, cotton fibre, crop residue or other waste fibre. Any sources that are not certified under a recognised certification scheme (e.g. FSC) as being sustainably managed shall not originate from: Illegally harvested wood and natural materials are those that are harvested, traded or transported in a way that is in breach with applicable national regulations (such regulations can for example address CITES species, money laundering, corruption and bribery, and other relevant national regulations); Wood and natural materials from genetically modified organisms are those which have been induced by various means to include genetic structural changes (for a definition of genetically modified, refer to the European Union Directive 2001/18/EC), traditional breeding programs do not constitute genetic modification; Uncertified high conservation value habitat communities. Uncertified high conservation value habitat are those that possess one or more of the following attributes: communities containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia); and/or large landscape level communities, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance; Communities that are in [constitute] or contain rare, threatened or endangered ecosystem; communities fundamental to meeting basic needs of locally indigenous human populations (e.g. subsistence, health) and/or critical to these people's traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).</p> <p>Salvaged & Reclaimed Timbers Salvaged or reclaimed timbers may be used in certified panel boards. Salvaged and reclaimed timbers include timbers legally sourced as pre-cut waste timber or deadwood from cityscape, urban and rural gardens, demolition sites, and waste wood from certified tree loppers / doctors.</p> <p>Treatment Wood and natural materials used in panel board products must not be treated or impregnated with fungicides and insecticides that are classified due to their hazardous nature by the IARC as Type 1 or 2a. Wood preservatives must not contain more than 5 % organic solvents by weight, unless the solvent polymerises or adsorbs to the wood and the product has zero solvent emissions. Creosote must not be used as a wood or fibre preservative. Panel boards that are intended for products that may also be used outdoors (e.g., versatile furniture) use must not contain more than 0.1 % by weight of any substance carrying the following risk phrases: R50, R51, R52, R53, R56, R58. It is accepted that recycled fibre may have been treated with the above substances during their previous lifecycles. Glues in Plywood and Other Engineered Wood Products The content of free formaldehyde in glues for plywood, other engineered wood products or other natural material panels or products must not exceed 1.0 % w/w.</p> <p>Emissions Requirements Products made from wood and other natural products that contain formaldehyde-based additives, shall be subject to the</p>

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following air emission limits for formaldehyde as measured using the standard test methods outlined below. Raw timber and natural materials are exempt from this criterion.

Test Method	Limit Value
EN 120 for Particle and MDF boards for plywood	< 9 mg / (100g) < 6 mg / (100g)
DIN EN 717-1	< 0.12 mg / m ³
DIN EN 717-2 not applicable to MDF	< 3.5 mg / m ² h

Paper Processing

Paper must not be bleached with any compounds containing or giving rise to elemental chlorine during the manufacturing process. This includes the in-situ generation of chlorine from chloride.

Where surfactants are used in the paper manufacturing process, these surfactants must be readily biodegradable in accordance with the Organisation for Economic Cooperation and Development (OECD) guidelines for the testing of chemicals. Exceptions may be made for laminating paper.

Plastics

Products must mark each individual plastic product or component weighing greater than 100g with an appropriate resin identification code.

Additives

a. CFC, HCFC, HFC, Methylene chloride or other halogenated organic solvents shall not be used in the production of any plastic or foam. Methylene chloride may be used in the cleaning of production equipment if the manufacturer has in place a contract with a licensed and registered hazardous waste disposal company responsible for the correct disposal of the hazardous waste, and can demonstrate measures to minimise use and emissions (including evaporation) of the solvent. Manufacturers making use of this exemption must undertake not to procure new equipment that requires the use of methylene chloride.

