

(version 20090601)

Sustainable Public Procurement-fiche: advanced

1) *Subject matter*

Outdoor furniture that is composed of environmentally friendly materials and produced by environmental processes.

“For <.....> (name of the public authority), the care for the environment and social aspects is important. It is stated in her <strategic policies>, <mission>, <vision>, <procurement policy>, ...”

2) *Exclusion criteria*

Non compliance with environmental and social legislation, which has been the subject of a final judgment or a decision having equivalent effect, may be considered an offence concerning the professional conduct of the economic operator concerned or grave misconduct, permitting to exclude the party concerned from competing for the contract

Ref:

Art. 53 and 54 of Directive 2004/17/EC and Art. 45 of Directive 2004/18/EC

3) *Technical capacity*

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4) *Technical specifications*

a) General

- The VOC content of adhesives used in the assembly of furniture do not exceed 10% by weight [Eu toolkit core criteria]
- It is possible to separate 90% of the parts from metal, wood, plastic and inert materials (stone, glass) from the other materials. It has not to be possible to separate panel materials with plastic or synthetical resin in the different materials.

Wood and wood-based materials

Wood raw materials

- All wood and wood-based materials shall come from legally sourced timber. [Eu toolkit core criteria tech spec]
- If the product contains more than 10% wood by weight: At least 30% of the solid wood or wood-based materials used shall come from sustainably managed forests. [Eu toolkit comprehensive criteria tech spec]



Wood preservation

- Wood must not have been treated after felling with pesticides classified by WHO as type 1A and type 1B (extremely and highly hazardous). The list, the WHO recommended classification of pesticides by hazard, can be found on <http://www.who.int/pcs/>
- If the timber that is used, is naturally durable (durability class 1 or 2 according to EN 350-2), it is not treated with wood preservative.: [Eu toolkit comprehensive criteria]
- Chemical substances used in the wood preservation products are not classified as carcinogenic (R45, R49, R340), toxic for reproduction (R60 to R63), mutagenic (R40, R46) or allergenic by inhalation (R42) according to directive 1999/45/EC. [Eu toolkit comprehensive criteria]
- Chemical products for wood preservation that do not contain biocides are not classified as ecotoxic (R50, R50/R53, R51/R53, R52/R53, R52 or R53) or toxic (R23 to R28).(see annex)
- No active substances of wood preservatives are based on arsenic, chrome, organic tin compounds. [Eu toolkit comprehensive criteria tech spec]
- Chemical substances used in the wood preservation product do not contain
 - o halogenated organic compounds,
 - o phthalates,
 - o aziridine and polyaziridines,
 - o creosote.
- Active substances, pigments and additives of the wood preservation products is not based on:
 - o arsenic,
 - o lead,
 - o boron,
 - o tin,
 - o cadmium,
 - o copper,
 - o chrome (VI), or
 - o mercury.
- Wood preservatives don't contain more than 5% organic solvent by weight. The aromatic content of the solvent doesn't exceed 5% by weight. A solvent comprising a monomer that polymerizes in the wood and is not given off is acceptable if test results show that at least 95% of the organic solvent polymerizes in the wood.

Surface treatment of wood

- Products for surface treatment (enamel, coat or synthetic resin) of wood do not contain more than those limit concentration of heavy metals:
 - o cadmium: detection limit;
 - o copper: 25 mg/kg;
 - o lead: 50 mg/kg;
 - o zinc: 50 mg/kg.



Plastic parts

- Auxiliaries, colorants et pigments who cause that the concentration of heavy metals in plastics exceed the following concentrations are not added:
 - o cadmium: detection limit
 - o lead: detection limitIf postconsumer plastic is used the requirements for lead and cadmium are other:
 - o lead: 90mg/kg
 - o cadmium: 75mg/kg.
- No halogenated organic flame retardants are actively added to the plastic materials.
- All plastic parts $\geq 50g$ are marked for recycling according to ISO 11469 or equivalent and do not contain additions of other materials that may hinder their recycling. [Eu toolkit core criteria]

Metal parts

Surface treatment of metal parts

- The content of volatile organic compounds in the coats/enamels for surface treatment of metals is not more than 15% by weight.
- Products used for surface treatments of metals don't contain chrome VI or their compounds. In exceptional cases, metal surfaces may be treated with chromium where this is necessary on the grounds of heavy physical wear or in the case of parts that require particularly tight connections (i.e. gaslifters, table- and chair legs). [Eu toolkit core criteria]

Packaging

- Packaging/wrapping doesn't contain chlorinated plastics

Evidence:

The compliance with all the criteria mentioned above can be proved with one of the following labels:



Nordic Swan
Labeling



Milieukeur



(Only for the criterium 'raw materials': FSC PEFC or equivalent)

In case that the tendering company can present one of these labels, any further proof is not necessary. Any other suitable evidence from a recognized body can also be used.



