Österreichisches Umweltzeichen

Austrian Eco-label
“UZ 18”

Recycled paper products

Version 6.0
As of: 1 January 2013

For more information, please contact one of the Eco-label addresses:

Federal Ministry of Sustainability and Tourism,
Div. V/7
Mr. Josef Raneburger
Stubenring 1, A-1010 Vienna
Phone: +43 (0)1 71100 61-1250; Fax: Ext. 7649
e-m@il: josef.raneburger@bmnt.gv.at
http://www.umweltzeichen.at

Consumer Information Association (VKI)
Team “Eco-label“
Mr. Josef Reschl
Linke Wienzeile 18, A-1060 Vienna
Phone: +43 (0)1 588 77-206; Fax: Ext. 73
e-m@il: jreschl@vki.at
http://www.konsument.at

Table of contents

Introduction

The present Guideline aims to promote the collection and recovery of waste paper and to make a contribution to resource conservation and the reduction of waste quantities. For products made from recycled paper, the fibrous material has to consist of 100% waste paper. Depending on the product group, the use of up to 60% “Ordinary Medium Grades” is required. This helps to ensure that also low-quality paper is recycled.

The production of paper production is subject to stringent requirements. Limit values for emissions to air and water that reflect the best available techniques have to be observed. The use of raw and auxiliary materials is subject to stringent limitations regarding health-affecting or environmentally harmful impacts of the chemicals. These requirements ensure that the environmental stress resulting from the production process is minimised.

As regards the final products, the focus is on a recyclable product design. Recoverability is among other things ensured by the prohibition of coatings or lamination with foreign materials. Eco-label products also have to comply with quality standards which guarantee that, in spite of the use of recoverables, optimum product durability and thus further conservation of resources will be achieved.

1 Definition of the product groups

For the purposes of this Guideline products eligible for labelling include recycled paper, cardboard or paperboard complying with the criteria defined in points 2 through 4, such as:

1.1 Envelopes with or without window

1.2 Writing pads

1.3 Spiral-bound writing pads

Memo pads – writing pads glued together along one side or wire-stitched

Exercise books

1.4 Note pads – loose or glued sheets, also in combination with paper box

1.5 Stickers

1.6 Others, like cash slips, loose-leaves

1.7 Binders (incl. suspended files), file covers, cassette systems (document and magazine boxes, standing files), ring binders

1.8 Organisation systems with drawers, archive boxes, archive shelves (filing and storage systems)

1.9 Filing systems (lateral and vertical drawer suspension files, cassette registers)

1.10 Folders, loose-leaf binders, indices dividers etc.

2 Health and environmental criteria

2.1 General regulations for raw materials, auxiliary materials and feedstocks

The inspection body in charge of verification shall be notified of all materials and mixtures used in the manufacturing of fibrous material, in waste paper treatment and paper production.

Updated safety data sheets as specified in the REACH Regulation [1] shall be attached to the expert opinion in German or English language.

Materials and preparations which, during production, lose the below characteristics of hazardousness (e.g. where they have been allowed to react) shall be exempt from the quantitative restrictions mentioned.

Substances that are assigned any of the following R phrases according to the Dangerous Substances Regulation [2] or H phrases according to the CLP Regulation [3] may be used as a maximum in the concentrations given in …..

