



**Environmental criteria for sustainable public
procurement of**

Printing Services

Version March 2017

1. Scope/definition

The Printing Services product group includes the procurement of all printing on paper, cardboard or other paper-based materials produced specifically for the contracting authority. This includes:

- standard printed materials (also referred to as commercial printed materials or general printed materials) such as general letterhead and stationery, postcards, envelopes, tickets, A5 cards, forms, fanfold forms, business cards, memo paper, etc.;
- additional printed materials (also referred to as promotional printed materials or communication printed materials) such as books, magazines, newspapers, flyers, brochures, reports, handbooks, guidebooks, calendars, etc.

This concerns the following CPV codes:

Products	CPV code
Postcards, greeting cards and other printed matter	22300000-3
Bespoke printed matter	22458000-5
Trade-advertising material, commercial catalogues and manuals	22460000-2
Miscellaneous printed matter	22900000-9
Printed envelopes	30199710-0
Printed window envelopes	30199711-7
Printed non-window envelopes	30199712-4

For printed materials within this product group, the offset printing process and the professional digital print process are by far the most commonly used by printers. This is why the decision was made to draft criteria only for these two processes.

This document focuses on the environmental aspects relating to printed materials. The buyer can apply the environmental criteria for any procurement of printed materials without having to make a closer consideration of the differences in printing processes and techniques. The environmental criteria explicitly indicate that they pertain only to the offset printing process and the professional digital print process. If the requested job requires printing with a different printing process, then these environmental criteria will not apply to the tenderer.

All paper-related environmental aspects and criteria are covered in the criteria document for the Paper product group.

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/10534/productgroep-drukwerk>.

2. Most significant environmental effects

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 these are (at least at present) less relevant or 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/
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Energy and climate
Energy consumption during paper production and transport, and accompanying CO₂ emissions



<ul style="list-style-type: none"> Minimise paper transport. 	AS10
<ul style="list-style-type: none"> Apply minimum paper requirement. 	ME1
<ul style="list-style-type: none"> Purchase printed materials with a minimum CO₂ footprint. 	GC4, AS5
<ul style="list-style-type: none"> Require an Environmental Management System. 	CB1

Supplies and Raw materials
Raw materials consumption in production of printed materials (paper and ink). Use of hazardous substances and compounds



<ul style="list-style-type: none"> Ask for improved environmental performance. 	CB2
<ul style="list-style-type: none"> Only produce printed materials that are necessary. 	AS2
<ul style="list-style-type: none"> Use raw material-saving measures. 	AS3, AS4, AS6, AS7, AS8, GC3
<ul style="list-style-type: none"> Use a print-on-demand system. 	AS11
<ul style="list-style-type: none"> Use the minimum requirement for paper. 	ME1
<ul style="list-style-type: none"> Use recyclable materials. Recycle materials. 	GC5, ME6, GC6
<ul style="list-style-type: none"> Require an Environmental Management System. 	CB1

Water and Soil
Discharge into water from pulp and paper production
Water consumption during paper production



<ul style="list-style-type: none"> Ask for improved environmental performance. 	CB2
<ul style="list-style-type: none"> Use minimum paper requirement. 	ME1



<ul style="list-style-type: none">• Require an Environmental Management System.	CB1
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Health and welfare
Emissions of harmful substances during paper production