5) Awarding the contract:

	Criterion	Weight
1	Price <i>Calculation (e.g.):</i> Lowest offered price/ stated price x 0,70	e.g. 70%
2	Environmental criteria (The public authority formulates the points it wants to assign to the below mentioned criteria) <i>Calculation (e.g.):</i> Total scored points / maximum number of points x 0,20	e.g. 20%
3	...	e.g. 5 %
4	...	e.g. .

Environmental criteria

General

- Percentage by weight of recycled content of wood-based materials, plastics and/or metals in the final piece of furniture. The higher this percentage the more awarding point this product receives. [Eu toolkit core criteria]
- Percentage of VOC content of the adhesives used in the assembly of furniture that is less than 10% by weight. [Eu toolkit core criteria]
- The aromatic solvent content of adhesives used in the assembly of furniture does not exceed 5% by weight.
- By normal use and maintenance a lifetime of 3 years has to be guaranteed.
- Maintenance of the tools is possible without the use of organic solvents.
- The supplier maintains separately access to spare parts of the furniture (as hinges and wheels) for at least 10 years after the delivery of the tool.

Wood

- The proportion of the wood that comes from sustainable forestry has to be indicated by the supplier. The higher this proportion the more awarding points that product receives. [Eu toolkit comprehensive criteria]

Wood based panels

- If wood based panels are used, the emission class for formaldehyde is E1 (less or equal to 0,1ppm/m³ air /m² surface).
- For wood based panels with more than 10% wood by weight:



- Chemical products must not have been classified as carcinogenic (R45, R49, R340), toxic for reproduction (R60 to R63), mutagenic (R40, R46), toxic (R23 till R28) or allergenic by inhalation (R42) under criteria in Directive 1999/45/EG. (see annex)
- However, the content of free formaldehyde may be up to 0.3 % by weight, with the exception of adhesives for plywood and bonded wood panels, where the free formaldehyde content may be up to 0.5 % by weight.
- Halogenated organic binding agents, halogenated organic flame retardants, polychlorinated 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 content of alkyl phenol ethoxylates or other alkyl phenol derivatives in the chemical product may not exceed 0.6% by weight.
- The total amount of incorporated chemical substances classified by the chemicals supplier as environmentally hazardous according to EU's classification system (18th amendment of Directive 67/548/EEC) must be less than 0.5 g/kg of panel material. The requirements relate to the chemical composition of the products when mixed into the product.
- The content of aromatic solvents does not exceed 1 % by weight of the chemical product.

Surface treatment of wood

- Products for surface treatment (enamel, coat or synthetic resin) do not contain more than those limit concentration of heavy metals:
 - chromium III: 50 mg/kg;
 - zinc: 50 mg/kg;
- Active substances, pigments and additives in products for surface treatment of wood are not based on cadmium, lead, arsenic, boron, tin, copper or chrome VI.; [Eu toolkit core criteria]
- Chemical substances used in the product for surface treatment of wood do not contain hazardous substances that are classified as carcinogenic (R45, R49, R340, R68), toxic for reproduction (R60 to R63), mutagenic (R40, R46, allergenic by inhalation (R42), harmful to the environment (R50, R51, R50/53, R51/53, R52, R52/53, R53) or danger of serious damage to health by prolonged exposure (R48) according to directive 1999/45/EC. (See annex); [Eu toolkit core criteria]
- Chemical substances used in the surface treatment products for wood do not contain aziridine and 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. (See annex) [Eu toolkit core criteria]
- Chemical substances used in the surface treatment products for wood do not contain halogenated organic compounds and polyaziridines or creosote.
- The products used for surface coating shall not contain more than 5% by weight of volatile organic compounds (VOCs).; [Eu toolkit core criteria]





- No halogenated fire retardants are used on wood.