It is accepted that recycled content may have been treated or produced with the above substances during their previous lifecycle. This exception does not apply to the following substances in this section.

b. Aniline based amines, and pigments, catalysts or stabilisers containing mercury, lead, cadmium, tin or chromium must not be added to any plastic component. Organic tin catalysts may be used in the production of flexible polyurethane if the manufacturer has in place a contract with a licensed and registered hazardous waste disposal company responsible for the correct disposal of the hazardous waste.

c. If 1,3 butadiene is used in latex, rubber or foams its concentration shall be less than 1 mg / kg.

d. The total discharges to waste water (measured as COD or TOC) from the production of foam rubber shall be treated and decreased by 90% in on-site or external sewage treatment works prior to emissions into waterways.

Glass

Lead glazing, crystal glass, mirror glass, wire reinforced glass or laminated glass must not be used in panel boards. Colouring agents or other additives containing lead, cadmium, mercury, chromium, arsenic or selenium must not be used.

Metals and Alloys

Coatings applied to metals or alloys must not contain cadmium, nickel, tin or chromium. In exceptional cases, surfaces may be treated with chromium or nickel where this is necessary on the grounds of heavy physical wear or in the case of parts that require particularly tight connections. This exemption will not be granted to parts that are intended to come into frequent contact with skin.

Coatings applied to metals or alloys must not prevent recycling at the end of the normal life of the product. Metal fittings such as screws and bolts are exempt from this requirement where the coating serves to protect the product from staining due to corrosion.

Gypsum plasterboard shall not be formulated or manufactured with phosphogypsum.

No product or component may be impregnated, labelled, coated or otherwise treated in a manner which would prevent post consumer recycling. Exemptions may be made for products with a long product life where a coating or treatment would further extend the useful life of the product.

Hazardous Materials

In order to promote the reduction of pollutant hazards in the disposal, landfill and/or incineration of end of life furniture, the

following substances shall not be added to eco-labelled products during manufacture: Arsenic, cadmium, chromium, copper, lead, tin, mercury or antimony, Elemental fluorine or chlorine, Pentachlorophenol (PCP), Tar oils (benzo (α)pyrene). Mercury, arsenic, chromium or cadmium contaminant concentration shall be less than 1 mg/kg. Lead contaminant concentration shall be less than 10 mg/kg.

Prohibited Substances

The following compounds, their functional derivatives or in-situ precursors shall not be added to panel boards or be used at any stage of the manufacturing process, including as preparatory agents, cleaners or degreasers in the production facility: Halogenated organic solvents or binding agents; Fluoropolymer additives; Aniline based amines; The phthalates DEHP, DBP, DAP, BBP, DMP, DMT, DEP, DMEP and DIBP; Aziridine or polyaziridines; Pigments and additives that contain lead, tin, arsenic, cadmium, mercury or their compounds; Polybrominated diphenyl ethers, or short-chain (≤ 13 C) chlorinated organic flame retardants.

Possible Radioactive Sources

This criterion applies to panel boards intended for indoor use that contain greater than 75% by mass: Granites, pegmatites or gypsum; Slag, clinker, or other waste from smelting, or Ash from coal or peat. Radioactive safety may be demonstrated in either of the following ways:

- a. Direct physical measurement
- b. Chemical composition: The finished product must not contain more than:
U 8 mg / kg, Th 15 mg / kg and K 5 % by mass.

Manufacturing Requirements

All aluminium products or parts shall contain at least 35 % recycled content.
Stainless steel comprising greater than 5 % of the total weight of the product shall contain at least 20 % recycled content.
Stainless steel panels must carry a minimum warranty of 40 years.
Plastics comprising greater than 10 % of the weight of the product shall contain at least 50 % by weight recycled content, or at least 50 % by weight polymers based on non-petrochemical derived polyols.
Gypsum or other mineral panels greater than 5% of the weight of the product must contain a minimum of 10% recycled content.
The manufacturer must have effective policies and procedures to minimise waste, including measures to recycle waste materials from the production process.