Table 1: Characteristics for classification and limit values

Annex VI to the Substances Directive	CLP Regulation	Limit value in mass % *
Very toxic R26, R27, R28 R39/26, R39/27, R39/28	H300, H310, H330 H370	0.1
Toxic R23, R24, R25 R39/23, R39/24, R39/25 R48/23, R48/24, R48/25	H301, H331, H311 H370 H372	0.1
Carcinogenic	**Carcinogenicity**	
Cat.1, 2: R45, R49	Cat. 1A, 1B: H350, H350i	0.1
Cat. 3: R40	Cat.2: H351	1.0
Mutagenic	**Germ cell mutagenicity**	
Cat. 1, 2: R46	Cat. 1A, 1B: H340	0.1
Cat. 3: R68	Cat.2: H341	1.0
Toxic to reproduction	**Reproductive toxicity**	
Cat.1, 2: R60, R61	Cat. 1A, 1B: H360F, H360D, H360FD, H360Fd, H360Df	0.1
Cat.3: R62, R63	Cat.2: H361f, H361d, H361fd	1.0
Addition lactation: R64	Toxic for reproduction on or via lactation: H362	1.0
Dangerous for the environment	**Environmental hazards**	
R50	Acute aquatic hazard: H400	1.0
R50/53	Chronic (long term) aquatic hazard Cat. 1: H410	1.0
R51/53	Cat. 2: H411	1.0
R59	Hazardous to the ozone layer: EUH 059.	0.1
Substances which, according to Article 59 of the REACH Regulation, have been placed on what is known as the Candidate List. The version of the Candidate List up to date at the time of application shall apply. [4]		0.1
Substances meeting the criteria for PBT (persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative) (REACH, Annex XIII)		0.1
Substances which, according to the (Austrian) Ordinance on Occupational Exposure Limits (‘Grenzwerteverordnung’) [5], are clearly identified as carcinogenic agents (Annex III – A1 and A2) and classified as carcinogenic substance groups or compounds (Annex III – C).		0.1
Substances which, according to the (Austrian) Ordinance on Occupational Exposure Limits (‘Grenzwerteverordnung’) are classified as reasonably suspected of having carcinogenic potential (Annex III – B).		1.0
* The maximum quantities that may be used depend on the concentrations as from which the substances have to be mentioned in the safety data sheet. In cases where a specific limit value for the concentration has been laid down in the CLP Regulation, the lower value shall be used as the limit value. Substances classified as “dangerous for the environment” shall be exempted from this provision; they shall be subject to the limit values given in the table.		

2.2 Specific regulations for raw materials, auxiliary materials and feedstocks

2.2.1 Paper additives and manufacturing auxiliaries

No chlorine or chlorinated agents may be used to bleach the fibrous material (TFC – totally chlorine-free bleaching).
The use of ethylene diamine tetraacetic acid (EDTA) is prohibited.

In principle, the addition of optical brighteners is prohibited.
For paper manufactured exclusively from secondary fibres, optical brighteners of the types C.I.220 and C.I. 260 may be used provided they stick at a level of at least 95% to the substrate to be brightened.
Evidence: The producer of the optical brightener shall provide a declaration that the optical brighteners will stick to the substrate to be brightened at a level of at least 95%. Alternatively, the applicant can demonstrate compliance with the requirement by providing a test certificate from an independent certifying institute stating compliance with the bleeding test according to DIN EN 648 [6] meeting the conditions of Level 5.

Azo dyes which might split off any of the amines listed in Annex 2 must not be used as colorants (pigments or dyes) in the colouring and shading process. Colorants containing mercury, lead, cadmium, or chromium VI compounds as constituting components are excluded from use.

Alkylphenol ethoxylates or other alkylphenol derivatives shall not be added to cleaning substances, de-inking substances, foam inhibitors, dispersants or coatings (stroke). Alkylphenol derivates are defined as substances that upon degradation produce alkyl phenols.

All surfactants used in de-inking shall be ultimately biodegradable. Verification shall follow OECD 302 A-C (or equivalent ISO standards); with a percentage degradation (including adsorption) within 28 days of at least 70 % for 302 A and B, and of at least 60 % for 302 C the surfactant is considered to be biodegradable.

The active components in biocides or biostatic agents used to counter slime-forming organisms in circulation water systems containing fibres shall not be potentially bio-accumulative. Biocides' accumulation potentials are characterised by log Pow (log of the octanol/water partition coefficient) < 3.0 or an experimentally determined bioconcentration factor ≤ 100. For this purpose, one of the below testing methods shall be applied: OECD 107, 117 or 305 A-E.

2.2.2 Fibrous material

The fibres used as raw material, except for product group 1.8, must at 100 % originate from waste paper (tolerance 5 %). For product group 1.8 the share of waste paper must be at least 70%.

The waste paper used for product groups 1.1 – 1.6 must at least at 60% originate from “Ordinary and Medium Grades” (as specified in the “European list of standard grades of paper and board for recycling” ÖNORM EN 643 [7], respectively the European List of Standard Grades of Recovered Paper and Board **1** [8]). For product group 1.7 a portion of at least 40 % of the waste paper must come from “Ordinary and Medium Grades”.

