



**Environmental criteria for sustainable public
procurement of**

Reproduction Equipment

Version March 2017

1. Scope/definition

The Reproduction Equipment product group comprises equipment for use in an office environment. This product group comprises printers (black and white and colour equipment), photocopiers, faxes and multifunctional equipment, including electronic equipment, that combines at least two functions (printing, copying, faxing or scanning).

Large-format printers (that is to say, 40-100 cm printing width) also fall within the scope of this criteria document. It should, however, be stated that the criteria linked to double-sided printing do not apply to large format printers.

The following products (with their corresponding CPV codes) are part of the Reproduction Equipment product group. This list of products is non-exhaustive.

Products	CPV code
Photocopying and thermocopying equipment	30121000-3
Photocopiers	30121100-4
Photocopying equipment	30121200-5
Reproduction equipment	30121300-6
Parts and accessories of photocopying apparatus	30125000-1
Printers and plotters	30232100-5
Fax equipment	32581200-1

Excluded from the scope of this product group are:

- franking machines and scanners.

This document describes the environmental criteria. Information about the other elements of sustainable public procurement, such as social conditions and social return, may be found on the PIANOo website, on the specific product group page: <https://www.pianoo.nl/document/10525/productgroep-reproductieapparatuur>.

2. Most significant environmental impacts

The table below lists the sustainability themes and describes the approach to each theme for the product group. The “Approach” column presents a statement indicating the influence of sustainable purchasing and its criteria on the “sustainability” of the theme. This column also includes a reference to any requirements, award criteria or points of attention/suggestions that may be useful in implementing the approach. The product group can also have an impact on other environmental themes but, for now at least, these are less relevant, of a much less significant level of concern or do not as yet have a suitable set of standard criteria.

Themes:	Approach:	No. of requirement/ Criterion
<p>Energy and climate Energy consumption of reproduction equipment in the use phase, with corresponding CO₂ emissions</p>	<ul style="list-style-type: none"> • Use energy-efficient models. 	AS7, ME1, GC1
	<ul style="list-style-type: none"> • Use equipment that allows energy-efficient printing. 	ME4
	<ul style="list-style-type: none"> • Coordinate choice of equipment with copy and/or printing needs. 	AS2, AS3, AS5

<p>Supplies and Raw materials Paper and ink consumption in use phase of the equipment</p> <p>Service life of the equipment</p> <p>Waste production in the use phase</p> <p>Critical materials in the equipment</p>	⇒	<ul style="list-style-type: none"> Use equipment that prints with the minimum possible material. 	AS7, ME2, ME3, ME4, GC3
		<ul style="list-style-type: none"> Use equipment with long lifetime and guarantee period. 	ME5
		<ul style="list-style-type: none"> Use equipment that allows local confirmation of print job before output. 	ME6
		<ul style="list-style-type: none"> Use equipment without flame-retardant substances or preparations. 	GC2
		<ul style="list-style-type: none"> Coordinate choice of equipment with copy and/or printing needs. 	AS1, AS3, AS4, AS7
		<ul style="list-style-type: none"> Purchase used/refurbished equipment and cartridges. 	ME7, AS6
		<ul style="list-style-type: none"> Use recycled material. 	AS7, ME8, GC4
		<ul style="list-style-type: none"> Bio-based procurement. 	AS8
		<p>Health and welfare Use of hazardous substances in production of equipment</p>	⇒

3. Points of attention/suggestions

Devoting attention to the opportunities and possibilities for the most sustainable procurement possible in the preparation phase will lead to specifications that are more ambitious or which differ from the standard technical specifications and award criteria set out in this document. The table below presents points for attention and suggestions for promoting sustainability in procurement within this product group.

No.	Points of attention/suggestions (AS)
AS1	<p>Analyse print and reproduction needs Complete a thorough analysis of the organisation's printing and copying needs ahead of time. This requires insight into the relevant figures, such as the use of paper and toner over a specific period of time. These figures can be collected within the context of internal environmental practices, for example, or collection can be outsourced to the supplier as part of maintenance.</p>

