



# **Austrian Ecolabel**

## **EC 65**

# **Footwear**

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## 1 Introduction

The footwear industry is made up of a large number of sub-sectors. These include the entire manufacturing cycle from the production of raw materials (leather, textile fibres, rubber and polymers) to semi-finished products (soles and other parts of shoes including processes) and up to the finished product. For this Ecolabel criteria the entire manufacturing cycle was analysed and the requirements for processes related to the environment have been drawn up.

The aim of the Austrian Ecolabel is to award products which meet high environmental production standards, dispense with chemicals hazardous to health, exhibit excellent usability characteristics and for which the working conditions during manufacturing, as specified in the Jo-In Code, have been adhered to. The Austrian Ecolabel for footwear therefore intends to provide orientation for the consumption of sustainable products by means of:

- Improved environmental standards during the manufacturing process,
- Improvement of on-the-job safety and social conditions during manufacturing,
- Avoidance of chemicals in the product that are hazardous to health,
- Excellent suitability for use.

The Ecolabel criteria for footwear is based on the criteria catalogue of the Blue Angel for footwear (RAL UZ 155). Especially the requirements with regard to tanning processes (without chromium or non-mineral or plant-based tanning substances) and the social conditions for employees during production have been amended or supplemented: Also an RSL list (Restricted Substances List) has been added. The adoption into the Austrian Ecolabel system of the basis for awarding the Blue Angel is an initiative for increasing the cooperation with other national Ecolabel systems.

Interested manufacturers are to be given the opportunity of using two label systems with only the one test. This means that reference is made to German standards, laws and other regulations. If comparable Austrian regulations exist, these will also be specified and then apply equally to the obtainment of the Austrian Ecolabel. Wording which deviates from the RAL UZ 155 will be highlighted in **yellow**.

If an appendix is referred to (Appendix 1 to 10), this has to be submitted to a qualified certification body (testing agency, authorized "expert") as form for the conformity assessment for all products or product series for which the Ecolabels are applied.

The forms are available as download in German and English at:

[www.umweltzeichen.at/schuhe](http://www.umweltzeichen.at/schuhe)

## 2 Scope

The product group “footwear” (or “shoes”) comprises all articles or clothes designed to protect or cover the feet with a solid outsole whose bootleg material consists of leather, textile and/or plastic material. The use of polyvinyl chloride (PVC) shall not be permitted. The footwear shall not contain any electric or electronic components. The term “final product” refers to a pair of shoes.

If insoles are sold separately they too may be awarded the Austrian Ecolabel, provided that they meet the requirements of these basic Criteria.

The applicant shall use Annex 2 to inform the certification body about the materials and components of the final product and submit a colour photo of the corresponding shoe model along with the application documents.

## 3 Requirements

### 3.1 General Requirements

There will be accept test reports from laboratories accredited under DIN EN ISO/IEC 17025 „General requirements for the competence of testing and calibration laboratories“ only.

The test reports to be submitted for compliance with the process-related requirements (para. 3.3) shall be not more than two years old at the time of filing the application.

The test reports to be submitted for compliance with the substance requirements (para. 3.5) shall be not more than one year old at the time of filing the application and for compliance with the serviceability requirements (para. 3.6) shall be not more than two year old.

Recognized environmental management systems such as EMAS or ISO 14001 and other certifications <sup>1</sup> may be considered for reviewing applications and monitoring compliance with the criteria.

Only in the German criteria document Appendix 1 (respectively para 4) includes a list of all legal provisions and test standards mentioned in this document.

See download of UZ 65: [www.umweltzeichen.at/schuhe](http://www.umweltzeichen.at/schuhe)

### 3.2 Requirements for Origin and Production of Certain Raw Materials

The requirements for the production and manufacture of certain raw materials (paras. 3.2 and 3.3) shall apply to all bootleg and/or sole materials of the final product accounting for more than 10 weight percent of the final product. The requirement in para. 3.2.3 and para. 3.3.6 shall be exempted therefrom.

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<sup>1</sup> E.g. the Blue Angel (RAL UZ 155), IVN-label for textiles or leather, GOTS, Oeko-Tex® Standard 100, STeP by Oeko-Tex®, EU-Ecolabel, if a valis certificate is available and if the requirements are comparable with this criteria.

### **3.2.1 Origin of Raw Hides and Skins**

Raw hides and skins shall be obtained from farm animals kept primarily for milk and/or meat production. Wild or endangered species shall be explicitly excluded.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit a corresponding declaration from the leather manufacturer stating that no hides and skins of wild and endangered species are used and that the leather-manufacturing company conducts compliance verification checks on the raw materials used (Annex 3). The applicant shall submit the suppliers' certificates of origin at the request of the certification body.*

### **3.2.2 Origin of Natural Rubber, Wood and Cork**

If wood, including cork or natural rubber, are used these materials shall come from sustainably managed forests. They may not come from illegal felling and trade or from forests that need to be protected for ecological and/or social reasons. Cellulose for synthetic cellulose fibers must come from sustainable forestry.

#### *Compliance Verification*

*The applicant shall provide information on the geographic origin of wood, cork or the natural rubber used for producing rubber products in Annex 1. With respect to the wood, natural rubber or cellulose fibers used the applicant shall submit certificates establishing compliance with this criterion. The certification body will accept certificates from the Forest Stewardship Council (FSC) providing evidence of sustainable forestry and a chain of custody (CoC). As regards wood from the European economic area (EU and EFTA) The certification body recognizes the PEFC certification scheme as equivalent (PEFC - Programme for the Endorsement of Forest Certification Schemes).*

### **3.2.3 Origin of Cotton and other Natural Fibers**

Natural textile fibers (e.g. cotton, hemp, flax, wool) accounting for over 3 percent by weight of the final product shall come from certified organic farming/livestock breeding or from fibers of the conversion period<sup>2</sup> and meet the requirements of Council Regulation (EC) No 834/2007 (EU Organic Regulation) or those of the US National Organic Programmes (NOP).

It shall be guaranteed at all stages of the processing chain that fibers from certified organic agriculture won't be mixed with conventional fibers and certified organic fibers won't be contaminated by contact with banned substances. Fibers used may not come from genetically modified organisms (GMO).

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<sup>2</sup> „Conversion“ means the transition from non-organic to organic farming within a given period of time during which the provisions for organic production have been applied. (Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91, (OJ L 189, 20.07.2007, p.1)

### *Compliance Verification*

*The applicant shall declare compliance with the requirement according to Annex 1. Fibers carrying the German “Bio” seal (German organic logo) or the “Euro Leaf” (EU organic logo) or those marked according to the US National Organic Programme (NOP) will be recognized. Also, the applicant may submit corresponding certificates issued by an internationally IFOAM<sup>3</sup> or EN ISO/IEC 17065 accredited certifier that establish compliance with recognized international and national standards of organic farming.*

*Labelling of products as “in conversion” shall only be possible if the provisions forming the basis of the certification of the fiber production provide for the possibility of such certification for the fiber concerned. However, it must be separately certified according to this provision.*

*Where applicable, the applicant shall, at the request of the certification body, submit a part identification or transaction certificate issued by an accredited certification body proving compliance with the requirement at all stages of the processing chain and including details of the amounts of organic fibers produced.*

## **3.3 Requirements for the Manufacturing Processes for Raw Materials/Materials**

### **3.3.1 Use of Water in the Manufacture of Leather**

The following amounts of water shall not be exceeded:

- 25 m<sup>3</sup>/t for raw skins of cattle,
- 45 m<sup>3</sup>/t for hides of calves, goats and kangaroos,
- 80 m<sup>3</sup>/t for skins of pigs and
- 120 m<sup>3</sup>/t for hides of sheep.