2.3 Specific regulations for raw materials, auxiliary materials and feedstocks

- Printing inks

  UV-curing printing inks are permitted subject to the following conditions:

  Suction system for the printing machines using UV-curing printing inks

  The deinkability of printed products manufactured using UV-curing printing inks has to be proved by means of the “Deinkability Scorecard” [7] of the European Recovered Paper Council. UV printing inks, printing machines and paper grades that are subject to the proof of deinkability shall be defined in detail.

  Pigments:

  Pigments containing antimony[3], arsenic, selenium, mercury, lead, cadmium or chromium VI compounds as constituting components are excluded from use.

  The use of pigments which may release the amines listed in Annex 2 as a consequence of the breakdown of one or more azo groups is not permitted. Pigments in which, following the procedure of the method indicated in Annex 2, none of the amines listed can be detected due to the breakdown of one or several azo groups are exempt from this provision.

  The use of pigments which were synthesised using halogenated organic compounds is not permitted. For yellow and green pigments, this requirement shall be met subject to technical alternatives.

- Glues, adhesives:
  Water-based dispersion adhesives and adhesives based on natural latex are permitted.

1 Ordinary Grades (Group 1): In Austria “Untere Sorten“ (A)
Medium Grades (Group 2): In Austria “Mittlere Sorten“ (B)
High Grades (Group 3): In Austria “Bessere Sorten“ (C)
Kraft Grades (Group 4): In Austria “Krafthaltige Sorten“ (D)

Phthalates that at the time of application are classified with risk phrases H360F, H360D, H361f in accordance with Regulation (EC) No 1272/2008 must not be added to printing inks or adhesives.

- Functional components (e.g. stitching, spiral binding)
  The steel used in wire-stitching shall be cadmium-free. Any plastics/ plastic coatings shall be free from halogenated organic compounds. For filing systems, the synthetic share shall not exceed 1% of the total mass of the product.
- Surface finishing of the printing substrate
  A coating may be applied where this is necessary to maintain fitness for use (protective effect). UV coating is not permitted.
- Plastic lamination is not permitted.

2.3.1 Envelopes

For envelopes with window, pergamin and polystyrene are materials permitted to be used for the window.

2.3.2 Memo pads

Wire-stitching or perfect binding are permitted.

2.3.3 Exercise books

Lettering

Any lettering field shall be printed on the exercise book; the use of adhesive labels is not permitted.

Stitching

Sewn binding or wire stitching are permitted.

Covers for exercise books

No film lamination

Apart from paper made from fibrous material as described in point 2.2.1, also paper which may be used for the manufacturing of printed products according to Eco-label Guideline UZ 24 “Printed products” is permitted.[2]

2.4 Production

The production site is defined as the place where the major part of production takes place.

➢ Official requirements and legal provisions, in particular concerning air, water, waste, environmental information and employee protection, shall be complied with. Both for domestic production sites and for production sites abroad the relevant national provisions shall be met.
In cases where EU provisions are more stringent than national provisions, such EU provisions shall be complied with in any event. The applicant shall confirm compliance with this requirement.

2 For the requirements, see Annex 3.

- A waste management concept shall be presented. It has to contain the items listed in the Decree of the Austrian Federal Ministry of Environment, Youth and Family - BMUJF (now Federal Ministry of Agriculture, Forestry, Environment and Water Management - BMLFUW) [9] on the completeness of company-level waste management plans.

For production sites registered in accordance with the EMAS Regulation [10] or certified in accordance with the Austrian Industrial Standard ÖNORM EN ISO 14001 [11] the above-mentioned requirements shall be deemed satisfied.

2.4.1 Specific requirements concerning the production of fibrous material and paper

2.4.1.1 Emissions

Emissions to water and air and fossil CO_2 emissions relating to the production of fibrous material and paper shall be determined according to the requirements of "paper profile – environmental product declaration for paper" [12]. The determination of the SO_2 and NO_x emissions originating from combined heat and power plants (co-generation plants) and for the calculation of the CO_2 emissions shall follow the explanations in Annex 4.

Depending on the composition of the fibrous material, the emission values, expressed in points, shall be calculated according to Table 2.