Maintenance of wood

- The wood is not impregnated or treated by pesticides, bleaching products, sulphur compounds, kerosene, petrol, diesel oil, turpentine substitute, white spirit and other petrochemical products.
- Chemical products for maintenance of wood are not classified as environmentally hazardous (R50, R50/R53, R51/R53, R52/R53, R52 or R53) according to the criteria in Directive 1999/45/EG.(see annex)
- The active substances (biocides) in maintenance products for wood are not potentially bio accumulative in accordance with the criteria in Directive 67/548/EG.
- Agents for maintenance/surface treatment do not contain more than 5 % by weight of organic solvents. The aromatics content of the solvent do not exceed 5 % by weight.

Plastics

Raw materials

- Auxiliaries, colorants and pigments that cause the concentration of heavy metals in plastics to exceed the following concentrations are not added:
 - o arsenic: 50mg/kg
 - o chrome VI 100mg/kg
 - o tin: detection limit
 - o zinc: 20.000mg/kg.
- Substances based on mercury and their compounds or tin organic substances must not be actively added to the plastic materials.
- No phthalates are actively added to the plastic materials.

Surface treatment of plastics

- The products used for surface coating do 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).(see annex); [Eu toolkit core criteria]
- Chemical substances used in the surface treatment of plastic must not contain: or aziridine and 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. (see annex) [Eu toolkit core criteria]
- Chemical substances used in the surface treatment of plastic do not contain: halogenated organic compounds,
 - o phthalates,
 - o polyaziridines, or
 - o creosote.



- Active substances, pigments and additives used in the surface treatment of plastics are not based on:
 - o arsenic,
 - o lead,
 - o boron,
 - o tin
 - o cadmium,
 - o copper or
 - o mercury.
- The products used for surface coating of plastic shall not contain more than 5% by weight of volatile organic compounds (VOCs).; [Eu toolkit core criteria]
- The plastic parts are not surface treated.

Metals

Surface treatment of metals

- No more than 200cm² of the surface per functionally part of furniture may be galvanised.
- The concentration of the following heavy metals in coatings and enamels is not more than:
 - o arsenic: 50mg/kg
 - o chrome total: detection limit
 - o copper: 5000 mg/kg
 - o zinc: 20000mg/kg
- Active substances, pigments and additives used in the surface treatment of metals are not based on:
 - o lead,
 - o boron,
 - o tin,
 - o cadmium,
 - o mercury.
- Chemical substances used in the surface treatment of metals don't contain aziridine.; [Eu toolkit core criteria]
- Chemical substances used in the surface treatment of metals doesn't contain:
 - o halogenated organic compounds,
 - o phthalates,
 - o polyaziridines, or
 - o creosote.
- Chemical substances used in the surface treatment of metals are not classified as ecotoxic (R50, R50/R53, R51/R53, R52/R53, R52 or R53), carcinogenic (R45, R49, R340), toxic for reproduction (R60 to R63), mutagenic (R40, R46) or allergenic by inhalation (R42) according to directive 1999/45/EC. (See annex) [Eu toolkit core criteria]



Others

- If nature stone is used, this comes from a quarry for what is made up a landscape recovery plan based on an environmental effect rapport conform EU directive 85/337 or an equal environmental study.
- The concentration of heavy metals in glazes, binders and fillers on stony materials do not exceed those limits:
 - o arsenic: 50mg/kg
 - o cadmium: detection limit
 - o chrome total: 5050mg/kg
 - o chrome III: 5000mg/kg
 - o chrome VI 50mg/kg
 - o lead: 5000mg/kg
 - o zinc: 20.000mg/kg.
 - o copper: 5000 mg/kg

Packaging

- Packaging must consist of readily recycled material, and/or materials taken from renewable resources, or be a multi-use system. [Eu toolkit core criteria]
- All packaging materials shall be easily separable by hand into recyclable parts consisting of one material (e.g. cardboard, paper, plastic, textile). [Eu toolkit core criteria]
- The packaging is composed of one recyclable material (cardboard, paper, polyethylene, polypropylene, polystyrene) or if it is composed of different materials these have to be separable by hand in the different recyclable fractions (cardboard, paper, polyethylene, polypropylene, polystyrene).

5) Performance clauses:

- The supplier maintains access to spare parts for at least 15 years after the delivery of the tool. If this is not possible the supplier has to guarantee an alternative solution.

References

[Information of the public authority that used these clauses in a procurement case]



Annex R-PHRASES:

(R-phrases are mentioned on product labels and in product safety datasheets. It can be a useful tool for verification-procedures.)