If the product is not recyclable (or separable into recyclable parts) in mainstream local recycling systems, the manufacturer shall accept their product without additional cost (excluding transportation costs) for further recycling, or have arrangements with a local recycler to accept the product, or have an established product stewardship program that will divert the majority of recovered material from landfill. Exceptions may apply to material contaminated by the user (e.g., medical, nuclear). Normal dust and other environmental accumulations do not qualify for this exemption.

Packaging Requirements

Chlorinated or halogenated plastics must not be used in product packaging.
Used packaging shall be able to be recycled by local recycling systems.

Product Information

The manufacturer must provide written information to the user clearly stating: The intended use of the product; Instructions for correct storage, installation and use so as to maximise the product lifetime; Maintenance instructions, if required; Maintenance instructions must not specify nor require the use of any chemical or coating limited by any part of this standard; Recycling instructions for the product end-of-life.

Reference	The Australian Ecolabel Program
28	WOOD PRODUCTS FOR INDOOR USE
Description	Ready-to-use final products for indoors use (e.g. furniture, interior doors, panels, floorings with painted surfaces, laminate floorings, prefabricated parquet/linoleum), which are mainly made, i.e. for more than 50 per cent, from wood/flower wood powder and/or wood-based materials (chipboards, coreboards, fibreboards, veneer panels, each non-coated or coated). Window frames and semifinished products are non included.
Criteria	<p>Raw Materials</p> <p>Solid wood, laminated wood, veneer and the wood used for the production of plywood shall not be taken from primeval forests (boreal and tropical primary forests).</p> <p>Wood based materials must not exceed in their raw state, i.e. prior to machining or coating, a formaldehyde steady state con-</p>

ECOLOGICAL CRITERIA

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centration of 0.1 ppm in the test chamber.

Coating Systems

Must not include any substances as constituent parts that are classified in Annex I to Directive 67/548/EEC or classified in TRGS 905 as carcinogenic, mutagenic teratogenic.

Liquid Coating Systems

In liquid coating systems the coating materials used must not exceed 250 g/l VOC for plane two-dimensional products/materials and 420 g/l VOC for three-dimensional products.

Indoor Air Quality

For plane two-dimensional products (e.g. interior doors, panels, laminated floorings, prefabricated parquet).

Substance	Initial Value (24 ± 2 h)	Final Value (28th Day)
Formaldehyde	-	0,05 ppm
Organic compounds Boiling point 50-250°	-	300 µg/m ³
Organic compounds Boiling point > 250° C	-	100 µg/m ³
CMT Substances	< 1 µg/m ³	< 1 µg/m ³

FOR THREE DIMENSIONAL PRODUCT

Substance	Initial Value (24 ± 2 h)	Final Value (28th Day)
Formaldehyde	-	0,05 ppm
Organic compounds Boiling point 50-250°	-	600 µg/m ³
Organic compounds Boiling point > 250° C	-	100 µg/m ³
CMT Substances	< 1 µg/m ³	< 1 µg/m ³

CMT Substances = carcinogenic, mutagenic and teratogenic substances

Wearing Parts

For those parts of a product which are subject to wear, e.g. hinges, locks, table leaves, functionally compatible replacements shall be guaranteed for a period of at least five years. This shall not apply to lighting and lighting fixtures.

Recycling and Disposal

With regard to recycling and disposal neither material protection agents (fungicides, insecticides, flame-retardants) nor halogenated organic compounds must be added to the products. Excluded are fungicides exclusively used for pot preservation of aqueous coatings and adhesives or flame retardants using inorganic ammonium phosphates (ammonium hydrogen phosphate, ammonium polyphosphate etc.), boron compounds (boric acid, borates) or other dehydrating minerals (aluminium trihydrate or the like) for flame retarding purposes.

The producer shall provide consumer information about wearing parts and their repair or exchange; about type and origin of the predominant wood; Information about other materials (> 3 weight per cent); Information about assembly or laying of the products; Information about disassembly for moving or later recycling purposes; Information about the product's wearing resistance (fields of use and, if applicable, material test results).