Production sites having an environmental management scheme certified in accordance with the Austrian Industrial Standard ÖNORM EN ISO 14001 or validated in accordance with the EMAS Regulation can provide this evidence by means of the records on the wastewater, exhaust air and CO_2 emissions given in the environmental reports or by means of a duly signed paper profile. In any other case the evidence shall be provided by the eco-label verification body.

The weighted total number of points shall not exceed 100; each of the individual emission values must remain below the indicated limit values.

Table 2: Emission limit values paper production

CALCULATION				
Parameter	Limit value	Reference value	Weighting	Calculation of points
COD	≤ 6 kg/t	4 kg/t	10 %	$P_{COD} = 10 \times (COD_{paper}/COD_{reference})$
AOX	≤ 0.07 kg/t	0.01 kg/t	20 %	$P_{AOX} = 20 \times (AOX_{paper}/AOX_{reference})$
SO_2	≤ 0.75kg/t	0.5 kg/t	10%	$P_{SO2} = 10 \times (SO_{2paper}/ SO_{2reference})$
NOx	≤ 1.65 kg/t	1.1 kg/t	10 %	$P_{NOx} = 10 \times (NOx_{paper}/NOx_{reference})$
$CO_{2\ fossil}$	≤ 1100 kg/t	733 kg/t	40 %	$P_{CO2} = 40 \times (CO_{2\ fossil\ paper}/CO_{2\ fossil\ reference})$
$FIBRE_{cert/rec}$	≥ 50 %		10 %	$P_{FIBREcert/rec} = 10 * (2 *(100 - \%_{FIBREcert/rec} /100)$
Points				$P_{TOTAL} = P_{COD} + P_{SO2} + P_{AOX} + P_{NOx} + P_{CO2} + P_{FIBRE}$
EVALUATION				
NUMBER OF POINTS				$P_{TOTAL} \leq 100$

The wastewater of the production site must go through a biological wastewater purification plant which complies with the best available techniques. Definition of the best available techniques according to the IPPC Directive[3] [13] or the relevant reference document [14].

For the residues (in particular from waste paper treatment or bark and fibre residues), proof of material or energy recovery shall be furnished[3]. If this is not possible, this shall be justified in a conclusive way and proof of orderly disposal as provided for in the Austrian Waste Management Act (AWG) shall be provided.

2.5 Packaging

Any plastics used shall be free from halogenated organic compounds. The use of composite materials as packaging material is not permitted.

Individual packaging is not permitted, unless this is a functional necessity.

Those putting packaging in circulation shall either take such packaging back themselves and utilise it or verifiably take part in a collection and recovery system. The provisions of the Austrian Packaging Ordinance shall apply [15].

3 Fitness for use

Compliance with the required standards of fitness for use has to be furnished for the individual product groups.

3.1 Envelopes

- Evidence of the fitness for postal purposes:
  The fitness for processing by means of automated postal address recognition has to be evidenced in a practical test.

3.2 Exercise books

- The products processed must be sufficiently fit for use as regards their mechanical strength.
  The overall evaluation shall be carried out by the expert.
- Area-related mass of the leaves: At least 80 g/m².

3 For the definition, see Annex 1.

3.3 Writing paper (e.g. writing pads, loose-leaves) and exercise books

In the framework of the technical test the following requirements have to be satisfied:

Testing methodologies	Requirements exercise books	Requirements writing paper
Tensile strength; ÖNORM EN ISO 1924-2 [16]		> 35 Nm/g
Abrasion (erasing quality); DIN 53 109 [17]		≤ 30 mg contact pressure 5 N 100 revolutions
Roughness, DIN 53 108 [18]	200-400 ml/min.	
Writability; DIN 53 126 [19]	writable	
Whiteness; DIN 53 145 [20]	> 55 %	> 55 %
Colour fastness of the envelope; ÖNORM EN 646 [21] Test solutions: Distilled water: Artificial perspiration (ÖNORM EN ISO 105-E04) [22]	 4 4	
Tearing test acc. to Elmendorf; ÖNORM EN 21974 [23]	≥ 250 mN (average values of longitudinal and lateral direction)	
Determination of the number of double folds; ISO 5626 [24]	≥ 80 double folds (average values of longitudinal and lateral direction)	

3.4 Specific requirements on product group 1.7 (binders)

5,000 cycles opening and closing of the mechanics and the cover with subsequent setting up of the products. During the test the binder shall be full as in normal use. The product (system) must pass the test without any noticeable functional impairment.