AS2	<p>Choose machine that best meets the copying and/or printing requirements</p> <p>The choice of the type of copier/printer in general is determined on the basis of the number of copies/prints made (the copy volume). Heavy equipment uses considerably more energy than a medium-volume machine. The installation of heavy equipment in areas with a relatively low copy volume therefore wastes energy. Equipment that is too light is not appropriate either. Using a machine to make more copies than it was designed for can result in greater wear and tear, increased repairs and premature replacement.</p>
AS3	<p>Choose central copying/printing</p> <p>By choosing a central copying/printing location, it is possible to reduce the number of machines. This reduces the raw materials and waste (including toner cartridges). A large machine that is used by various users in general uses less energy than many smaller machines combined.</p>
AS4	<p>Choose printers with different trays for different types of paper</p> <p>Printers with more than one tray make it possible to match the choice of paper to the purpose of the printed document (filing or not, thicker paper or not, etc.). This makes it possible to always make the most environmentally friendly choice. This also ensures that incorrect printing is avoided, for example, by having separate trays for blank paper and letterhead paper.</p>
AS5	<p>Choose multifunctional (digital) devices</p> <p>A multifunctional device (MFD) or an "all-in-one device" uses approximately 50% less energy than a separate printer, scanner, fax machine and copier. This can also result in cost savings.</p>
AS6	<p>Choose used equipment</p> <p>Check to see if it is possible to procure refurbished equipment (provided it meets the specified energy criteria). Actual practice shows that this type of equipment is not inferior in terms of quality and does not require more maintenance than new equipment.</p> <p>Offer the tenderer the opportunity to supply not only new, but also reconditioned equipment. Include the following text in the ToR, for example:</p> <p>"The equipment supplied may be used ("refurbished equipment"), provided it is of a pleasing and well-looked-after appearance (presentable, with no wear and tear) and in very good condition. Naturally, all other requirements mentioned in the ToR (such as quality and availability) will apply to refurbished equipment as much as they do to new equipment."</p>
AS7	<p>Apply additional environmental criteria</p> <p>The EU Ecolabel for imaging equipment provides a basis for the application of additional environmental criteria:</p> <ul style="list-style-type: none"> - availability of N-up printing (i.e. printing several pages on a single sheet); - energy-efficient (in addition to Energy Star, also maximum use of standby mode); - design for disassembly; - toner and/or ink cartridge take-back requirement; - warranty, guarantee of repairs and supply of spare parts (five-year guarantee period). <p>The background to the EU Ecolabel for imaging equipment can be found at: http://ec.europa.eu/environment/ecolabel/documents/Technical%20Background%20Report_Imaging%20Equipment.pdf.</p>
AS8	<p>Consider bio-based procurement</p> <p>In many cases, bio-based raw materials are preferable over fossil-based raw materials (such as plastics). Survey (in consultation with the market where possible) the possibilities, the pros and any cons of use of bio-based raw materials for your procurement needs and give them an appropriate place in your procurement documents. More information on bio-based procurement can be found via PIANOo SPP Theme Bio-based Procurement (https://www.pianoo.nl/themes/maatschappelijk-verantwoord-inkopen-duurzaam-inkopen/mvi-thema-s/biobased-inkopen), where the guide to bio-based procurement and the Guidelines to Bio-based Procurement have also been made available (https://www.pianoo.nl/themes/maatschappelijk-verantwoord-inkopen-mvi-duurzaam-inkopen/handreikingen-mvi-0/handreikingen-biobased-inkopen).</p> <p>If you include a requirement that the material used must be bio-based, ask for descriptions of the material used and documentation supporting claims such as "bio-based", "sustainable biomass" and "compostable". This will make the assessment easier and give the purchaser the opportunity to check when goods are delivered whether the items supplied are in fact those agreed. It is also important not to require the production of specific certificates because this may put producers to unnecessary expense when alternative evidence would also suffice.</p>

4. Selection criteria

Not defined for this product group.