### *Compliance Verification*

*The applicant shall declare compliance with the requirements in Annex 1 and submit a declaration of compliance from the leather-manufacturing company (Annex 3). The application documents shall include a documentation of the annual production and water usage figures. (Upon filing of the application the applicant shall present the annual production and water usage figures for the previous year (Annex 3). These data shall apply to the entire leather tanning process. If semi-finished products are processed (among other things, wet white leather) the pre-supplier shall be asked to make the water usage data for the manufacture of the semi-finished leather product available.*

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<sup>3</sup> <http://www.ifoam.org/germanversion/index.html>

### **3.3.2 Requirements for Wastewater Treatment in Leather Manufacture**

#### **3.3.2.1 Requirements for Wastewater at the Discharge Point**

The wastewater from leather manufacturing shall not exceed the following values upon discharge into a water body:

- COD of 250 mg/l or at least of 90% reduction compared with the inflow on a monthly average,
- 0.5 mg/l for AOX,
- 10 mg/l for ammonium nitrogen,
- 2 mg/l for phosphorus,
- a value of 2 for the toxicity in fish eggs (GEi),
- 2 mg/l for sulfide in a sulfide-containing partial stream (wastewater from soaking, liming and deliming processes, each including rinsing) and
- 1 mg/l for total chromium in a chromium-containing partial stream (wastewater from tanning processes, including samming, as well as from wet-dressing).

This requirement does not apply to permitted discharges into a municipal sewage treatment plant which meets at least the requirements of Council Directive concerning urban waste water treatment (91/271/EEC) of 21st May 1991. The above values for chromium and sulfide must be met at the discharge of the sewage treatment plant – calculated on a pro rata basis for the respective partial stream.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirements in Annex 1 and submit a declaration of compliance from the leather-manufacturing company (Annex 3) as well as test reports according to Annex 25 to the German Wastewater Ordinance or equivalent international test reports. For this purpose, the following test methods may be used:*

- *Chemical oxygen demand (COD): ISO 6060 or DIN 38409-41 or DIN-ISO 15705,*
- *AOX (chloride content < 5g/l): DIN EN ISO 9562 or*
- *AOX (chloride content > 5g/l) DIN 38409-22, respectively*
- *Sulfide: DIN 38405-27 or ISO 10530,*
- *Chromium: ISO 9174 or DIN EN 1233 or EN ISO 11885,*
- *Toxicity in fish eggs: DIN EN ISO 15088.*



*The concentration measurement of sulfide and chromium can be made in the full stream. In such case, the mixing ratio of the partial streams shall be indicated in order to allow a return account.<sup>4</sup> A retrograde calculation taking into account the degradation rate of the sewage treatment plant in accordance with Appendix 8 shall also be admissible.*

*In addition, the applicant shall submit a declaration from the leather-manufacturing company stating that the discharge values of the wastewater treatment plant are checked at least every six months (Annex 3).*

*If the wastewater is discharged into municipal sewage treatment plants (indirect discharge) the applicant shall additionally submit the permit of the leather-manufacturing company evidencing that the discharge has been approved and the municipal sewage treatment plant meets at least the requirements according to 91/271/EEC.*

### **3.3.3 Requirements for Wastewater Treatment during the Processing of Natural Rubber / Latex and the Manufacturing and Processing of Synthetic Rubber**

The wastewater from the processing of natural rubber and/or manufacturing of synthetic rubber shall not exceed the following values upon discharge into a water body:

- 2 mg/l for zinc,
- 0.5 mg/l for lead,
- 1 mg/l for AOX,
- 0.1 mg/l for benzene and its derivatives,
- COD of 150 mg/l or at least 90% reduction compared with the inflow on a monthly average,
- 20 mg/l for total nitrogen (N<sub>total</sub>) and 2 mg/l for total phosphorous (P<sub>total</sub>) as well as
- a value of 2 for the toxicity in fish eggs (GEi).

This requirement shall not apply to approved discharges into a municipal sewage treatment plant that meets at least the requirements of Council Directive 91/271/EEC concerning urban waste water treatment, dated 21st May 1991.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirements in Annex 1 and submit a declaration of compliance from the natural rubber/synthetic rubber-processing company (Annex 4) as well as test reports evidencing compliance*

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<sup>4</sup> Example: In a mixture ratio of 50:50 the required value is 0.5 mg/l for total chromium and 1 mg/l for sulfide.

*with the requirements according to Annex 32 to the German Wastewater Ordinance or equivalent international test reports. For this purpose, the following test methods may be used:*

- *Chemical oxygen demand: ISO 6060 or DIN 38409-41 or DIN-ISO 15705-45,*
- *AOX (chloride content < 5g/l): DIN EN ISO 9562 or DIN EN ISO 9562 or*
- *AOX (chloride content > 5g/l) DIN 38409-22, respectively*
- *Sulfide: DIN 38405-27 or ISO 10530,*
- *Chromium: ISO 9174 or EN 1233 or EN ISO 11885,*
- *Zinc: DIN EN ISO 11885,*
- *Lead: DIN EN ISO 11885,*
- *Benzene and derivatives: DIN 38407-9,*
- *Toxicity in fish eggs: DIN EN ISO 15088.*

*In addition, the applicant shall submit a declaration from the natural rubber/synthetic rubber-processing company stating that the discharge values of the wastewater treatment plant are checked at least every six months (Annex 4).*

*If the wastewater is discharged into municipal sewage treatment plants (indirect discharge) the applicant shall additionally submit the permit from the natural rubber/synthetic rubber-processing company which shows that the discharge has been permitted and the municipal sewage treatment plant meets at least the requirements according to 91/271/EEC.*

### **3.3.4 Requirements for Wastewaters from Textile Finishing Plants**

#### **3.3.4.1 Requirements for Wastewaters at the Discharge Point (Direct Discharge)**

Wastewater from wet processing plants (except for wastewater from water retting of flax and other bast fibers) shall not exceed the following values upon discharge into a water body:

- COD: 160 mg/l (expressed as annual average value),
- BOD<sub>5</sub>: 30 mg/l,
- Sulfite: 1 mg/l,
- Ammonium nitrogen: 10 mg/l,
- Total nitrogen: 20 mg/l,
- Total phosphorus: 2 mg/l,

- The chromaticity shall meet the following values:
  - Spectral absorption coefficient at
    - 436 nm (yellow sector)  $7 \text{ m}^{-1}$
    - 525 nm (red sector)  $5 \text{ m}^{-1}$
    - 620 nm (blue sector)  $3 \text{ m}^{-1}$
  - Toxicity in fish eggs GEI: 2.
  - The pH value of wastewater discharged into surface waters shall be between 6 and 9 (unless the pH value of the receiving waters is outside this range) and the temperature shall be less than  $40 \text{ }^{\circ}\text{C}$  (unless this temperature is already exceeded in the receiving waters).

This requirement shall not apply if it can be proved that the discharge into the municipal sewage treatment plant has been permitted and the municipal sewage treatment plant meets at least the requirements of Council Directive 91/271/EEC of 21<sup>st</sup> may 1991 concerning urban wastewater treatment.