Reference **Blue Angel**

29 WOOD PRODUCTS AND WOOD-BASE PRODUCTS

Description Ready-to-use final products for indoor use (e.g. furniture, interior doors, panels, floorings with painted surfaces, laminate floorings, prefabricated parquet/linoleum) which are mainly made, i.e. for more than 50 per cent, from wood/flower wood powder and/or wood-based materials (chipboards, coreboards, fibreboards, veneer panels, each non-coated or coated). Window frames and semifinished are not included.

Criteria **Origin of the Wood**

Solid wood, laminated wood, veneer and the wood used for the production of plywood shall not be taken from primeval forests (boreal and tropical primary forests). When buying timber the applicant undertakes to take wood from sustainable forestry into account.

Coating Systems

The coating systems must not include any substances as constituent parts which are classified in Annex I to Directive 67/548/EEC and classified as carcinogenic mutagenic teratogenic.

Liquid Coating Systems

In liquid coating systems the coating materials used must not exceed a) 250 g/l VOC for plane two-dimensional products/materials (e.g. interior doors, panels, floorings with painted surfaces, prefabricated parquet) and b) 420 g/l VOC for furniture and other materials/products with three-dimensional surfaces (VOC: volatile organic compound).

This requirement shall be considered fulfilled irrespective of the VOC content of the individual coating material if it is proved that - considering the quantity of the coating material used - the VOC content for the entire coating system of the product under para. 2 does not exceed as a total 250 g/l VOC for products/materials under a) and 420g/l VOC for products/materials under b).

Exempted are painting plants equipped with a waste gas purification plant complying with the EU Directive on Solvents.

Gypsum used for product manufacture must be an industrial residue coming at 100% from flue gas desulphurization plants.

Radioactive radiation of the gypsum: Leningrad Formula

$$\frac{CK}{130pCi/g} + \frac{CRa}{10pCi/g} + \frac{CTh}{7pCi/g} \leq 1$$

The fibre content of paper used for the production must be at 100 per cent (tolerance: 5%) from low-grade, medium-grade and kraft-containing waste paper

Wood chips used in gypsum chipboards must come at 100 per cent (tolerance 5%) from waste timber, small timber or wood residues that have not been treated with wood preservatives.

Reference [Blue Angel](#)

30 PAPERBOARD AND PACKAGING

Description Includes "containerboard" used to make corrugated shipping containers, and "paperboard," used in a wide variety of packaging applications such as folding cartons.

Criteria Recommended Recovered Fibre Content Levels for the different kinds of item

Item	Post consumer Fibre (%)	Recovered Fibre (%)
Corrugated containers (<300 psi)	25-50	25-50
(>300 psi)	25-30	25-30
Solid Fibre Boxes	40	40
Folding Cartons	40-80	100
Industrial paperboard (e.g., tubes, cores, drums, and cans)	45-100	100
Miscellaneous (e.g., pad backs, covered binders, book covers, mailing tubes, protective packaging)	75-100	90-100
Padded mailers	5-15	5-15
Carrierboard	10-15	10-100
Brown papers (e.g., wrapping paper and bags)	5-20	5-40

The recovered fibre and post consumer fibre content is calculated from the content of each component relative to the weight each contributes to the total weight of the box.

Reference [EPA \(USA\)](#)