5. Technical specifications

No.	Technical specifications (ME)
ME1	<p>“Energy Star” requirements for reproduction equipment All products meet the most recent Energy Star standards for energy performance. See: www.eu-energystar.org.</p> <p><i>Explanation</i> As from 7 May 2014, the Energy Star standard “Imaging Equipment specifications v2.0” apply to reproduction equipment.</p> <p>The energy consumption must be measured in accordance with the Test Method for Determining Imaging Equipment Energy Use Version 2.0 – Final May-2012 or equivalent method.</p> <p><i>Verification</i> The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. Products in the Energy Star database (see http://www.eu-energystar.org/db-currentlists.htm) are in compliance. All products with a relevant EU Ecolabel are assumed to be in compliance. Products with a different type 1 environmental label or an environmental declaration meeting this criterion will be assumed to be in compliance. Other appropriate forms of documentation will also be accepted, such as a technical file from the manufacturer or an approval report of an accredited institution (for example, an ISO 17025-accredited institution authorised to issue approval reports) showing that the products answer to the criteria.</p> <p><i>Explanation</i> A Type I environmental label refers to environmental labels based on an independent test using pre-determined environmental criteria which are based on a “life-cycle approach”. Examples in the Netherlands include the Milieukeur label and the EKO label. Other examples include the EU Ecolabel (Europe), Blaue Engel (Germany) and Nordic Swan (Scandinavia). For further information on the type I environmental label, see: http://www.nen.nl/NEN-Shop/Norm/NENENISO-140242000-en.htm.</p> <p>For information on ISO 17025 with regard to performance of trials and calibrations, see: http://www.nen.nl/NEN-Shop/Norm/NENENISOIEC-170252005-nl.htm</p>
ME2	<p><i>(Only applicable to image processing equipment that can achieve a print/copying speed of 19 images per minute (monochromatic) or more in A4 format)</i></p> <p>Double-sided printing The image processing equipment must be equipped with an automatic double-sided printing/copying unit. The duplex print/copy function must be configured as standard in the manufacturer's original, official software</p> <p><i>Verification</i> The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. All products with an EU Ecolabel will be assumed to be in compliance. Products with a different type 1 environmental label or an environmental declaration meeting this criterion and products that have the Energy Star v.2.0 quality mark (or a more recent version) are assumed to be in compliance. A manufacturer declaration indicating that these requirements are met will also be accepted.</p> <p><i>Explanation</i> For an explanation of the type 1 environmental label, see http://www.nen.nl/NEN-Shop/Norm/NENENISO-140242000-en.htm.</p> <p><i>Source EU GPP</i></p>

ME3	<p>Suitability for recycled paper Reproduction equipment is suitable for the use of recycled paper when it meets the European EN 12281:2002 standard.</p> <p><i>Verification</i> The tenderer may be requested to substantiate, with documentation, that the reproduction equipment is suitable.</p>
ME4	<p>User instructions for green management of performance Instructions for maximising the environmental performance of the imaging equipment (addressing the functions for paper management, energy efficiency and consumables such as ink/toner cartridges) must be provided, in written form, as a specific component of the user guide and/or in electronic form on the manufacturer website.</p> <p><i>Verification</i> The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. All products with a relevant EU Ecolabel are assumed to be in compliance. Products with a different type 1 environmental label or an environmental declaration meeting this criterion will be assumed to be in compliance. Other suitable forms of documentation will also be accepted, such as a written statement from the manufacturer that the clause set out above will be fulfilled.</p> <p><i>Explanation</i> For an explanation of the type I environmental label, see the explanation at ME1 and http://www.nen.nl/NEN-Shop/Norm/NENENISO-140242000-en.htm.</p> <p><i>Source EU GPP</i></p>
ME5	<p><i>(Only applicable to purchase contracts excluding maintenance)</i></p> <p>Product lifetime and warranty Repair or replacement of the product must be covered under warranty for a minimum of five years. The tenderer must therefore ensure that for at least a period of five years after the date of purchase, original or equivalent replacement parts are available (either directly or through other designated intermediaries). This provision does not apply in unavoidable temporary circumstances beyond the control of the manufacturer such as natural disaster.</p> <p><i>Verification</i> The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. All products with a relevant EU Ecolabel are assumed to be in compliance. Products with a different type 1 environmental label or an environmental declaration meeting this criterion will be assumed to be in compliance. Other suitable forms of documentation will also be accepted, such as a declaration from the manufacturer of compliance with the provision above.</p> <p>For an explanation of type I environmental label, see the explanation at ME1 and http://www.nen.nl/NEN-Shop/Norm/NENENISO-140242000-en.htm.</p> <p><i>Source EU GPP</i></p>
ME6	<p><i>(Only applicable to reproduction equipment connected to a network on which a group of users run print jobs)</i></p> <p>Local confirmation of the print job prior to execution Reproduction equipment offers the option to release or delete print jobs locally or remotely.</p> <p><i>Explanation</i> A distinction between 2 concepts can be made:</p> <ul style="list-style-type: none"> • "pull printing" (also referred to as "follow-me printing"), by which a print job is sent to a central print server. This server will retain the instruction until a user identifies himself or herself on any printer within the network and retrieves the print job; • PIN printing: A printing instruction is sent to a specific printer that supports PIN printing. The printing instruction will only be executed after the user has identified himself or herself. <p><i>Verification</i> The tenderer may be requested to substantiate, with documentation, that the reproduction equipment is suitable for pull printing and/or PIN printing.</p>
ME7	<p>Efficient use of resources for cartridges: product design aimed at reusing toner and/or ink cartridges The products must accept remanufactured toner and/or ink cartridges.</p>