<u>R1:</u>	Explosive when dry.
<u>R2:</u>	Risk of explosion by shock, friction, fire or other sources of ignition.
<u>R3:</u>	Extreme risk of explosion by shock, friction, fire or other sources of ignition.
<u>R4:</u>	Forms very sensitive explosive metallic compounds.
<u>R5:</u>	Heating may cause an explosion.
<u>R6:</u>	Explosive with or without contact with air.
<u>R7:</u>	May cause fire.
<u>R8:</u>	Contact with combustible material may cause fire.
<u>R9:</u>	Explosive when mixed with combustible material.
<u>R10:</u>	Flammable
<u>R11:</u>	Highly flammable
<u>R12:</u>	Extremely flammable
<i>R13 (obsolete):</i>	<i>Extremely flammable liquid gas (This R-phrase is no longer designated by the version of the GefStoffV published on 26.10.93.)</i>
<u>R14:</u>	Reacts violently with water.
<u>R15:</u>	Contact with water liberates extremely flammable gases.
<i>Merck R15.1</i>	<i>Contact with acid liberates extremely flammable gases.</i>
<u>R16:</u>	Explosive when mixed with oxidizing substances.
<u>R17:</u>	Spontaneously flammable in air.
<u>R18:</u>	In use, may form flammable/explosive vapour-air mixture.
<u>R19:</u>	May form explosive peroxides.
<u>R20:</u>	Harmful by inhalation.
<u>R21:</u>	Harmful in contact with skin.
<u>R22:</u>	Harmful if swallowed.
<u>R23:</u>	Toxic by inhalation.
<i>Riedel-de Haen R23K:</i>	<i>Also toxic by inhalation.</i>
<u>R24:</u>	Toxic in contact with skin.
<i>Riedel-de Haen R24K:</i>	<i>Also toxic in contact with skin.</i>
<u>R25:</u>	Toxic if swallowed.
<i>Riedel-de Haen R25K:</i>	<i>Also toxic if swallowed.</i>
<u>R26:</u>	Very toxic by inhalation.
<i>Riedel-de Haen R26K:</i>	<i>Also very toxic by inhalation.</i>
<u>R27:</u>	Very toxic in contact with skin
<i>Riedel-de Haen R27A:</i>	<i>Very toxic in contact with eyes.</i>
<i>Riedel-de Haen R27K:</i>	<i>Also very toxic in contact with skin.</i>
<i>Riedel-de Haen R27AK:</i>	<i>Also very toxic in contact with eyes.</i>



<u>R28:</u>	Very toxic if swallowed.
<i>Riedel-de Haen R28K:</i>	<i>Also very toxic if swallowed.</i>
<u>R29:</u>	Contact with water liberates toxic gas.
<u>R30:</u>	Can become highly flammable in use.
<u>R31:</u>	Contact with acids liberates toxic gas.
<i>Merck R31.1</i>	<i>Contact with alkalies liberates toxic gas.</i>
<u>R32:</u>	Contact with acids liberates very toxic gas.
<u>R33:</u>	Danger of cumulative effects.
<u>R34:</u>	Causes burns.
<u>R35:</u>	Causes severe burns.
<u>R36:</u>	Irritating to eyes.
<i>Riedel-de Haen R36A:</i>	<i>Lacrimating</i>
<u>R37:</u>	Irritating to respiratory system.
<u>R38:</u>	Irritating to skin.
<u>R39:</u>	Danger of very serious irreversible effects.
<u>R40:</u>	Possible risk of cancer. <i>CAUTION: Until 2001 this R-phrase was used for possible mutagenic or teratogenic risks as well. These risks are now labelled with R68!</i>
<u>R41:</u>	Risk of serious damage to eyes.
<u>R42:</u>	May cause sensitization by inhalation.
<u>R43:</u>	May cause sensitization by skin contact.
<u>R44:</u>	Risk of explosion if heated under confinement.
<u>R45:</u>	May cause cancer.
<u>R46:</u>	May cause heritable genetic damage.
<i>R47(obsolet):</i>	<i>May cause deformities. (This R-phrase is no longer designated by the version of the GefStoffV published on 26.10.93.)</i>
<u>R48:</u>	Danger of serious damage to health by prolonged exposure.
<u>R49:</u>	May cause cancer by inhalation.
<u>R50:</u>	Very toxic to aquatic organisms.
<u>R51:</u>	Toxic to aquatic organisms.
<u>R52:</u>	Harmful to aquatic organisms.
<u>R53:</u>	May cause long-term adverse effects in the aquatic environment.
<u>R54:</u>	Toxic to flora.
<u>R55:</u>	Toxic to fauna.
<u>R56:</u>	Toxic to soil organisms.
<u>R57:</u>	Toxic to bees.
<u>R58:</u>	May cause long-term adverse effects in the environment.
<u>R59:</u>	Dangerous for the ozone layer.
<u>R60:</u>	May impair fertility.
<u>R61:</u>	May cause harm to the unborn child.
<u>R62:</u>	Possible risk of impaired fertility.
<u>R63:</u>	Possible risk of harm to the unborn child.
<u>R64:</u>	May cause harm to breastfed babies.
<u>R65:</u>	Harmful; may cause lung damage if swallowed.
<u>R66:</u>	Repeated exposure may cause skin dryness or cracking.
<u>R67:</u>	Vapours may cause drowsiness and dizziness.
<u>R68:</u>	Possible risks of irreversible effects.