#### **3.3.4.2 Requirements for Wastewaters prior to Mixing (Direct and Indirect Discharge)**

Prior to mixing with other wastewaters the wastewater shall not exceed the following values:

- AOX: 1 mg/l,
- Sulfide: 1 mg/l,
- Copper: 1 mg/l,
- Nickel: 0.5 mg/l,
- Total chromium: 0.5 mg/l,
- Tin: 2 mg/l,
- Zinc: 2 mg/l.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit a declaration of compliance from the operator of the textile finishing plant (Annex 5) as well as test reports substantiating compliance with the requirements according to Annex 38 to the German Wastewater Ordinance or equivalent international test reports. For this purpose, the following test methods may be used:*

- *COD: ISO 6060 or DIN 38409-41 or DIN ISO 15705 for the qualified random sample or the 2-hour mixed sample,*
- *Copper and nickel: ISO 8288,*
- *Sulfide: DIN 38405-27 or ISO 10530,*

- *Sulfite: DIN EN ISO 10304-3,*
- *Toxicity in fish eggs: DIN EN ISO 15088,*
- *AOX (chloride content < 5g/l): DIN EN ISO 9562,*
- *AOX (chloride content > 5g/l): DIN 38409-22,*
- *Spectral absorption coefficient: DIN 38404-3,*
- *Ammonium nitrogen: DIN EN ISO 11732:2005,*
- *Total nitrogen: DIN EN ISO 12260,*
- *Total phosphorus: DIN EN ISO 11885,*
- *Tin: DIN EN ISO 11885,*
- *Zinc: DIN EN ISO 11885.*

*The sewage treatment plant shall be inspected regularly. For this purpose, the applicant shall submit a declaration from the operator of the textile finishing plant stating how often the outflow values are measured (at least twice a year). (Annex 5)*

*As an alternative to measuring the copper, nickel and chromium contents the applicant may submit a declaration from the operator of the textile finishing plant stating that metal complex dyes containing copper, chromium or nickel do not form part of the dyeing formula. (Annex 5)*

*If the wastewater is discharged into a municipal sewage treatment plant the applicant shall additionally submit the permit of the textile finishing plant which shows that the discharge has been permitted and the municipal sewage treatment plant meets at least the requirements according to 91/271/EEC.*

### **3.3.5 Requirements for Exhaust Air Emissions in Textile Finishing**

Total organic substances as total carbon shall not exceed 0.8 g C per kg of textiles during the thermosetting, thermosoling, coating, impregnating or wet finishing of textiles including the respective drying facilities.

An additional maximum of 0.4 g C per kg of textiles may be emitted from carry-overs from upstream processes and residual contents of preparations each.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit a confirmation from the operator of the textile finishing plant declaring compliance with the requirement. (Annex 5)*

*For this purpose, the operator shall submit either a report according to Appendix 2 including a projection of emissions on the basis of substance emission factors*

*or a test report according to DIN EN 12619. When testing according to DIN 12619 the product-related emission factor shall be determined from the measured concentration value and the actual air/product ratio. The calculation formula, including an example calculation, can be seen from Appendix 2.*

### **3.3.6 Requirements for the tanning process**

Exclusively admitted are leather and skins from non-mineral or plant-based tanning processes. Quebracho or other plant-based tanning substances are inadmissible for tanning if they originate from over-exploitation of environmental resources.

#### *Compliance Verification*

*The applicant submits a list of all suppliers of leather and skins. The suppliers submit a list to the expert of all substances used for the tanning process of all certified products and - in case of plant-based raw materials - their origin and the annual quantity of leathers and skins which have not been tanned with chromium.*

### **3.4 Requirements for Completion Processes (Footwear Manufacture)**

Total emissions of volatile organic compounds (VOC)<sup>5</sup> in terms of the Solvent Emissions Directive (1999/13/EC) during completion of footwear production shall not exceed following limits:

25 g VOC/pair (on average) until 31<sup>st</sup> March 2017

20 g VOC/pair (on average) from 1<sup>st</sup> April 2017

If the value cannot be satisfied by integrated production measures a suitable reduction measure shall be applied.

#### **Compliance Verification**

*The applicant shall declare compliance with the requirement in Annex 1 and submit the calculation of VOC emissions during completion of footwear production. The calculation shall be made in accordance with Directive 1999/13/EC. Further information on the calculation can also be gathered from DIN EN ISO 14602:2005-02. The footwear manufacturer shall indicate the reduction method used.*

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<sup>5</sup> „Volatile organic compound“ means any organic compound having at 293.15 K (i.e. 20°C) a vapour pressure of 0.01 kPa or more, or having a corresponding volatility under the particular conditions of use. For the purpose of Directive 1999/13/EC, the fraction of creosote which exceeds this value of vapour pressure at 293.13 K shall be considered a VOC.

### 3.5 Requirements for Chemicals, Auxiliaries and Dyes

The requirements apply to all components of the final product (shoe) accounting for more than 3 weight percent as well as for all materials intended for skin contact/inside materials.

#### 3.5.1 General Exclusion of Substances with Certain Properties

The final product as well as the materials used must not contain any of the following substances<sup>6</sup>:

a) Substances which are identified as particularly alarming according to the Chemicals Regulation REACH (EG/1907/2006)<sup>7</sup> and which have been incorporated into the list pursuant to Article 59 (1) of the REACH Regulation (so-called “list of candidates”). The list of candidates being effective at the time of application filing shall be applicable<sup>8</sup>.

b) Substances which in accordance with the criteria of the Regulation (EC) No 1272/2008<sup>9</sup> (or Directive 67/548/EEC) are assigned the H Phrases (R Phrases) listed in the following table or which meet the criteria for such classification.<sup>10</sup>

c) Exempted from regulations a) and b) are impurities in concentrations not indicated in the Material Safety Data Sheet. The components to be indicated in the Material Safety Data Sheet must meet the requirements set forth in Point 3 of Annex II to the REACH Regulation (EC/1907/2006).<sup>11</sup>

If, accordingly, the substance is a component of a preparation (mixture), its

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<sup>6</sup> Terms as defined in Section 3, paras. 1-4 of the Publication of the Revised Version of the German Chemicals Act of 2 July 2008, as amended, (Federal Law Gazette, I, No. 28, p. 1146).

<sup>7</sup> 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

<sup>8</sup> The current version of the List of Candidates can be found at:  
[http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp)

<sup>9</sup> 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 (GHS Regulation).

The GHS Regulation (Globally Harmonized System), that has come into force on January 20, 2009, replaces the old Directives 67/548/EEC (Dangerous Substances Directive) and 1999/45/EC (Dangerous Preparations Directive). According to the said regulation, substances are classified, labelled and packed until December 1, 2010 according to Directive 67/548/EEC while mixtures (formerly preparations) are classified, labelled and packed until June 1, 2015 according to Directive 1999/45/EC. Thereafter the GHS Regulation shall be applied. The new indications of danger (H Phrases) as well as the hitherto applicable R Phrases shall be indicated for substances until the 1st of June 2015.