	<p>Devices and practices that would prevent this reutilisation (sometimes referred to as anti-reutilisation devices/practices) should not be present or applied.</p> <p><i>Verification</i> The tenderer may be asked to submit documentation showing compliance with the above criteria. All products with a relevant EU Ecolabel will be assumed to be in compliance. Products with a different type 1 environmental label or an environmental declaration meeting this criterion will be assumed to be in compliance. Other appropriate forms of documentation will also be accepted, such as a technical file from the manufacturer, an approval report of an accredited institution or a test report showing that the products answer to these criteria.</p> <p><i>Explanation</i> For an explanation of type I environmental labelling, see the explanation at ME1 and http://www.nen.nl/NEN-Shop/Norm/NENENISO-140242000-en.htm.</p>
ME8	<p>Use of recycled materials for packaging Where cardboard boxes are used, they must have a recycled material content of at least 80%. Where plastic bags or plastic sheets are used for the final packaging, they must have a recycled content of at least 75%. This minimum requirement will not apply if bio-based material is chosen.</p> <p><i>Verification</i> The tenderer may be asked to provide a sample of the product packaging with the proposal, together with an accompanying statement declaring that this criterion has been satisfied.</p> <p><i>Source EU GPP</i></p>

6. Award criteria

No.	Award criteria (GC)
GC1	<p>Energy efficiency and operating mode of reproduction equipment Points are assigned for every 5% of energy consumption lower than the specifications for the operating mode in the technical specifications, as measured using the Test Method for Determining Imaging Equipment Energy Use Version 2.0 – Final May-2012 or equivalent method.</p> <p><i>Verification</i> The tenderer may be requested to submit a technical file from the manufacturer. A test report showing that the products meet these criteria will also be accepted.</p> <p><i>Source EU GPP</i></p>
GC2	<p>No flame-retardant substances or preparations The greater the extent to which plastic components heavier than 25 g do not contain any flame-retardant substances or preparations to which one of the following H phrases has been allocated as determined in Directive 1272/2008, the higher the tender will be rated.</p> <ul style="list-style-type: none"> • H350 (may cause cancer); • H340 (may cause inheritable genetic damage); • H360F (may impair fertility); • H360D (may cause harm to the unborn child). <p>This criterion will have been met when no more than 0.1% (by weight) of the relevant substances is present because trace amounts may be present in relation to any practical test.</p> <p><i>Verification</i> The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. All products with a relevant EU Ecolabel will be assumed to be in compliance. Products with a different type 1 environmental label or an environmental declaration meeting this criterion will be assumed to be in compliance. Other appropriate forms of documentation will also be accepted, such as a technical file from the manufacturer, an approval report of an accredited institution or a test report showing that the products answer to these criteria.</p> <p><i>Explanation</i></p>

	<p>For an explanation of the type I environmental label, see the explanation at ME1 and http://www.nen.nl/NEN-Shop/Norm/NENENISO-140242000-en.htm.</p>
GC3	<p><i>(Only applicable to imaging equipment that can achieve a print/copying speed of less than 19 images per minute (monochromatic) in A4 format)</i></p> <p>Double-sided printing Points will be assigned to image processing equipment equipped with an automatic unit for double-sided printing/copying (duplex unit). The duplex print/copy function must be configured as standard in the manufacturer's original, official software.</p> <p><i>Verification</i> The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. Likewise, products with a different type 1 environmental label or an environmental declaration meeting this criterion will be assumed to be in compliance. Other appropriate forms of documentation, such as a manufacturer declaration indicating that these requirements are met, will also be accepted.</p> <p><i>Explanation</i> For an explanation of the type I environmental label, see the explanation at ME1 and http://www.nen.nl/NEN-Shop/Norm/NENENISO-140242000-en.htm.</p> <p><i>Source EU GPP</i></p>
GC4	<p>Recycling packaging The greater the provision made by the tenderer for better recycling of the packaging, the higher this component of the tender will be rated. The tenderer may earn points by:</p> <ul style="list-style-type: none"> - avoiding multi-layers, black plastic and combination packaging; - using packaging which is readily recyclable; - collecting and recycling a higher percentage of the packaging it supplies. <p><i>Verification</i></p> <p>The tenderer may be asked to state:</p> <ul style="list-style-type: none"> - whether multi-layers, black plastic and combination packaging are used; - whether the packaging is readily recyclable, where "readily recyclable" is defined as: can be separated by hand into elements of a single material and/or packaging that are suitable for multiple use; - what percentage of the packaging it supplies is collected and recycled. <p>The tenderer may be asked to provide a sample of the packaging. It may also be asked to send a statement in which it indicates 1) what percentage of the packaging used is collected or taken away 2) how the packaging used is processed during the waste phase and, 3) in the case of recycling, which recycler recycles the material.</p>

7. Contract provisions

Not defined for this product group.