COMBINATIONS OF R-PHRASES:

- R14/15: Reacts violently with water, liberating extremely flammable gases.
- R15/29: Contact with water liberates toxic, extremely flammable gas.
- R20/21: Harmful by inhalation and in contact with skin.
- R21/22: Harmful in contact with skin and if swallowed.
- R20/22: Harmful by inhalation and if swallowed.
- R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
- R21/22: Harmful in contact with skin and if swallowed.
- R23/24: Toxic by inhalation and in contact with skin.
- R24/25: Toxic in contact with skin and if swallowed.
- R23/25: Toxic by inhalation and if swallowed.
- R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.
- R24/25: Toxic in contact with skin and if swallowed.
- R26/27: Very toxic by inhalation and in contact with skin.
- R27/28: Very toxic in contact with skin and if swallowed.
- R26/28: Very toxic by inhalation and if swallowed.
- R26/27/28: Very toxic by inhalation, in contact with skin and if swallowed.
- R36/37: Irritating to eyes and respiratory system.
- R37/38: Irritating to respiratory system and skin.
- R36/38: Irritating to eyes and skin.
- R36/37/38: Irritating to eyes, respiratory system and skin.
- R39/23: Toxic: danger of very serious irreversible effects through inhalation.
- R39/24: Toxic: danger of very serious irreversible effects in contact with skin.
- R39/25: Toxic: danger of very serious irreversible effects if swallowed.
- R39/23/24: Toxic: danger of very serious irreversible effects through inhalation and in contact with skin.
- R39/23/25: Toxic: danger of very serious irreversible effects through inhalation and if swallowed.
- R39/24/25: Toxic: danger of very serious irreversible effects in contact with skin and if swallowed.
- R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
- R39/26: Very toxic: danger of very serious irreversible effects through inhalation.
- R39/27: Very toxic: danger of very serious irreversible effects in contact with skin.
- R39/28: Very toxic: danger of very serious irreversible effects if swallowed.
- R39/26/27: Very toxic: danger of very serious irreversible effects through inhalation and in contact with skin.
- R39/26/28: Very toxic: danger of very serious irreversible effects through inhalation and if swallowed.
- R39/27/28: Very toxic: danger of very serious irreversible effects in contact with skin and if swallowed.
- R39/26/27/28: Very toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
- R42/43: May cause sensitization by inhalation and skin contact.
- R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- R48/21: Harmful: danger of serious damage to health by prolonged exposure in contact with skin.
- R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- R48/20/21: Harmful: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin.
- R48/20/22: Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
- R48/21/22: Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
- R48/20/21/22: Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
- R48/23: Toxic: danger of serious damage to health by prolonged exposure through inhalation.
- R48/24: Toxic: danger of serious damage to health by prolonged exposure in contact with skin.
- R48/25: Toxic: danger of serious damage to health by prolonged exposure if swallowed.
- R48/23/24: Toxic: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin.
- R48/23/25: Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
- R48/24/25: Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.



- R48/23/24/25: Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
- R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R68/20: Harmful: possible risk of irreversible effects through inhalation.
- R68/21: Harmful: possible risk of irreversible effects in contact with skin.
- R68/22: Harmful: possible risk of irreversible effects if swallowed.
- R68/20/21: Harmful: possible risk of irreversible effects through inhalation and in contact with skin.
- R68/20/22: Harmful: possible risk of irreversible effects through inhalation and if swallowed.
- R68/21/22: Harmful: possible risk of irreversible effects in contact with skin and if swallowed.
- R68/20/21/22: Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

