

## ***Sustainable Public Procurement-fiche: advanced***

### ***1) Subject matter***

Household washing machines produced with environmentally friendly materials and which are environmentally friendly in use and in the waste phase.

“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 (not exclusive)***

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### ***4) Technical specifications***

#### ***Energy efficiency***

- The machine uses less than or equal to 0,19 kWh of electrical energy per kg of wash\_load measured according to EN 60456:1999, using the standard 60 °C cotton cycle. This corresponds with an energy efficiency class A or B as defined in commission directive 95/12/EC.

#### ***Water consumption***

- The machine doesn't consume more than 16 liters of water per kilogram of wash load, measured according to EN 60456:1999, using the standard 60°C cotton program.

#### ***Spin performance***

- Machines with a capacity of more than 3.5 kg achieve a residual moisture content of less than 54%, measured according to EN 60456:1999, using the standard 60°C cotton program. This corresponds with a spin drying efficiency class A or B as defined in Directive 95/12/EC, Annex IV.



- Machines with a capacity less than, or equal to, 3.5 kg achieve a residual moisture content of less than 60%, measured according to EN 60456:1999, using the standard 60°C cotton program.

### **Noise**

Airborne acoustical noise from the appliance, counted as sound power, shall not exceed L<sub>wad</sub> 56 dB(A) during washing or L<sub>wad</sub> 76 dB(A) during spinning, measured according to EN60456:1999, using the standard 60 °C cotton cycle as chosen for Directive 95/12/EC.

### **Material requirements**

- Plastic parts weighing more than 50 grams must be provided with permanent markings specifying the material, in accordance with ISO 11 469.
- Plastic parts heavier than 25 grams shall not contain flame retardant substances that are assigned at the time of applying for the ecolabel any of the risk phrases, as defined in Council Directive 67/548/EEC as last amended by commission Directive 98/98/EEC:

- o R45
- o R46
- o R60
- o R61 (see annex)

This requirement does not apply to flame retardants that on application change their chemical nature to no longer warrant classification under any of the risk phrases listed above, and where less than 0,1% of the flame retardants in the treated part remains in the form as before application.

- Plastic parts heavier than 25 grams shall not contain the following flame retardants:
  - o decabromodiphenyl ether CAS 13654-09-6
  - o monobromodiphenyl ether CAS 101-55-3
  - o dibromodiphenyl ether CAS2050-47-7
  - o tribromodiphenyl ether CAS49690-94-0
  - o tetrabromodiphenyl ether CAS40088-47-9
  - o pentabromodiphenyl ether CAS32534-81-9
  - o hexabromodiphenyl ether CAS36483-60-0
  - o heptabromodiphenyl ether CAS68928-80-3
  - o octabromodiphenyl ether CAS32536-52-0
  - o nonabromodiphenyl ether CAS63936-56-1
  - o decabromodiphenyl ether CAS1163-19-5
  - o Chloroparaffins with chain length 10 to 13 C atoms, chlorine content > 50 % by weight CAS85535-84-8



**Evidence:**

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



Nordic Swan



Eu Ecolabel

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

**5) Awarding the contract:**

	<b>Criterion</b>	<b>Weight</b>
1	<b>Price</b>  <i>Calculation (e.g.):</i> Lowest offered price/ stated price x 0,70	e.g. 70%
2	<b>Environmental criteria</b> (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***

### ***Energy efficiency***

- The machine uses less than or equal to 0,17 kWh of electrical energy per kg of wash load measured according to EN 60456:1999, using the standard 60 °C cotton cycle.
- The mean energy consumption of four different operating modes is less or equal to 0.23kWh/kg washing. The four programs are the standard 60°C cotton program at full load and 2 kg load, and the standard 40°C cotton program at full load and 2 kg load.

The Energy efficiency (E) is calculated as:  $E = (e1 + e2 + e3 + e4)/(m1 + m2 + m3 + m4)$

e is electricity consumption in kWh and m is the mass of washing in kilograms, for each of the four individual operating modes.

### ***Water consumption***

- The machine uses less than or equal to 12 liters of water per kg of washload, measured according to EN 60456:1999, using in the standard 60° C cotton program as chosen for Directive 95/12/EC.

### ***Spin performance***

- Machines with a capacity less than, or equal to, 3.5 kg achieve a residual moisture content of less than 54%, measured according to EN 60456:1999, when tested according to the stated test method using the standard 60° C cotton program. This corresponds with a spin drying efficiency class A or B as defined in Directive 95/12/EC, Annex IV.

### ***Material requirements***

- No substances based on cadmium, lead mercury or their compounds are added to plastic materials (Nordic Swan).  
Cables are excepted from this requirement.
- Plastic parts heavier than 25 grams shall not contain flame retardant substances or preparations containing substances that are or may be assigned any of the risk phrases (see annex)
  - o R50
  - o R51
  - o R52
  - o R53 or any combinations of risk phrases containing any of the above risk phrases, as defined in Council Directive 67/548/EEC as last amended by Commission Directive 98/98/EEC.

This requirement does not apply to flame retardants that on application change their chemical nature to no longer warrant classification under any of the R-phrases listed above, and where less than 0.1 % of the flame retardant in the treated part remains in the form as before application.



- The following flame retardants may not be added to plastic materials:
  - o Polybrominated biphenyls (PBB),
  - o polybrominated biphenyl ethers (PBDE)
  - o or chloroparaffins with chain length 10-13 carbon atoms and chlorine content >50% by weight (CAS no 85535-84-8).

***Other***

- The appliance has clear volumetric and/or weight-related markings on the detergent dispenser allowing the user to adjust the detergent quantity used according to the type and amount of load and its degree of soiling.
- The machine must pass a rinsing performance test using the alkali method with a score  $\geq 5$
- The machine must pass a rinsing performance test using the zeolite method with a score  $\geq 3$ .

***6) Performance clauses:***

- The manufacturer shall offer a commercial guarantee to ensure that the washing machine will function for at least two years. This guarantee shall be valid from the date of delivery to the customer.
- The availability of compatible replacement parts shall be guaranteed for at least 12 years from the time that production ceases.

<b><i>References</i></b>
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[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
<u>R13 (obsolete):</u>	<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(obsolete):</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.