<sup>10</sup> The harmonized classifications and labelling of dangerous substances can be found in Part 3 of Annex VI to Regulation (EC) No 1272/2008 (GHS Regulation). Table 3.1 lists classifications and labellings according to the new system using H Phrases, Table 3.2 lists classifications according to the old system using R Phrases. The GHS Regulation can be found, for example, at: [http://www.reach-info.de/ghs\\_verordnung.htm](http://www.reach-info.de/ghs_verordnung.htm). In addition, a comprehensive classification and labelling inventory will be made publicly available on the ECHA website from December 1, 2010 which will also include the manufacturers' self-classifications of hazardous substances.

concentration may not exceed the general consideration limits specified in the Preparations Directive (1999/45/EC) or in the GHS Regulation (EC/1272/2008). If a more stringent specific concentration limit exists for a substance in a mixture the latter shall apply.

d) Exempted from regulation b) are monomers or additives which turn into polymers during the manufacture of plastics or are chemically (covalently) bound to the plastic if their residual concentrations are below the consideration limits for mixtures.

e) Upon evaluation by the Umweltbundesamt (Federal Environmental Agency – Germany or Austria) further exemptions from regulation b) may be adopted, provided that these are technologically non-substitutable substances and consumer safety continues to be guaranteed. Appendix 3 includes a list of permitted exemptions.

f) Additionally a restricted substances list (RSL) has to be applied for the final product and all materials if there are stronger requirements in the RSL or if there are - in comparison with EC 65 - additional substances listed (updated list at the date of application, application maximum one year old).

CADS-list, see: [www.cads-shoes.com/Dokumente.html](http://www.cads-shoes.com/Dokumente.html)

g) Substances according to POP-Regulation EG 850/2004.

<b>Regulation (EC) No 1272/2008 (GHS-Regulation)</b>	<b>Directive 67/548/EEC (Dangerous Substances Directive)</b>	<b>Wording</b>
<b>Toxic Substances</b>		
H300	R28	Fatal if swallowed
H301	R25	Toxic if swallowed
H304	R65	May be fatal if swallowed and enters airways
H310	R27	Fatal in contact with skin
H311	R24	Toxic in contact with skin
H330	R26	Fatal if inhaled
H331	R23	Toxic if inhaled
H370	R39 in combination with R23, R24, R25, R26, R27 and/or R28	Causes damage to organs
H371	R68 in combination with 20, 21 and/or 22	May cause damage to organs
H372	R48 in combination with R23, R24 and/or R25	Causes damage to organs
H373	R48 in combination with 20, 21 and/or 22	May cause damage to organs
<b>Carcinogenic, mutagenic and reprotoxic substances:</b>		
H340	R46	May cause genetic defects
H341	R68	Suspected of causing genetic defects
H350	R45	May cause cancer
H350i	R49	May cause cancer by inhalation
H351	R40	Suspected of causing cancer
H360F	R60	May damage fertility
H360D	R61	May damage the unborn child
H360FD	R60/61	May damage fertility. May damage the unborn child
H360Fd	R60/63	May damage fertility. Suspected of damaging the unborn child
H360Df	R61/62	May damage the unborn child. Suspected of damaging fertility
H361f	R62	Suspected of damaging fertility
H361d	R63	Suspected of damaging the unborn child
H361fd	62/63	May damage fertility. May damage the unborn child
H362	R64	May cause harm to breast-fed children
<b>Water-Hazardous Substances</b>		
H400	R50	Very toxic to aquatic life



H410	R50/53	Very toxic to aquatic life with long-lasting effects
H411	R51/53	Toxic to aquatic life with long-lasting effects
<b>Other Health and Environmental Effects</b>		
EUH059	R59	Hazardous to the ozone layer

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit a conformation from the pre-supplier according to Annex 6 stating that these requirements are met. The relevant Material Safety Data Sheets shall be made available.*

### **3.5.2 Special Substance Requirements**

The special substance requirements shall apply in addition to the general substance requirements. They explicitly refer to particularly problematic substances and specify them by requiring a test on the materials used or on the final product.

#### 3.5.2.1 Preservation of Raw Skins and Tanned Semi-Finished Products

The preservation of skins and tanned semi-finished leather products shall only be permitted under the following conditions:

Chemical preservation for transportation and storage shall be avoided to the greatest extent possible. If preservatives are used for the preservation of skins they must meet the requirements in para. 3.5.1 (general substance requirements) except for the labelling as toxic substances. Moreover, only those preservatives may be used for which a determination method for leather exists and which are not listed as a strong contact allergen in the BgVV-List<sup>12</sup> (Cat. A). Besides, the preservatives must not exceed the maximum contents in leather listed in Appendix 4.

A chemical preservation of the finished leather shall not be permitted.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit a declaration from its leather suppliers (Annex 3) who shall either declare that the product does not undergo chemical preservation treatments (gapless from slaughter to the finished leather) or name the preservatives used on the leather.*

*If preservatives are used the application documents shall include a test protocol listing the preservative contents in accordance with the test methods specified in Appendix 4.*

<sup>12</sup> Chemikalien und Kontaktallergien – Eine bewertende Zusammenstellung (Chemicals and Contact Allergies – An Evaluation Summary), Editor: D. Kayser und E.Schlede, Publisher: Loseblattsammlung Urban und Vogel, München (Munich) 2001 – BgVV: Bundesinstitut für Gesundheitlichen Verbraucherschutz Und Veterinärmedizin (German institute for consumer health protection and veterinary medicine)

*Moreover, the leather suppliers shall promise continuous compliance verification (Annex 3) and submit additional test reports at the request of the certification body.*

### 3.5.2.2 Biocides and Biostatic Products

Biocides as defined in the Biocidal Products Directive **528/2012** and biostatic products<sup>13</sup> shall not be used except in accordance with the requirement in para. 3.5.2.1.

This includes the ban on the use of dimethylfumarate (DMF)<sup>14</sup> and the following chlorophenols: pentachlorophenol (PCP), tetrachlorophenol (TCP) and 2,4,6 trichlorophenol as well as their salts and esters.

In-can preservatives in concentrations that need not be indicated in the Material Safety Data Sheet shall be exempted therefrom.

#### *Compliance Verification*

*The applicant shall declare in Annex 1 that no biocidal finishing agents are applied to the materials used, explicitly confirm the exclusion of dimethylfumarate, pentachlorophenol (PCP), tetrachlorophenol (TCP) and 2,4,6 trichlorophenol and submit corresponding test reports:*

- *Dimethylfumarate: GC-MS analysis after solvent extraction for the product or part of product (limit less than 0.1 mg/kg<sup>15</sup>).*
- *Chlorophenols in leather: DIN EN ISO 17070 (total limit value 0.5 mg/kg)*
- *Chlorophenols in textiles: measurement results for pentachlorophenol (PCP) in accordance with the official collection of test methods according to Section 64 LFGB (Food, Consumer Goods and Feed Code) B 82.02-8<sup>16</sup> and for tetrachlorophenols (TeCP) on the basis for DIN EN ISO 17070.<sup>17</sup>*

*The content of chlorophenols in finished fabrics for infants and young children under the age of three shall not exceed 0.05 mg/kg for PCP and Tri-CP each as well as for the sum of tetrachlorophenols (TeCP) and for all other textiles a total of 0.5 mg/kg.*

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<sup>13</sup> All substances with growth-inhibiting and multiplication-inhibiting effects are considered as biostatic products.

<sup>14</sup> Prohibited in the EU by Biocides Directive 98/8/EC, prohibited for imports by Commission Decision 2009/251/EC, transposed into German law by "Technische Spezifikation nach § 4 Abs. 2 GPSG - Kriterien für die Beurteilung von DMF-haltigen Produkten" (Technical Specification according to Section 4, para. 2, GPSG - Equipment and Product Safety Act – Criteria for evaluating DMF-containing products)

<sup>15</sup> Commission Decision 2009/251/EC of 17 March 2009 requiring Member States to ensure that products containing the biocide dimethylfumarate are not placed or made available on the market.