3.5 Specific requirements on product group 1.8

3.5.1 Setting up of the system

5 times setting up (and dismantling) of the system without any noticeable functional impairment.

3.5.2 Movable accessories of the system

Functional accessories of the system, such as folding mechanisms, parts or elements that have to be moved due to the system etc., shall be filled in a way appropriate for the use of the product/element (filling with 80 g/m² paper) and then pass a cycle of 1,000 operations without functional impairment.

3.5.3 Stacking capacity transverse

Stacking capacity for transversally placed elements:
Irrespective of the number of elements of a filing and storage system, the system has to work without any noticeable impairment with a stack height of 15 filled drawers (bottom drawer not filled, flat filling with 80 g/m² paper).

3.5.4 Stacking capacity vertical

Stacking capacity in case of elements positioned vertically: Requirement as in 3.5.3: 6-fold stack height.

3.6 Specific requirements on product group 1.9 (incl. suspended files)

1000 cycles of hanging up and taking off the product. During the test the product has to be filled in a way typical during use (a weight corresponding to the maximum filling weight). The product must pass this test without any noticeable functional impairment.

4 Declaration

On the packaging, respectively on the product or a product information, the following shall be declared:

- Number of Eco-label license
- Information concerning recovery and/or disposal

ANNEX 1

1. **‘best available techniques’**
   shall mean the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole;

   - ‘techniques’ shall include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned;
   - ‘available’ techniques shall mean those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator;
   - ‘best’ shall mean most effective in achieving a high general level of protection of the environment as a whole.

   Considerations to be taken into account generally or in specific cases when determining best available techniques bearing in mind the likely costs and benefits of a measure and the principles of precaution and prevention:

   1. the use of low-waste technology;
   2. the use of less hazardous substances;
   3. the furthering of recovery and recycling of substances generated and used in the process and of waste, where appropriate;
   4. comparable processes, facilities or methods of operation which have been tried with success on an industrial scale;
   5. technological advances and changes in scientific knowledge and understanding;
   6. the nature, effects and volume of the emissions concerned;
   7. the commissioning dates for new or existing installations;
   8. the length of time needed to introduce the best available technique;
   9. the consumption and nature of raw materials (including water) used in the process and their energy efficiency;
   10. the need to prevent or reduce to a minimum the overall impact of the emissions on the environment and the risks to it;
   11. the need to prevent accidents and to minimize the consequences for the environment;
   12. the information published by the Commission pursuant to Article 16 (2) or by international organizations.

2. "**recovery**"
   means any operation the principal result of which is waste inside a plant or in the economy serving a useful purpose

   a) by replacing other materials which would otherwise have been used to fulfil a particular function, or

   b) in the case of preparation for re-use, by waste being prepared to fulfil this function.

   Recovery shall mean the preparation for re-use, the recycling and any other recovery (e.g. energy recovery, the treatment of materials destined for use as fuels, or the filling), including the pre-treatment preceding these measures.

   “material recovery”
   shall mean the ecologically expedient treatment of waste in order to utilize the material properties of the original material with the main purpose of using the waste or the materials recovered from it as a direct substitute for raw materials or products manufactured from primary raw materials, except where the waste or the materials recovered from it undergo thermal recycling.

3. **Packaging**
   To achieve a water vapour barrier needed to maintain the paper functionality, a polyolefin rate of no more than 10 mass% in the packaging is permitted. Proof shall be furnished of the recyclability of the packaging.

ANNEX 2

The following aromatic amines shall not be generated as a result of reductive cleavage of the azo group(s) contained in the pigment and must not be detected in the procedures of the indicated methods.

Methodology:
Testing methods according to the Austrian Industrial Standards ÖNORM EN 14362-1 [25] and ÖNORM EN 14362-3 [26].
If these methods are not deemed a validated method of analysis for a printing substrate according to the present Guideline, the use of the prohibited azo pigments shall not be deemed established for amounts not exceeding 30 mg per amino component in one kilogramme of sample material.