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31	OFFICE WASTE RECEPTACLES																					
Description	Baskets and receptacles for differentiate or non-differentiated wastes (can be made from recovered paper, plastic, or steel).																					
Criteria	<p>Recommended Recovered Materials Content Levels:</p> <table border="1"> <thead> <tr> <th>Item</th> <th>Post consumer Fibre (%)</th> <th>Recovered Fibre (%)</th> </tr> </thead> <tbody> <tr> <td>Plastic</td> <td>20 - 100</td> <td>--</td> </tr> <tr> <td>Steel</td> <td>16</td> <td>25-30</td> </tr> <tr> <td>Paper</td> <td></td> <td></td> </tr> <tr> <td>Corrugated</td> <td>25-50</td> <td>25-50</td> </tr> <tr> <td>Solid Fibre Boxes</td> <td>40</td> <td>--</td> </tr> <tr> <td>Industrial paperboard</td> <td>40-80</td> <td>100</td> </tr> </tbody> </table> <p>The recommended recovered materials content levels for steel in this table reflect the fact that the designated items are made from steel manufactured in a Basic Oxygen Furnace (BOF). Steel from the BOF process contains 25-30% total recovered materials, of which 16% is postconsumer steel.</p>	Item	Post consumer Fibre (%)	Recovered Fibre (%)	Plastic	20 - 100	--	Steel	16	25-30	Paper			Corrugated	25-50	25-50	Solid Fibre Boxes	40	--	Industrial paperboard	40-80	100
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Reference	EPA (USA)																					
32	WALLPAPER																					
Description	Wallpapers according to DIN 6730 and woodchip wallpapers according to DIN 6730.																					
Criteria	<p>Waste paper content</p> <p>Waste paper is the general term for papers and boards obtained as a result of use or processing. Without taking the incorporated wood fibres into consideration the minimum waste paper content must be: for wallpapers at least 600 kg of waste paper per 1.000 kg of manufactured new paper (weight A.D.), at least 50% of which must consist of waste paper classified as low, medium and kraft-containing waste paper; for woodchip wallpapers at least 800 kg of waste paper per 1000 kg of manufactured new paper (weight: A.D.), at least 40% of which must consist of waste paper classified as low, medium and kraft-containing waste paper.</p> <p>Additives</p> <p>Products must be manufactured without the use of any chemical additives containing glyoxal or formaldehyde as constituent parts or that may separate formaldehyde.</p> <p>The content of releasable formaldehyde in the final product must not exceed 8 mg per 100 g of abs dry wallpaper.</p> <p>Coating substances, dyes, biocides and the following compounds are forbidden:</p> <p>Only those substances may be used as anti-slime or preservation agents for product manufacture which are listed as biocides in Annex II to EC Regulation 1048/20051. Where new (non-listed) substances are used licensing under the Biocides Act shall be required.</p> <p>The following substances must not be used:</p> <table border="1"> <thead> <tr> <th>Name</th> <th>CAS No.</th> </tr> </thead> <tbody> <tr> <td>sodium hexafluorosilicate</td> <td>16893-85-9</td> </tr> <tr> <td>N-(α-(1-nitroethyl)benzyl)-ethylene diamine</td> <td>14762-38-0</td> </tr> <tr> <td>mixture of tris-(hydroxymethyl)-nitromethane,</td> <td>126-11-4</td> </tr> <tr> <td>5-chloro-2-methyl-4-isothiazoline-3-on and</td> <td>26172-55-4</td> </tr> <tr> <td>2-methyl-4-isothiazoline-3-on</td> <td>2682-20-41</td> </tr> <tr> <td>tetramethylthiuran disulphide</td> <td>137-26-8</td> </tr> </tbody> </table> <p>Colorants</p> <p>Azo dyes which may release one of the amines listed in Directive 2002/61/EC must not be used as colorants.</p> <p>4-aminodiphenyl (92-67-1); 4-aminoazobenzene (90-09-3); benzidine (92-87-5); 4-chloro-o-toluidine (95-69-2); 2-naphtylamine (91-59-8); o-aminoazotoluene (97-56-3); 2-amino-4-nitrotoluene (99-55-8); p-chloroaniline 106-47-8); 2,4'-diaminoanisole (615-05-4); 4,4'-diaminodiphenylmethane (101-77-9); 3,3'-dichlorobenzidine (91-94-1); 3,3'-dimethoxybenzidine (119-90-4); 3,3'-dimethylbenzidine (119-93-7); 3,3'-dimethyl - 4,4'diaminodiphenylmethane (838-88-0); p-cresidine (120-71-8); 4,4'-methylenebis-(2-chloroaniline) (101-14-4); 2-methoxyaniline (90-04-0); 4,4'-oxidianiline (101-80-4); 4,4'-thiodianiline (139-65-1); o-toluidine</p>	Name	CAS No.	sodium hexafluorosilicate	16893-85-9	N-(α -(1-nitroethyl)benzyl)-ethylene diamine	14762-38-0	mixture of tris-(hydroxymethyl)-nitromethane,	126-11-4	5-chloro-2-methyl-4-isothiazoline-3-on and	26172-55-4	2-methyl-4-isothiazoline-3-on	2682-20-41	tetramethylthiuran disulphide	137-26-8							
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(95-53-4); 4-methyl-m-phenylenediamine (95-80-7); 2,4,5-trimethylaniline (137-17-7).
 Colorants (i.e. pigments or dyes) containing mercury, lead, cadmium or chromium VI compounds as constituent parts must not be used.
 No colorants, surface refinement agents and coating materials may be used which are classified according to Annex III to Directive 67/548/EEC as R 40, R 45, R 46, R 61, R 63, or which are classified as carcinogenic, mutagenic or teratogenic.
 The processing of waste papers must be done without any chlorine, halogenated bleaching chemicals and hardly biodegradable complexing agents, such as, for example EDTA and DTPA. No optical brighteners may be added for product manufacture and refinement.
 Additional demand for fibres may only be met with primary fibres that are manufactured without the use of any optical brighteners, chlorine and halogenated bleaching chemicals.
 The origin of the timber used for addition of virgin fibres must be verifiable. The timber must originate from forests that are managed in line with the principles of sustainable forest management, as can be demonstrated. The minimum content of virgin fibres from certified forestry companies must be specified in accordance with the Chain of Custody requirements (CoC). According to the Chain of Custody it must not fall below 70 percent of the total virgin fibre content.
Heavy Metals
 The heavy metal concentration must be lower than the following parameters (mg/KG): Lead <=20; Chromium VI <=20; Arsenic<=3; Cadmium<=3; Mercury<=2.