<sup>16</sup> Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch (Lebensmittel- und Futtermittelgesetzbuch – LFGB – Food, Consumer Goods and Feed Code) LFGB, dated 1 September 2005, amended by the Ordinance of 3 August 2009, I 2630; Section 64: Official collection of test methods, - Publications

<sup>17</sup> Test reports according to Öko-Tex Standard 100 will also be recognized.

### 3.5.2.3 Chromium VI in Leather and total chromium content

Shoes made of leather may not contain hexavalent chromium (chromium (VI)) as contamination. The content of total chromium is limited with 250 ppm.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit to the certification body first when filing the application and then every six months as well as when changing the formula a test report according DIN EN ISO 17075:2008 stating that hexavalent chromium (chromium (VI)) has not been detected (limit of detection 3 ppm).*

*Additionally a chemical extraction of total chromium has to be done according to ÖNORM EN ISO 17072-2 resp. DIN EN ISO 17072-2.*

### 3.5.2.4 Total Contents of Heavy Metals in Leather, Natural Rubber and Plastics

With respect to arsenic, cadmium or lead the materials used in the final product may not exceed a limit of 50 mg/kg per heavy metal.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit to the certification body corresponding test reports establishing compliance with requirement. The test report shall refer either to the test of individual materials used for manufacturing the final product or to the final product itself. The test shall be conducted in accordance with DIN EN 14602 or on the basis of DIN EN ISO 17072-2.*

### 3.5.2.5 Nickel and its Compounds

If nickel is used in metal objects that come into contact with the skin for a prolonged period the migration limit for metal alloys which are in direct and prolonged contact with the skin ( $0.5 \mu\text{g}/\text{cm}^2/\text{week}$ ).

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement and submit a certificate from the supplier stating that the metallised component used meets this requirement. Alternatively, the applicant may submit a test report issued by a testing laboratory accredited for this test attesting the safety with respect to dermal exposure. DIN EN 1811, possibly in combination with DIN EN 12472, may be used as test method.*

### 3.5.2.6 Extractable Heavy Metals in Leather and Textiles

The extractability of the following heavy metals shall not exceed the limits listed in the table below:

Extractable Heavy Metals	Limit
Antimony	5 mg/kg
Arsenic	0.2 mg/kg
Lead	0.8 mg/kg
Cadmium	0.1 mg/kg
Chromium in the textile material	2 mg/kg
Chromium (VI) in the textile material	< 0.5 mg/kg
Cobalt	4 mg/kg
Copper	50 mg/kg
Nickel	4 mg/kg
Mercury	0.02 mg/kg

### *Compliance Verification*

*The applicant shall declare compliance with the requirements in Annex 1 and submit a test report according to the following test methods:*

*For leather: DIN EN ISO 17072-1 (still a draft), the leather samples shall be prepared in accordance with EN ISO 4044.*

*For textiles: based on the test method DIN 54233-2:2010-02 (still a draft).*

*Chromium (VI) in the textile material may also be measured using the method specified in DIN 38405-24 (D-24). However, the detection limit may not exceed 0.5 mg/kg.*

*Extraction tests shall be performed for 4 hours at 37°C using an artificial acidic sweat solution.*

### 3.5.2.7 Organotin Compounds in Leather and Plastic Coatings, Plastics and Textile Materials

Organotin compounds shall not be used.

### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1.*

*Moreover, the applicant shall submit the measurement results based on the test method DIN EN ISO 17353 or according to other suitable test methods<sup>18</sup>. The content of the respective organotin compounds shall not exceed the following limits:*

<i>Tributyltin compounds (TBT)</i>	<i>0.025 mg/kg</i>
<i>Dibutyltin compounds (DBT)</i>	<i>1 mg/kg</i>

<sup>18</sup> Test methods of DIN EN ISO 17025 accredited testing laboratories will be recognized. The same applies to test reports in accordance with Öko-Tex Standard 100.

<i>Diocetyl tin compounds (DOT)</i>	<i>1 mg/kg</i>
<i>Monobutyl tin compounds (MBT)</i>	<i>1 mg/kg</i>
<i>Triphenyl tin (TPT)</i>	<i>1 mg/kg</i>

### 3.5.2.8 Formaldehyde in Leather and Textiles

The use of formaldehyde shall not be permitted.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1.*

*With regard to leather materials the applicant shall submit the measurement results according to the test methods DIN EN ISO 17226-1 or DIN EN ISO 17226-2. With regard to the textile materials used the applicant shall also submit the measurement results according to the test method DIN EN ISO 14184-1.<sup>19</sup>*

*The amount of free and partially hydrolysable formaldehyde from other sources shall be less than 20 mg/kg in final products for infants and young children until the age of three (shoe size up to and including (German) size 28) and less than 75 mg/kg for all other materials.*

### 3.5.2.9 Use of Dyes in Leather, Textiles and Plastics

Azo dyes shall not be used that may cleave to any one of the aromatic amines listed in Appendix 5.

Moreover, no carcinogenic, mutagenic or reprotoxic disperse dyes or pigments or sensitizing dyes shall be used for dyeing.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit – for dyed materials - a corresponding declaration from its pre-suppliers (Annex 7) stating that the dyes listed in Appendix 5 are not used.*

*Moreover, the applicant shall submit the following test reports (not applicable to non-dyed materials – however, this needs to be explicitly confirmed by the testing laboratory in the test report):*

#### *For azo dyes in leather:*

*The applicant shall submit the measurement results according to the test method DIN EN ISO 17234-1 for leather and the measurement results according to the test method DIN EN ISO 17234-2 (still a draft) for 4-aminobenzene. The detection limit shall be 20 mg/kg each.*

#### *For azo dyes in textiles:*

*The applicant shall submit the measurement results according to the test methods DIN EN 14362-1:2010-02 and DIN EN 14362-03:2010-05 (both still a*

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<sup>19</sup> Test reports in accordance with Öko-Tex Standard 100 will also be recognized.

draft)<sup>20</sup>. The detection limit shall be 20 mg/kg each. (Note: The measurement of 4-aminoazobenzene may show false positive values; a check measurement is therefore recommended).

For disperse dyes in textiles:

The applicant shall submit the measurement results according to the test method DIN 54231 or according to other suitable test methods. (The detection limit shall be 50 mg/kg each.)<sup>21</sup>

### 3.5.2.10 Phthalates and Plasticizers in Plastics, Natural Rubber and Coatings or Printings of Materials

Neither the plasticizer tri(2-chloroethyl) phosphate (TCEP) nor the following phthalates may be used in the plastics, natural rubber or coated or printed materials used:

DNOP (di-n-octyl phthalate), DINP (di-isononyl phthalate), DIDP (di-isodecyl phthalate), DEHP (diethylhexyl phthalate), DBP (dibutyl phthalate), BBP (benzyl butyl phthalate) and DIBP (di-isobutyl phthalate). Addenda see CADS-list according to para 3.5.1.

*Compliance Verification*

The applicant shall declare compliance with the requirement in Annex 1 and submit a corresponding test report. Testing shall be conducted according to DIN EN ISO 18856 or DIN EN 14602.

The certification body will accept suitable test methods of DIN EN ISO 17025 accredited testing laboratories for the test for TCEP.

The total of the above-mentioned phthalates and plasticizers shall not exceed 1000 mg/kg.