4-Aminobiphenyl	00092-67-1
Benzidine	00092-87-5
4-Chloro-o-toluidine	00095-69-2
2-Naphthylamine	00091-59-8
o-Aminoazotoluol	00097-56-3
2-Amino-4-nitro-toluol	00099-55-8
p-Chloroaniline	00106-47-8
2,4-Diaminoanisol	00615-05-4
4,4'-Diaminodiphenymethane	00101-77-9
3,3'-Dichlorobenzidine	00101-77-9
3,3'-Dichlorobenzidine	00119-90-4
3,3'-Dimethyl-benzidine	00119-93-7
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	00838-88-0
p-cresidine	00120-71-8
4,4'-Methylenebis(2-chloroaniline)	00101-14-4
4,4'-Oxydianiline	00101-80-4
4,4'-Thiodianiline	00139-65-1
o-Toluidine	00095-53-4
2,4'Toluylenediamine	00095-80-7
2,4,5-Trimethylaniline	00137-17-7
4-Aminoazobenzene	00060-09-3
o-Anisidine, 2-Methoxyaniline	00090-04-0

ANNEX 3

The paper grades used shall meet the criteria of one of the below-mentioned national or European Eco-labels.

- Austrian Eco-label [27]
- German Ecolabel – “Blue Angel” [28]
- Nordic Ecolabel – “Nordic Swan” [29]
  For products under item 1.2, proof of the share of secondary fibres shall be provided.
- EU Ecolabel [30]
  For products under item 1.2, proof of the share of secondary fibres shall be provided.

If the paper grades used have not been awarded at least one of the above-mentioned eco-labels, proof of compliance with the following requirements shall be furnished.

The weighted sum of points of the paper grades used, calculated according to Table 2, must not exceed 100, with the individual emission values having to be below the given limits. There has to be a certified environmental management system for the production site of the paper.

The parameters of Table 2 form part of a uniform product declaration of the international paper industry and are published by several paper manufacturers in the form of paper profiles [31]. This declaration shall be added to the expert opinion. Reference and limit values, their weighting and the calculation of the points are explained in the publication “Vorschlag von Grenzwerten für die Mustermappe Ökologische Druckpapiere” [32]. For papers which are part of the sample portfolio “Mustermappe Ökologische Druckpapiere” [33], this requirement is deemed to be met. For products under item 1.2, a proof of the percentage of secondary fibres contained shall be provided.

Table 2: Paper evaluation

CALCULATION				
Parameter	Limit value	Reference value value	Weighting	Calculation of points
COD	≤ 37.5kg/t	25 kg/t	10 %	PCOD = 10 x (COD_{paper}/$COD_{reference}$)
AOX	≤ 0.17 kg/t	0.07kg/t	20 %	PAOX = 20 x (AOX_{paper}/$AOX_{reference}$)
SO_2	≤ 1.35kg/t	0.9kg/t	10%	PSO2 = 10 x ($SO2_{paper}$/ $SO2_{reference}$)
NOx	≤ 3.45 kg/t	2.3 kg/t	10 %	PNOx = 10 x (NOx_{paper}/$NOx_{reference}$)
CO_2fossil	≤ 1,100 kg/t	733 kg/t	40 %	PCO2 = 40 x ($CO2_{fossil\ paper}$/$CO2_{fossil\ reference}$)
Wood $_{CERT}$	≥ 50 %	-	10 %	$P_{FIBREcert/rec}$ = 10 * (2 *(100 - $\%_{FIBREcert/rec}$ /100)
Points				PTOTAL = PCSB + PSO2 + PAOX + PNOx + PCO2 + PWOOD
EVALUATION				
NUMBER OF POINTS				PTOTAL ≤ 100
Environmental management system				Must be available.
CoC certification sustainable forest management (except paper grades made of 100% recycled fibres)				Must be available.

ANNEX 4

Determination of emission parameters

SO_2 and NO_x emissions from co-generation

In case of co-generation of heat and electricity at the same plant, the emissions of SO_2 and NO_x resulting from electricity generation can be subtracted from the total amount. The following equation is used to calculate the proportion of the emissions resulting from electricity generation:

$$2 \times (MWh_{(electricity)})/[2 \times MWh_{(electricity)} + MWh_{(heat)}]$$

The electricity in this equation is the electricity produced at the co-generation plant. The heat in this equation is the net heat delivered from the power plant to the pulp/paper production.