Reference **Blue Angel**

33A MATTRESSES

Criteria Must be accompanied by a ten-year customer warranty excluding normal wear and tear.
 Must use only mattress steel innersprings that have been repaired and heat-treated.
 Must reuse the following minimum percentages of mattress components:
 55% by weight of steel inner springs,
 4% by weight of urethane foam, and
 10% by weight of cotton liners.
 Must direct all waste urethane foam and cotton liners to carpet underlay and paper manufacturers.

Reference **Environmental Choice Canada**

33B MATTRESSES

Description Bed mattresses: products providing a surface to sleep or rest upon, consisting of a strong cloth cover filled with materials, and that can be placed on an existing supporting bed structure.
 The product group includes: latex foam for use in bed mattresses, polyurethane foam for use in bed mattresses, framed sprung mattresses (an upholstered bed base consisting of springs, topped with fillings, on a rigid frame to be used in a bed frame or free standing, combined with a mattress pad which is not intended to be used separately).
 Inflatable mattresses and water mattresses are excluded.

Criteria The following criteria need only be met if **latex foam** contributes to more than 5 % of the total weight of the mattress.
 Concentration of Extractable heavymetals
 Antimony, arsenic, lead, cobalt <0.5 ppm, cadmium <0.1 ppm, nickel and chromium (total) 1.0 ppm, copper 2.0 ppm, mercury 0.02 ppm, VOCs<0.5 mg/m³.
Formaldehyde
 The concentration of formaldehyde shall not exceed 30 ppm as measured with EN ISO 14184-1. Alternatively it shall not exceed 0.01 mg/m³ as measured with the chamber test.
Dyes, pigments, flame retardants
 Shall comply with corresponding criteria laid down in Commission Decision 2002/371/EC of 15 May 2002 establishing the ecological criteria for the award of the Community ecolabel to textile products.
 Metal complex dyes based on copper, lead, chromium or nickel shall not be used.
 No chlorophenol (salts and esters) shall be present in concentrations exceeding 0.1 ppm, except mono- and di-chlorinated phenols (salts and esters) which shall not exceed 1 ppm.
 The concentration of butadiene shall not exceed 1 ppm; the concentration of N-nitrosamines shall not exceed 0.001 mg/m³ as measured with the chamber test.