### 3.5.2.11 Polycyclic Aromatic Hydrocarbons (PAHs) in Plastics and Natural Rubber

The limits for polycyclic aromatic hydrocarbons (PAHs) for award of the GS label, category 2, (materials with foreseeable skin contact longer than 30 sec) shall not be exceeded in the plastics and natural rubber or rubber materials used.

*Compliance Verification*

The applicant shall declare compliance with the requirement in Annex 1 and submit either the GS Certificate or a test report or evidence that the required limits are met. The measurements shall be performed in accordance with the specifications set forth in the papers ZEK "Prüfung und Bewertung von Polyzyklischen Aromatischen Kohlenwasserstoffen (PAK) bei der GS-Zeichen-Zuerkennung" (Testing and Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) for Award of the GS Label – valid version at the time of application, the application which is maximum one year old).

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<sup>20</sup> Test reports in accordance with Öko-Tex Standard 100 will also be recognized.

<sup>21</sup> Test reports in accordance with Öko-Tex Standard 100 will also be recognized.

### 3.5.2.12 N-Nitrosamines in Synthetic and Natural Rubber

Synthetic and natural rubber shall not contain the N-nitrosamines listed in Appendix 6.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and either state that during manufacture no vulcanisation accelerators have been used which may produce N-nitrosamines or submit a corresponding test report. Testing shall be performed according to DIN EN 12868 or on the basis of DIN EN 14602.*

*(Release test by means of a saliva test solution for a period of 24 hours at a temperature of  $40 \pm 2^\circ\text{C}$ . The quantification limit of the analysis method must be less than  $1 \mu\text{g}/\text{dm}^2$  (cf. Directive 93/11/EEC).*

### 3.5.2.13 Dimethylformamide in Synthetic Leather and Polymer Coatings

The use of dimethylformamide in synthetic leather or polymer coatings based on polyurethane shall not be permitted.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1. If synthetic leather or polymer coatings are used the applicant shall submit a confirmation from its suppliers (Annex 8) that no dimethylformamide has been used and present a corresponding test report. Testing shall be performed by methanol extraction and GC-MS determination. The dimethylformamide content shall not exceed 10 mg/kg.*

### 3.5.2.14 Short-Chain Chloroparaffins/Chloroalkanes

C10-C13 chloroalkanes may not be used in leather, rubber or textile components.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit a confirmation from its suppliers (Annex 9) as well as a corresponding test report. Testing shall be performed by methanol extraction and GC-MS determination. The content of short-chain chloroalkanes shall not exceed 1 g/kg.*

### 3.5.2.15 Chlorinated Benzenes and Toluenes

The chlorinated benzenes and toluenes listed in Appendix 6 shall not be used in dyed synthetic fibers.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1. Moreover, the applicant shall submit the test results according to test method*

*DIN 54232:2010-08<sup>22</sup>. The content of these compounds shall not exceed 1 mg/kg.*

### 3.5.2.16 Alkylphenol Ethoxylates and Alkylphenols

Alkylphenol ethoxylates (APEOs), specifically nonylphenols and nonylphenol ethoxylates, may not be used (additional substances see SVHC-candidate-list resp. CADS-list).

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit either a confirmation from its suppliers (Annex 10) or a corresponding test report. Testing shall be performed by solvent extraction and GC-MS determination or LC-MS determination.*

*The content of alkylphenols and alkylphenol ethoxylates shall not exceed 100 mg/kg each.*

### 3.5.2.17 Perfluorinated and Polyfluorinated Chemicals

No perfluorinated and polyfluorinated chemicals (PFCs) may be used.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1.*

### 3.5.2.18 Flame-Retardants

Flame-retardants shall be permissible only to conform with German or Austrian legal fire protection requirements to ensure safety at work. No halogenated flame-retardants may be used. The flame-retardants used must meet the requirements in para. 3.5.1.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit corresponding test evidence to the certification body as needed.*

### 3.5.2.19 Use of Nanomaterials

The use of synthetic nanomaterials<sup>23</sup> in processes or in the finishing shall be not permitted.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1.*

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<sup>22</sup> Test reports according to Öko-Tex Standard 100 will also be recognized.

<sup>23</sup> Definition based on DIN CEN ISO/TS 27687:2008-11.



## **3.6 Serviceability**

### **3.6.1 Odour Test**

The product must have a product-specific smell. On a five-grade scale from “odourless” to “intolerable odour” the odour test must at least meet level 3 (strong but tolerable odour).

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit a test report. The required olfactory test shall be made with at least 7 test persons on the basis of SNV 195651.*

### **3.6.2 Durability**

The criteria listed in Appendix 7 concerning flex resistance, tear strength, abrasion resistance, upper sole adhesion as well as tear strength and colour fastness to rubbing shall be complied with.

#### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit a test report stating that the parameters listed in Appendix 7 are complied with using the following test methods:*

- *DIN EN 13512 — Test methods for uppers and lining – Flex resistance,*
- *DIN EN 13571 — Test methods for uppers, lining and insoles, Tear strength,*
- *DIN EN ISO 17707 — Test methods for outsoles – Flex resistance,*
- *DIN EN 12770 — Test methods for outsoles – Abrasion resistance,*
- *DIN EN ISO 17708 — Test methods for whole shoe – Upper sole adhesion*
- *DIN EN 12771 — Test methods for outsoles – Tear strength,*
- *DIN EN ISO 17700 — Test methods for uppers, linings and insoles – Colour fastness to rubbing.*

## **3.7 Packaging**

The plastics used in the packaging shall not contain any halogenated polymers. If the shoes are packed in boxes the boxes shall be made of 100 % recycled material. The products shall be packed so as to allow degassing of volatile organic substances. Neither the transportation packaging nor the product packaging may contain dimethyl fumarate.

### *Compliance Verification*

*The applicant shall declare compliance with the requirement in Annex 1 and submit – where applicable – a sample of the product packaging (photo) to the certification body.*

## **3.8 Consumer Information**

If the final products are sold **in German speaking countries** the entire consumer information (for example, with respect to product care and cleaning) shall also be written in German. The applicant shall indicate in a way accessible to the consumer (either on the product itself or via the Website) the materials and components used in the final product (percentage by weight: > 5%; in total at least 75% of the final product).

### *Compliance Verification*

*The applicant shall submit a copy of the consumer information (possibly a photo) to the certification body.*

## **3.9 Working Conditions**

Fundamental principles and rights with regard to working conditions, as specified in the Jo-In-Code <sup>24</sup> are adhered to (or striven for) in the finishing or make-up process (assembling stages such as gluing and sewing).

This codex includes the following main topics (International Labour Organisation <sup>25</sup> (ILO) - core labour standards are in bold characters):

- Freedom of association and collective contract negotiations (ILO conventions **87**, **98**, 135, 154): The right of employees to establish trade unions and the right to negotiate collective contracts must be granted. No discrimination against union members.
- No forced labour (ILO conventions **29** and **105**): Workers must not be forced to work due to extortion, the threat of violence or intimidation.
- No child labour (ILO conventions **138** and **182**): Employment only from age 15 or after completing the prescribed number of compulsory school years.
- No discrimination (ILO conventions **100**, **111**, 183): Equal opportunity and equal treatment is to be ensured. Employment irrespective of skin colour, religion, gender, political opinion and nationality.
- Industrial safety and protection of health (ILO convention 155): Regulations governing safety and hygiene must be adhered to. Physical or psychological abuse, disciplinary punishment or intimidation are totally inadmissible.
- Wages (ILO conventions 95 and 131): "Living Wages": The wages must guarantee workers and their families a decent and humane livelihood. The wages are to be specified in a written agreement. Wage deductions as a means of punishment are not permitted.