<ul style="list-style-type: none">• Do not use hazardous materials.	AS9, ME1, ME2, ME3, ME4, ME5, GC1, GC2
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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 of different types than 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>Clearly indicate sustainability needs in the job description</p> <p>If the contracting authority wishes to include sustainability criteria in the contract documents, formulate the sustainability needs clearly in the contract description, to make clear that the sustainability of the printed materials produced is of essential importance to the contracting authority. This makes sustainability an element of the drafting of the tender.</p>
AS2	<p>Consider the necessity of the printed material</p> <p>Not printing materials remains the preferred option from an environmental standpoint, with the least environmental impact. This is why, every time you intend to produce printed materials, you should ask the question "Is printing this material actually necessary?"</p>
AS3	<p>Ask the designer and printer for digital proofs</p> <p>Ask the designer and printer for digital proofs. Before the actual printed material is created, a print proof is first created to verify whether the colours, page sequence, etc. are as required. It is not necessary to print these proofs. They can also be sent in the form of a PDF file. This saves transfer films and ink that create hazardous waste. This also reduces costs.</p>
AS4	<p>Use standard sizes</p> <p>Use standard print sizes (A3/A4/A5/etc.). Non-standard sizes require additional handling, often resulting in additional waste due to paper cutting losses, for example.</p>
AS5	<p>Make informed choice between digital print or offset printing</p> <p>If practical considerations dictate a choice between digital or offset printing, make the right choice by considering the latest sustainability issues in relation to the project. Trends in innovation driven by economic developments and increasingly efficient machines will, in the long run, ensure that the digital print process will consume less and less energy. As soon as the digital print process can handle the same volume of a wide range of paper formats as the offset print process, the digital print process will become a process with interesting potential for reducing the environmental footprint of graphic media companies.</p>
AS6	<p>When drafting printed materials, consider sustainability issues in layout and style</p> <p>Choose a layout, font and font size that allow more text on a page. A smart font choice can save significantly on ink. Also be sure to make a point of the sustainable style (for example, including logos of quality marks if appropriate for the printed materials). This helps the end user visualise the socially responsible and sustainable production aspects of the printed material.</p>
AS7	<p>Use the minimum number of colour prints and printed colour blocks</p> <p>Make a considered choice between black and white and coloured printing. Be aware that each additional colour block necessitates an extra printing pass. By avoiding the use of coloured ink or colour blocks you reduce the amount of ink.</p>
AS8	<p>Choose the lightest possible paper weight</p> <p>This saves raw materials. Furthermore, it yields benefits in terms of transport: reduced weight means less fuel. For more details, see the criteria document for the Paper product group.</p>
AS9	<p>Do not use finishes on printed materials</p> <p>Applying a finish consists of applying a protective layer to printed matter, for example laminating or plastifying. A drawback of applying a finish is that it uses substances that are harmful to the environment. Furthermore, products with a finish also cause problems during the recycling process. Therefore, at a minimum avoid the use of such techniques for printed matter destined for one-time or short-term use. Applying a finish is however suitable for book covers and catalogues or printed matter that will be frequently used or that have a long lifespan.</p>
AS10	<p>Avoid long-distance deliveries of small volumes of printed matter</p> <p>Limiting transport yields financial as well as environmental benefits. Look for an optimal balance between delivery (not too little) and inventories (not too much).</p>
AS11	<p>Use a print-on-demand system for materials like brochures or free magazines</p> <p>When brochures or newsletters go straight into the recycling bin, no one wins. Set up a print-on-demand system and announce it (by electronic communication) to the target group of the publication. This can save not only a lot of paper but also a lot of unnecessary printing.</p>

4. Selection criteria

No.	Selection criteria (SC)
SC1	<p><i>(For framework contract and multiyear contract for offset printing and/or digital printing)</i></p> <p>Environmental management system</p> <p>For that part/those parts of the organisation that is/are involved in the execution of the tendered contract, the tenderer has a management system in its organisation in which at least the following matters are arranged:</p> <ul style="list-style-type: none"> • the organisation's underlying premises on sustainability and the environment; • concrete steps taken to control and reduce the environmental impact of the processes connected to the performance of the contract; at a minimum, energy consumption, VOC emissions, use of the raw materials paper and ink, reduction of start-up losses and misprints, waste production, waste separation, transport and packaging materials involved in the contract and (digital print process only) emissions of ozone and fine particulates; • how the organisation monitors and re-evaluates the environmental measures listed above as a basis for ongoing improvement with specific attention to the environmental aspects defined for this criterion; • how the staff and vendors are made aware and their competence addressed with regard to dealing with the environmental aspects relevant to this contract. <p><i>Explanation</i></p> <p>With an internal environmental management system, a company demonstrates that care for the environment is a fundamental element of day-to-day operations.</p> <p>With an ISO 14001 or EMAS certificate or statement from an independent auditor, accountant or accredited certification institution with demonstrable knowledge of the issues, the tenderer can demonstrate that care for the environment is a fundamental element of day-to-day operations.</p> <p>In the graphic media sector, the SCGM (Certification of Graphic Media Sector Foundation) is an accepted certification institution. The certification the SCGM uses is a direct translation of the ISO 14001 standard.</p> <p>It has been established that the topics covered in this suitability requirement are proportional in relation to the contract for offset printed materials and digital printed materials.</p> <p><i>Verification</i></p> <p>The tenderer may be asked to furnish an ISO 14001 certificate, EMAS certificate or other certificate demonstrating compliance with the criteria above.</p>