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The following criteria need only be met if **Polyurethane (PUR)** foam contributes to more than 5% of the total weight of the mattress.

Extractable heavy metals, Formaldehyde Dyes, pigments, flame retardants Volatile organic compounds, Metal complex dyes shall meet the corresponding requirement for latex foam and in addition:

Tin in organic form (tin bonded to a carbon atom) shall not be used.

CFCs, HCFCs, HFCs or methylene chloride shall not be used as blowing agents or as auxiliary blowing agents.

Wire and springs

If decreasing and/or cleaning of wire and/or springs are carried out with organic solvents, use shall be made of a closed cleaning/decreasing system.

The surface of springs shall not be covered with a galvanic metallic layer.

The following criterion need only be met if coconut fibres contribute to more than 5 % of the total weight of the mattress.

If the coconut fibre material is rubberised, it shall comply with the criteria applicable to latex foam.

Wooden material

The formaldehyde measured in any particleboard used shall not exceed 50% of the threshold value that would allow it to be classified as class 1 quality according to EN 312-1. The formaldehyde measured in any fibreboard used shall not exceed 50 % of the threshold value that would allow it to be classified as class A quality according to EN 622-1.

Textiles (fibres and fabric)

All textile fibres and fabrics (except yarn used for sewing) shall comply with all of the relevant criteria laid down in Decision 2002/371/EC (which establishes the ecological criteria for textile products).

Glues

VOC<=10% by weight, Any glues used shall be free of benzene and chlorobenzenes.

Durability

The loss of height shall be less than 20 mm; the loss of firmness shall be less than 20%.

Reference Ecolabel

PAINTS

Environmental Aspects Water quality, use of chemical substances, air emissions.

34 INDOOR PAINTS AND VARNISHES

Description Indoor decorative paints and varnishes, woodstains and related products intended for use by do-it-yourself and professional users and primarily developed for indoor use and marketed as such.

This includes, inter alia, floor coatings and floor paints; products which are tinted by distributors at the request of amateur or professional decorators; tinting systems; decorative paints in liquid or paste formulas which may have been pre-conditioned, tinted or prepared by the manufacturer to meet consumers needs, including primers and undercoats of such product systems.

"Paint" means a pigmented coating material, in liquid or in paste or powder form, which when applied to a substrate, forms an opaque film having protective, decorative or specific technical properties.

"Varnish" means a clear coating material which when applied to a substrate forms a solid transparent film having protective, decorative or specific technical properties.

"Decorative paints and varnishes" means paints and varnishes that are applied to buildings, their trim and fittings, for decorative and protective purposes. They are applied in-situ. While their main function is decorative in nature, they also have a protective role.

"Woodstains" (lasures) means coatings producing a transparent or semi-transparent film for decoration and protection of wood against weathering, which enables maintenance to be carried out easily.

"Tinting systems" is a method of preparing coloured paints by mixing a 'base' with coloured tints.

The product group shall not comprise: (a) anti-corrosion coatings; (b) anti-fouling coatings; (c) wood preservation products; (d) coatings for particular industrial and professional uses, including heavy-duty coatings; (e) facade coatings; (f) any product primarily developed for outdoor use and marketed as such.

Criteria All criteria except criterion 3 concerning VOC limits shall apply to the paint or varnish in its packaging.
Criteria 1 and 2 apply only to white and light-coloured paints (including finishes, primers, undercoats and/or intermediates).