- Working times (ILO convention no. 1): No prescribed, unpaid overtime. The working times must conform to the legally prescribed working times. Employees must not be forced to regularly work more than 48 hours. They are to have at least one day off per week, and the legally provided entitlement to holidays must be adhered to.
- Fixed employment: Duties and rights of employees must be stipulated in a written agreement.
- Threats and misuse: Each employee must be treated with dignity and respect. Physical or psychological abuse, disciplinary punishment or intimidation are totally inadmissible.

Additionally excluded is sandblasting.

#### *Compliance Verification*

*The applicant is a member of one of the following initiatives and the applicant or the products has/have been certified and audited according to the following:*

a) (Fair Wear Foundation) [www.fairwear.org](http://www.fairwear.org).

b) ETI (Ethical Trading Initiative) [www.ethicaltrade.org](http://www.ethicaltrade.org)

*Audited by SEDEX / SMETA*

c) SA 8000 (Social Accountability 8000) [www.sa-intl.org](http://www.sa-intl.org)

*The certification according to SA 8000 is to be carried out only by accredited organisations.*

d) GOTS [www.global-standard.org/](http://www.global-standard.org/)

*or*

*IVN-Standards [www.naturtextil.de/verbraucher/qualitaetszeichen.html](http://www.naturtextil.de/verbraucher/qualitaetszeichen.html)*

*If the visual inspection of a shoe gives the impression that sandblasting has been used, the applicant must precisely document the process that has been used (e.g. process documentation of Fair Wear Foundation).*

## Appendix 2 to the Austrian Ecolabel Criteria EC 65

### Calculation of Exhaust Air Emissions in Textile Finishing

The substance emission factors shall be made available by the manufacturer of textile agents as product information.

The substance emission factor is defined as the amount of substance in gram that may be emitted under defined process conditions (curing time, temperature, substrate) from 1 kg of textile auxiliary.

#### 1. Calculation of the product-related emission factor from substance emission factors:

$$WF_C = \Sigma(FA \times FK \times f_C)$$

THM: Textile auxiliary

WF<sub>C</sub>: Product-related emission factor in g of total organic carbon per kg of textile material

FA: Liquor pickup in kg of liquor per kg of textile material

FK: Liquor concentration in g of textile auxiliary per kg of liquor

f<sub>C</sub>: Total carbon substance emission factor in g of total organic carbon per gram of textile auxiliary

#### Calculation of Product-related emission factors of two formulas (by way of example):

Liquor	Textile Auxiliary	FK [g/kg]	FA [kg/kg]	f <sub>C</sub> [g/g]	FK x FA x f <sub>C</sub>	WF <sub>C</sub> [g/kg]
<b>Formula 1</b>	Fatty acid ester	20	0.65	0.0152	0.2	
	Polysiloxane	20	0.65	0.0052	0.07	
	Reactant crosslinking agent with catalyst.	100	0.65	0.0009	0.06	
	Stearyl urea derivative with catalyst	20	0.65	0.0162	0.21	
<b>Total 1</b>						<b>0.54</b>
<b>Formula 2</b>	Plasticizer	50	1	0.005	0.25	
	Crease-resistant finish, formaldehyde-free	12	1	0.010	0.12	
	Catalyst	12	1	0.008	0.1	
<b>Total 2</b>						<b>0.47</b>

## 2. Calculation of the Product-Related Emission Factor from the Measured Concentration:

Firstly, the air/product ratio (LWV) in m<sup>3</sup>/kg is calculated from the measured waste gas flow (V) (in m<sup>3</sup>/h) of all emission points of a thermal treatment unit and the product throughput (W) (in kg/h):

$$LWV = V/W$$

If more than one thermal treatment units are connected to a waste gas cleaning plant the weighted LWV will have to be determined by dividing the total waste gas flow by the total product throughput.

$$WF_C = LWV \times \Sigma c_C$$

THM: Textile auxiliary

WF<sub>C</sub>: Product-related emission factor in g of total organic carbon per kg of textile material

LWV: Air/product ratio in m<sup>3</sup> waste gas per kg of textile material

c<sub>C</sub>: measured concentration in g of total organic carbon per m<sup>3</sup> of waste gas

## **Appendix 3 to the Austrian Ecolabel Criteria EC 65**

Additional exceptions from regulation b) may be entered under para. 3.5.1, point e) following an evaluation by the German or Austrian Umweltbundesamt (Federal Environmental Agency), provided that these are technologically non-substitutable substances and consumer safety is guaranteed.

Exempted from regulation b) is:

Antimony(III)-oxide, provided that it is used as a catalyst in the manufacture of polyester fibers.

## Appendix 4 to the Austrian Ecolabel Criteria EC 65

The preservatives used for protection during the transportation and storage of leather shall meet the following conditions for use on leather:

- 4-chloro-3-methylphenol < 600 mg/kg
- N-octylisothiazolinone < 250 mg/kg
- o-phenylphenol < 1000 mg/kg
- 2-(thiocyanomethylthio)benzothiazole < 500 mg/kg

The following substances may not be contained in the preservatives. Starting out from the analysis method and the detection limit of these substances this requirement shall be considered met if the following maximum values are not exceeded in the leather:

- chlorophenols (including salts and esters) < 1 mg/kg
- bromophenols (including salts and esters) < 1 mg/kg
- methylene bis(thiocyanate) (MBT) < 5 mg/kg
  
- The German Umweltbundesamt (Federal Environmental Agency) shall be entitled to include additional limits into Appendix 3. The conditions for use mentioned above may be adapted in the same way to the state of the art.

### Analysis Methods:

- Draft standard DIN EN ISO 13365:2009-10 2 - Leather - Chemical tests - Determination of preservative content (TCMTB, CMK, OPP, OIT) in leather (ISO/DIS 13365/IUC 29:2009); German version prEN ISO 13365/IUC 29:2009
- Official collection of test methods according to Section 64 LFGB B 82.02-8; Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch (Food, Consumer Goods and Feed Code)

## Appendix 5 to the Austrian Ecolabel Criteria EC 65

Dyes and pigments the use of which shall not be permitted under para. 3.5.2.9:

**Azo dyes** which can undergo cleavage to release any of the following aromatic amines (according to Directive 2002/61/EC):

4-aminobiphenyl	(92-67-1),
benzidine	(92-87-5),
4-chloro-o-toluidine	(95-69-2),
2-naphthylamine	(91-59-8),
o-aminoazotoluene	(97-56-3),
2-amino-4-nitrotoluene	(99-55-8),
p-chloroaniline	(106-47-8),
2,4-diaminoanisole	(615-05-4),
4,4'-diaminodiphenylmethane	(101-77-9),
3,3'-dichlorobenzidine	(91-94-1),
3,3'-dimethoxybenzidine	(119-90-4),
3,3'-dimethylbenzidine	(119-93-7),
3,3'-dimethyl-4,4'-diaminodiphenylmethane	(838-88-0),
p-cresidine	(120-71-8),
4,4'-methylene-bis-(2-chloroaniline)	(101-14-4),
4,4'-oxydianiline	(101-80-4),
4,4'-thiodianiline	(139-65-1),
o-toluidine	(95-53-4),
2,4-diaminotoluene	(95-80-7),
2,4,5-trimethylaniline	(137-17-7),
4-aminoazobenzene	(60-09-3),
o-anisidine	(90-04-0).