Fossil CO_2 emissions

The CO_2 emissions have to be calculated for the combustion of fossil fuels generated at all paper and pulp production sites during the production of the relevant paper grade for the production of heat and electricity as well as for the electricity purchased.

The following parameters of the Paper Profile shall be used for the determination of the CO_2 emissions and added:

- CO_2 level in kg/t paper
  for emissions generated from the combustion of fossil fuels during the production of pulp and paper.
- Value for the purchased electricity in kW/h
  For the determination of the CO_2 emissions resulting from purchased electricity in kW/h a figure of 400 g CO_2 emissions pro kWh is to be assumed. It is also possible to use the actual CO_2 emissions of the electricity supplier for the calculation, if they are plausibly presented in the expert opinion.

5 Normative standards, acts and other regulations

The documents referred to hereinafter contain provisions which are part of this Eco-label Guideline. Legal provisions shall always be applied as amended. Dated references to other documents do not cover later modifications or revisions of the publication.
In the case of undated references the most recent version of the referenced document shall apply.
Austrian acts can be consulted officially at http://www.ris.bka.gv.at **4**
The current versions of European Union Regulations and Directives are electronically retrievable at: http://eur-lex.europa.eu/de/index.htm

[1] Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, Article 31 and Annex II, amendment 552/2009; Federal Law Gazette II 158/2005

[2] Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances and the relating technical adjustments

[3] ***Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006***

[4] The current Candidate List is available at:
http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp

[5] Federal Law Gazette II No 429/2011: Austrian Ordinance on Occupational Exposure Limits (“Grenzwerteverordnung 2011” – GKV 2011) of 20 December 2011

[6] ÖNORM EN 648, “Papier und Pappe vorgesehen für den Kontakt mit Lebensmitteln – Bestimmung der Farbechtheit von optisch aufgehelltem Papier und Pappe” (Paper and paperboards intended as food-contact materials - determination of the colour fastness of optically brightened paper and paperboard), edition 2006-12-01

4 No responsibility can be accepted for the correctness and completeness of the legal information system. Exclusively the wording of the legal provisions published in the Federal and Provincial Law Gazettes or in other publications shall be decisive.

[7] ÖNORM EN 643, “Papier und Pappe - Europäische Liste der Altpapier-Standardsorten” (Paper and board - European list of standard grades of paper and board for recycling), 2012-10-01 (draft standard)

[8] European List of Standard Grades of Recovered Board, June 2002, published by Confederation of European Paper Industries (CEPI)
http://www.cepi.org

[9] Austrian Federal Ministry of Environment, Youth and Family Affairs, now Federal Ministry of Agriculture, Forestry, Environment and Water Management: “Erlass zum Abfallwirtschaftsgesetz und seinen Verordnungen” (Decree on the Waste Management Act and its ordinances) of 16 August 1995 (ref. no. 47 3504/404-III/9/95).
Leitfaden zum Abfallwirtschaftskonzept (Guidance on the waste management plan:)
http://www.lebensministerium.at/umwelt

[10] ***Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS)***
Official Journal L 342, 22/12/2009 pp. 0001 – 0045

[11] ÖNORM EN ISO 14001; Umweltmanagementsysteme - Anforderungen mit Anleitung zur Anwendung (Environmental management systems - Requirements with guidance for use), 15 August 2009

[12] Paperprofile, www.paperprofile.com

[13] Industrial Emissions Directive (IED), ***Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)***

[14] Reference Document on Best Available Techniques in the Pulp and Paper Industry BREF; December 2001

[15] Austrian Federal Law Gazette 648/1996, “Verpackungsverordnung” (Austrian Packaging Ordinance), 29 November 1996

[16] ÖNORM EN ISO 1924-2; Papier und Pappe; Bestimmung von Eigenschaften bei Zugbeanspruchung – Teil 2: Verfahren mit konstanter Dehngeschwindigkeit (Paper and board; determination of tensile properties – Part 2: Procedure with constant strain rate), 2009-03-15

[17] DIN 53 109; Prüfung von Papier und Pappe; Bestimmung des Abriebs nach dem Reibradverfahren (Testing of paper and board - Determination of abrasion by the abrasion wheel method), May 2008