5. Technical specifications

No.	Technical specifications (ME)
ME1	<p><i>(For offset printing and/or digital printing)</i></p> <p>Paper</p> <p>Paper use for the printed materials must meet the minimum requirements of the Paper product group. By including at least the minimum requirements from the Paper product group in the tendering for the printed materials, the contracting authority can ensure that the paper used for the offset/digital printed materials meets the relevant sustainability criteria.</p> <p>For offset and digital printing, only the minimum requirements for the Paper product group apply. The award criteria for the Paper product group do not apply, because it is a relatively heavy administrative burden on suppliers of printed materials to interpret the award criteria as applicable to their vendors and to verify them.</p> <p>The criteria for the Paper product group may be found on the website: www.pianoo.nl/.</p>
ME2	<p><i>(For offset printing and/or digital printing)</i></p> <p>Ink, pigments, varnish, additives, cleaning agents and solvents</p> <p>The manufacture of the printed materials to be delivered under this tender may not involve inks,</p>

	<p>pigments, varnish, additives, cleaning agents or solvents classified with one or more of the H-sentences: H300 H301 H310 H311 H330 H331 H340 H341 H350 H350i H351 H360F H360FD H360Fd H360Df H361f H361d H361fd H362 H370 H371 H372 H373 H400 H410 H411 H412 H413 EUH059 EUH029 EUH031 EUH032 EUH070. As an exception to this requirement, UV inks and UV varnishes may be classified with H412.</p> <p>During the transitional period as indicated in article 2 of the European Regulation (EC) no. 286/2011 2nd ATP, this minimum requirement likewise applies to the R-sentences corresponding to the H-sentences identified above, as set out in the conversion table in annex VII of the European Regulation (EC) no. 1272/2008.</p> <p><i>Verification</i> The tenderer may be asked to demonstrate compliance with the set requirements. Offset printed materials and digital printed materials with the EU Ecolabel or Nordic Swan quality mark will be assumed to meet these requirements.</p>
ME3	<p><i>(For offset printing and/or digital printing)</i></p> <p>APEOI, halogens and phthalates</p> <p>The ink, toners, glue, cleaning agents or other chemicals used in the manufacture of the printed materials to be delivered under this tender may not contain: alkylphenoethoxylates (APEO); halogens, with the exception of biocides with halogens, with one or more of the following H-sentences: H300 H301 H304 H310 H311 H330 H331 H340 H341 H350 H350i H351 H360F H360FD H360Fd H360Df H361f H361d H361fd H362 H370 H371 H372 H373 H400 H410 H411 H412 H413 EUH059 EUH029 EUH031 EUH032 EUH070; phthalates with the H-sentences: H360F, H360D, H361f; biocides, including biocides with halogens, with a log Pow (octanol/water distribution coefficient) ≥ 3.0 or an experimentally determined bioconcentration factor (BCF) > 100.</p> <p>During the transitional period as indicated in article 2 of the European Regulation (EC) no. 286/2011 2nd ATP, this minimum requirement likewise applies to the R-sentences corresponding to the H-sentences identified above, as set out in the conversion table in annex VII of the European Regulation (EC) no. 1272/2008.</p> <p><i>Verification</i> The tenderer may be asked to demonstrate compliance with the requirements above. Offset printed materials and digital printed materials with the EU Ecolabel or Nordic Swan quality mark will be assumed to meet these requirements.</p>
ME4	<p>Isopropyl alcohol</p> <p><i>(For offset printing without UV inks using sheet-fed offset, small format rotation or rotation processes)</i></p> <p>The process water used for the production of the printed materials to be delivered under this tender has a maximum isopropyl alcohol content (IPA content) of:</p> <ul style="list-style-type: none"> • for sheet-fed offset printing: 5% by vol.; • for rotation offset printing: 3% by vol.; • for small format rotation offset printing: 5% by vol. <p><i>(For offset printing with UV inks using small format rotation)</i></p> <p>The process water used for the production of the printed materials to be delivered under this tender has a maximum isopropyl alcohol content (IPA content) of 7% by vol.</p> <p><i>Verification</i> Pursuant to working conditions regulations, graphic media companies must document their IPA consumption per press in a solvent log at least once per quarter; this requirement is set out in further details in the graphic media occupational health & safety catalogue. The IPA consumption per contract can be registered in the solvent log. The tenderer may be asked to submit a copy of this log to document the IPA percentage maintained for the printed material delivered under the tender.</p>