**Dyes that are carcinogenic, mutagenic or toxic to reproduction (on the basis of Commission Decision 2002/371/EC (Community ecolabel for textile products):**

C.I. Basic Red 9	C.I. 42 500,
C.I. Disperse Blue 1	C.I. 64 500,
C.I. Acid Red 26	C.I. 16 150,
C.I. Basic Violet 14	C.I. 42 510,
C.I. Disperse Orange 11	C.I. 60 700,
C.I. Direct Black 38	C.I. 30 235,
C.I. Direct Blue 6	C.I. 22 610,
C.I. Direct Red 28	C.I. 22 120,
C.I. Disperse Yellow 3	C.I. 11 855,
C.I. Disperse Yellow 23	C.I. 26 070.
C.I. Disperse Orange 149	



**Potentially sensitising dyes (on the basis of Commission Decision 2002/371/EC):**

C.I. Disperse Blue 3	C.I. 61 505,
C.I. Disperse Blue 7	C.I. 62 500,
C.I. Disperse Blue 26	C.I. 63 305,
C.I. Disperse Blue 35,	
C.I. Disperse Blue 102,	
C.I. Disperse Blue 106,	
C.I. Disperse Blue 124,	
C.I. Disperse Brown 1,	
C.I. Disperse Orange 1	C.I. 11 080,
C.I. Disperse Orange 3	C.I. 11 005,
C.I. Disperse Orange 37,	
C.I. Disperse Orange 76 (formerly: Orange 37)	
C.I. Disperse Red 1	C.I. 11 110,
C.I. Disperse Red 11	C.I. 62 015,
C.I. Disperse Red 17	C.I. 11 210,
C.I. Disperse Yellow 1	C.I. 10 345,
C.I. Disperse Yellow 3	C.I. 11 855,
C.I. Disperse Yellow 9	C.I. 10 375,
C.I. Disperse Yellow 39,	
C.I. Disperse Yellow 49.	

**Heavy Metal-Containing Dyes**

Dyes and pigments containing cadmium, mercury, lead or nickel.

## Appendix 6 to the Austrian Ecolabel Criteria EC 65

### N-nitrosamines

The contents of the following N-nitrosamines in rubber must be below the detection limit:

- N-nitrosodimethylamine (NDMA)
- N-nitrosodiethylamine (NDEA)
- N-nitrosodipropylamine (NDPA)
- N-nitrosodibutylamine (NDBA)
- N-nitrosopiperidine (NPIP)
- N-nitrosopyrrolidine (NPYR)
- N-nitrosomorpholine (NMOR)
- N-nitroso-N-methyl-N-phenylamine (NMPPhA)
- N-nitroso-N-ethyl-N-phenylamine (NEPhA)

### Chlorinated Benzenes and Toluenes

The following chlorinated benzenes and toluenes may not be used in dyed synthetic fibers:

- Chlorobenzenes
- Dichlorobenzenes
- Trichlorobenzenes
- Tetrachlorobenzenes
- Pentachlorobenzenes
- Hexachlorbenzenes
- Chlorotoluenes
- Dichlorotoluenes
- Trichlorotoluenes
- Tetrachlorotoluenes
- Pentachlorotoluenes

## Appendix 7 to the Austrian Ecolabel Criteria EC 65

	General Sports Shoes	Children's Shoes	Casual Shoes	Men's Town Shoes	Cold Weather Shoes	Women's Town Shoes	Fashion Shoes	Infants' Shoes	Indoor Shoes
Uppers, flex resistance: (kc = no visible damage)	Dry = 100 Nass = 20	Dry = 100 Wet = 20	Dry = 80 Wet = 20	Dry = 80 Wet = 20	Dry = 100 Wet = 20 - 20° = 30	Dry = 50 Wet = 10	Dry = 15	Dry = 15	Dry = 15
Uppers, tear strength: (average tear force, N)									
Leather	≥ 80	≥ 60	≥ 60	≥ 60	≥ 60	≥ 40	≥ 30	≥ 30	≥ 30
Other materials	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 30	≥ 30	≥ 30
Outsoles, flex resistance: Cut growth (mm) Nsc = no spontaneous crack	≤ 4 Nsc	≤ 4 Nsc	≤ 4 Nsc	≤ 4 Nsc	≤ 4 Nsc at - 10 °C	≤ 4 Nsc			
Outsoles, abrasion resistance: D ≥ 0,9 g/cm <sup>3</sup> (mm <sup>3</sup> ) D < 0,9 g/cm <sup>3</sup> (mg)	≤ 200 ≤ 150	≤ 200 ≤ 150	≤ 250 ≤ 170	≤ 350 ≤ 200	≤ 200 ≤ 150	≤ 400 ≤ 250			≤ 450 ≤ 300
Uppersole, adhesion: (N/mm)	≥ 4,0	≥ 4,0	≥ 3,0	≥ 3,5	≥ 3,5	≥ 3,0	≥ 2,5	≥ 3,0	≥ 2,5
Outsoles, tear strength: (average strength, N/mm) D ≥ 0,9 g/cm <sup>3</sup> D < 0,9 g/cm <sup>3</sup>	8 6	8 6	8 6	6 4	8 6	6 4	5 4	6 5	5 4
Colour fastness of the inside of the footwear (lining or inner face of the upper). Grey scale on the felt after 50 cycles wet	≥ 2/3	≥ 2/3	≥ 2/3	≥ 2/3	≥ 2/3	≥ 2/3		≥ 2/3	≥ 2/3

## Appendix 8 to the Austrian Ecolabel Criteria EC 65

### Calculation of Chromium and Sulfide in the Partial Stream taking into account the Degradation Rate of the Sewage Treatment Plant

$C_{RohT}$ : Concentration of chromium or sulfide, respectively, in the partial stream before discharge into the sewage treatment plant  
 $C_{Roh}$ : concentration of chromium or sulfide of mixed wastewater at the inlet of the sewage treatment plant  
 $C_{Rein}$ : concentration of chromium or sulfide at the discharge of the sewage treatment plant

$\eta$ : degradation rate of the sewage treatment plant in %

The degradation rate of the sewage treatment plant can be calculated using the following formula:

$$\eta = ((C_{Roh} - C_{Rein}) / C_{Roh}) * 100\%$$

The concentration of chromium and sulfide in the respective partial stream can be calculated using the following formula:

$C_{ReinT}$ : concentration of chromium or sulfide in the partial stream at the discharge of the sewage treatment plant

$$C_{ReinT} = C_{RohT} - ((\eta / 100 \%) * C_{RohT})$$

### Example Calculations

Chromium				
$C_{RohT}$	$C_{Roh}$	$C_{Rein}$	$\eta$ (in %)	$C_{ReinT}$
[mg/l]	[mg/l]	[mg/l]		[mg/l]
15.38	7.23	0.71	90.18	<b>1.51</b>

Result: The limit (1 mg/l) is **not** met.

Sulfide				
$C_{RohT}$	$C_{Roh}$	$C_{Rein}$	$\eta$ (in %)	$C_{ReinT}$
[mg/l]	[mg/l]	[mg/l]		[mg/l]
5.88	3.13	0.37	88.18	<b>0.70</b>

Result: The limit (2 mg/l) is met.