[18] DIN 53,108; Prüfung von Papier und Pappe – Bestimmung der Rauhigkeit nach Bendtsen (Testing of paper and paperboard – Determination of the roughness using the Bendtsen method), January 2011

[19] DIN 53 126; Prüfung von Papier; Bestimmung der Beschreibbarkeit mit Tinte (Testing of paper and board - Determination of the writing properties by ink); November 2011

[20] DIN 53 145-1; Prüfung von Papier und Pappe – Messgrundlagen zur Bestimmung des Reflexionsfaktors – Teil 1: Messung an nicht fluoreszierenden Proben (Testing of paper and board – Measuring standards for the determination of the reflection coefficient – Part 1: Measurements on non-fluorescent samples), March 2012

[21] ÖNORM EN 646; Papier und Pappe vorgesehen für den Kontakt mit Lebensmitteln – Bestimmung der Farbechtheit von gefärbten Papier (Paper and board intended to come into contact with foodstuffs - Determination of colour fastness of dyed paper and board), 2006-07-01

[22] ÖNORM EN ISO 105-E04; Textilien – Farbechtheitsprüfungen – Teil E04: Farbechtheit gegen Schweiß (Textiles - Tests for colour fastness - Part E04: Colour fastness to perspiration), 2009-06-01

[23] ÖNORM EN 21974; Papier Durchreißversuch (Elmendorf-Methode) (Paper - Determination of tearing resistance (Elmendorf method));
1 September 1994

[24] ISO 5626; Papier, Bestimmung des Falzwiderstandes (Paper; determination of folding endurance); November 1993

[25] ÖNORM EN 14362-1, Textilien - Verfahren für die Bestimmung bestimmter aromatischer Amine aus Azofarbstoffen, Teil 1: Nachweis der Verwendung bestimmter Azofarbstoffe mit und ohne Extraktion der Faser (Textiles - Methods for determination of certain aromatic amines derived from azo colorants - Part 1: Detection of the use of certain azo colorants accessible with and without extracting the fibres), 2012-04-01

[26] ÖNORM EN 14362-3, Textilien - Verfahren für die Bestimmung bestimmter aromatischer Amine aus Azofarbstoffen, Teil 3: Nachweis der Verwendung gewisser Azofarbstoffe, die 4-Aminoazobenzol freisetzen können (Textiles - Methods for determination of certain aromatic amines derived from azo colorants - Part 3: Detection of the use of certain azo colorants, which may release 4-aminoazobenzene), 2012-08-15

[27] Grundlage für die Umweltzeichenvergabe
Richtlinien zur Vergabe des Österreichischen Umweltzeichens UZ 02 „Graphisches Paper“
(Guidance for the award of ecolabels
Guidelines for the award of the Austrian Eco-label UZ 02 “Graphic paper“)

[28] Grundlage für die Umweltzeichenvergabe
Recyclingpaper RAL-UZ 14
(Guidance for the award of ecolabels
Recycled paper RAL-UZ 14)

Zeitungsdruckpapier, überwiegend aus Altpapier und chlorfrei gebleicht (RAL-UZ 72
(Newsprint paper, predominantly made from waste paper and chlorine-free RAL-UZ 72)

[29] Nordic Ecolabelling, Ecolabelling of Printing Paper, Criteria Document

[30] 2011/332/EU: Commission Decision of 7 June 2011 on establishing the ecological criteria for the award of the EU Ecolabel for copying and graphic paper, Official Journal L 149, 08.06.2011 pp. 12 – 24
or
2012/448/EU: Commission Decision of 12 July 2012 establishing the ecological criteria for the award of the EU Ecolabel for newsprint paper, Official Journal L 202, 28.07.2012 pp. 26 – 37

[31] See www.paperprofile.com

[32] Vorschlag von Grenzwerten für die Mustermappe Ökologische Druckpapiere (Proposal for limit values for the sample portfolio for ecological printing papers), ÖKO KAUF Wien, AG Druck, Papier & Büromaterial, September 2002

[33] Mustermappe Ökologische Druckpapiere, Druck-, Büro-, Digitaldruckpapiere und Rolle (Sampe portfolio for ecological printing paper, printing paper, office paper, digital printing papers and reels), ÖKO KAUF Wien, AG Druck, Papier & Büromaterial, current edition