ME5	<p><i>(For offset printing and/or digital printing)</i></p> <p>Cleaning agents</p> <p>For everyday process-based cleaning of the ink system and rubber blanket (i.e. not being repair or technical maintenance activities) of the printing press as part of the process of printing the printed materials to be supplied under this tender, a cleaning agent with a flashpoint of 55°C or higher must be used.</p> <p><i>Verification</i></p> <p>The tenderer may be asked to demonstrate that it uses a cleaning agent with a flashpoint of 55°C or higher. A cleaning agent from class K3 (this includes the cleaning agents with a flashpoint of between 55 and 100°C) will be understood to meet this requirement. A graphic media company is obliged to document the annual consumption of the cleaning agent used in a consumption log. A copy of the consumption log may serve as documentation of this.</p>
ME6	<p>Use recycled material for packaging</p> <p>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></p> <p>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>

6. Award criteria

No.	Award criteria (GC)
GC1	<p>Isopropyl alcohol</p> <p><i>(For offset printing without UV inks using sheet-fed offset, small format rotation or rotation processes)</i></p> <p>The more the isopropyl alcohol content (IPA content) of the process water used for the production of the printed materials to be delivered under this tender is below 5% by vol., the higher the tender will be rated.</p> <p>If the printed materials to be delivered are completely IPA-free, the tender will be given an extra-high rating.</p> <p><i>(For offset printing with UV inks using small format rotation)</i></p> <p>The more the isopropyl alcohol content (IPA content) of the process water used for the production of the printed materials to be delivered under this tender is below 7% by vol., the higher the tender will be rated.</p> <p>If the printed materials to be delivered are completely IPA-free, the tender will be given an extra-high rating.</p> <p><i>(For digital printing)</i></p> <p>If digital printing is to be delivered for this tender, the tender will be given an extra-high rating.</p> <p><i>Verification</i></p> <p>Pursuant to working conditions regulations, graphic media companies must document their IPA consumption per press in a solvent log at least once per quarter; this requirement is set out in further details in the graphic media occupational health & safety catalogue. The IPA consumption per</p>

	contract can be registered in the solvent log. The tenderer may be asked to submit a copy of this log to document the IPA percentage maintained for the printed material delivered under the tender.
GC2	<p><i>(For offset printing and/or digital printing)</i></p> <p>Cleaning agents</p> <p>If a cleaning agent with a flashpoint of 100°C or higher is used for everyday process-based cleaning of the ink system and rubber blanket (i.e. not being repair or technical maintenance activities) of the printing press as part of the process of printing the printed materials to be supplied under this tender, the tender will be given an extra-high rating.</p> <p>If a vegetable-based cleaning agent (VCA) is used, the tender will be given an extra-high rating.</p> <p><i>Verification</i></p> <p>A graphic media company is obliged to document the annual consumption of the cleaning agent used in a consumption log. The tenderer may be asked to submit a copy of the cleaning agent consumption log as documentation.</p>
GC3	<p>Printing plates</p> <p><i>(For offset printing)</i></p> <p>If the printing plates used to produce the printed materials for this tender:</p> <ol style="list-style-type: none"> 1. are prepared using a technology that does not require film, the tender will be given an extra-high rating; 2. use a technology that does not require film and does not require chemicals, the tender will be given an extra-high rating. <p><i>(For digital printing)</i></p> <p>If digital printing is supplied for the purposes of this tender, the tender will be rated as highly as an offset printing tender that uses neither film nor chemicals.</p> <p><i>Explanation</i></p> <p>The digital print process does not use printing plates. Consequently, at the moment that the tenderer has made the choice to produce the printed materials using the offset printing process or the digital process, the tender for digital printing will be rated as highly as a tender for offset printing that uses neither film nor chemicals.</p> <p><i>Verification</i></p> <p>The tenderer may be asked to demonstrate, either with a process description of the technology used by the tenderer or with a signed statement, that the process technology is CTP chemical-free or low-CTP.</p>
GC4	<p>CO₂ footprint</p> <p>The tender with the lowest CO₂ footprint for the printed materials to be delivered under this tender will be rated more highly than the other tenders.</p> <p>The footprint must be calculated in accordance with the method of the international standard “Greenhouse Gas Protocol” (as described in The GHG Protocol Product Life Cycle Accounting and Reporting Standard).</p> <p><i>Explanation</i></p> <p>CO₂ reduction is an issue of increasing concern in the graphic media sector. Likewise, producing a CO₂ footprint calculation is increasingly being seen as standard. As long as this calculation is not truly widespread in the sector, the contracting authority will consider this a plus factor in the evaluation scale.</p> <p><i>Verification</i></p> <p>The tenderer may be asked to provide the CO₂ footprint calculation for the contracting authority to</p>

	<p>review. The calculation method as described in “The GHG Protocol Product Life Cycle Accounting and Reporting Standard” allows a total CO₂ footprint calculation to be made for any specific printing order. This methodology is used in ClimateCalc (http://www.climatecalc.eu) for CO₂ footprint calculations of individual printing orders. If the ClimateCalc CO₂ footprint calculation is used, then the CO₂ footprint calculation is understood to be calculated based on the international standard “Greenhouse Gas Protocol”.</p>
GC5	<p><i>(For offset printing and/or digital printing)</i></p> <p>Recyclability</p> <p>If the printed materials to be delivered are recyclable, the tender will be given an extra-high rating. The printed materials to be delivered are recyclable if:</p> <ul style="list-style-type: none"> • coating layers (dispersion, varnish and UV) and laminates (including polyethylene and/or polyethylene/polypropylene) are only used for the covers of books, magazines, notepads, notebooks and catalogues; and • there is a complete inventory of all materials incorporated into the printed material to be delivered; and • the materials used can be recycled at the end of the printed material's life cycle without losing their original quality; and • the printed paper can be de-inked. <p>"Original quality" is understood such that after the end of the life cycle of the printed materials to be delivered, the material can be used for the same or other useful applications.</p> <p>De-inkable printed paper is defined as printed materials that after recycling consist of virtually entirely clear, inkless, untinted, clean, spotless and filtrate darkening-free material. De-inkability will be assumed if:</p> <ol style="list-style-type: none"> a) the ink manufacturer demonstrates that the ink is de-inkable in accordance with the de-inking score list or equivalent testing method. At the moment that none of the parameters of the de-inking score sheet have a score below 0, the printed paper is de-inkable. For the de-inking score sheet, the testing method INGEDE-method 11 is used. Equivalent test methods that can independently demonstrate that the ink is de-inkable may also be used; or b) (for offset inks) the inks used are mineral-oil based; or c) the printed material holds the EU Ecolabel or Nordic Swan quality mark. <p><i>Verification</i></p> <p>The tenderer may be asked to provide a brief description to demonstrate how the printed materials to be delivered can be recycled at the end of their life cycle without loss of original quality.</p>
GC6	<p>Recycling packaging</p> <p>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. <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 which are suitable for multiple use. <p>The tenderer may be asked to send a sample of the packaging.</p>

7. Contract provisions

No.	Contract provisions (CB)
CB1	<p><i>(For framework contract and multiyear contract for offset printing and/or digital printing)</i></p> <p>Environmental management system reporting</p> <p>Each year, the contractor will report on the present contract to the contracting authority, concerning the contractor's environmental management system and corresponding action plan with points for improvement. This report will address, at a minimum, the control and reduction of the environmental impact of the processes connected to the performance of the contract, including at least energy consumption, VOC emissions, use of the raw materials paper and ink, reduction of start-up losses and misprints, waste production, waste separation, transport and packaging materials involved in the contract and (digital print process only) emissions of ozone and fine particulates.</p> <p><i>Explanation</i></p> <p>Meeting the suitability requirement demonstrates only that the tenderer meets the suitability requirement at the moment of tendering. With this contract provision, the contracting authority can ensure that the contractor continues to apply the measures taken in order to control and reduce the environmental impact of the operating processes in connection with the performance of the contract.</p> <p>Additional contract provisions can include the following should they be relevant:</p> <ul style="list-style-type: none"> • regular consultation between the contractor and contracting authority concerning the objectives to be achieved and the action plan; • regular consultation between the contractor and commissioning authority concerning potential improvements; • recalibrating the action plan during the course of the contract period during the regular consultation sessions.
CB2	<p><i>(For framework contract and multiyear contract for offset printing and/or digital printing)</i></p> <p>Improved environmental performance</p> <p>The contractor will inform the contracting authority (annually) of its product and process innovations that may have an impact on the environmental performance, where these could improve this aspect of the performance of the contract. The contractor will coordinate with the contracting authority on whether such innovations should be applied in the current contract.</p> <p><i>Explanation</i></p> <p>This provision is included to assure the contracting authority of optimal environmental performance by graphic media companies within the context of this contract. With this provision, the contracting authority has the opportunity to benefit from the environmentally oriented innovations of the contractor.</p>