

## ECOLABEL - PASSPORT OF CONSUMER PRODUCTS FOR EUROPE

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**Abstract:** The paper deals with the issue of „eco-labeling of consumer products” through the European legislative framework (Regulation (EC) no. 1980/2000 of the European Parliament and the Council of 17 July 2000 establishing a scheme for EU eco-label) and identifies a micro-guide able to offer consumers the necessary environmental protection issues that includes the product offered for sale. In a market where quality means both improving health and better environmental protection, "eco product", which minimizes environmental impact and health, ensuring a certain level of quality, can represent the fulfillment of the nowadays consumer requirements. European Eco label, which is the only sign of environmental quality, certified by an independent organization is valid throughout Europe and represents a unique opportunity to meet consumer expectations.

**Keywords:** Eco-label, european flower, environmental benefits, environmental quality.

### 1. PRELIMINARY CONSIDERATIONS

Eco-label is a voluntary instrument, which offers consumers a guide on environmental issues that include any product offered for sale. Environmental criteria considered in the labeling for consumer products are many and are based on assessment of their life cycle (raw materials - process - distribution - use - disposal), as revised in three years, besides ecological criteria are contained and the performance and durability / 1, 2 /.

By establishing a procedure for eco and specific criteria for different product groups, consumers can choose products that can reduce environmental impact, giving them information on the characteristics of the environmental impact of products labeled organic.

Government Decision No. 189/2002 established the legal framework Eco-label procedure which transposes into Romanian legislation the provisions of Decision No. 371/2002/CE and No. 231/2002/EC, establishing the ecological criteria for eco-textiles and leather community who identify with the consumer.

Competent Authority for awarding the Ministry of Environment and Forests. In making decisions on awarding this authority is supported by the National Commission for awarding established by Art. 14 GD nr.189/2002.

Eco-label criteria for textiles group and leather, changes in technical progress and approved by Government.

Thus, on February 26, 2004, occurred the Government Decision no. 254 laying down the criteria the eco-label for textiles and leather.

Ensure environmental criteria, performance and durability of textile and leather products undergo the procedure eco, due to "claims" increased buyer, which is becoming better informed, and for products purchased annually (in EU), enforce requirements for health and comfort. Even if a consumer does not perceive the product marketed as a product dangerous to the environment, it is becoming increasingly aware of its potential health benefits, so already we are witnessing

the promotion of brands for a better lifestyle and use products, eco-genetic Sano.

In a market where quality textile and leather means both health improvement and better environmental protection, "green products" that minimizes environmental impact and health, ensuring a certain level of quality, can be a fulfilling requirements of today's consumer.

European Eco-label, which is the only sign of environmental quality, certified by an independent organization is valid throughout Europe, is a unique opportunity to meet consumer expectations. In this way it promotes the design, manufacture and marketing your products with reduced environmental impact throughout the product lifecycle.

Application of eco-label on a product means providing the following benefits / 1 /:

- limiting pollution environmental factors (water, air, soil) during the production process;
- emissions of volatile organic compounds (VOCs) during production;
- limiting metal residues and formaldehyde in the final product;
- use recycled packaging;
- control various aspects of product sustainability.

Eco-labeled product recognition is achieved by applying a label on the package or the graphic symbol „European flower" (see Figure 1), indicating the intrinsic environmental qualities and provides certainty that:

- during the processing of raw material (textile, leather and synthetic) is limited use of substances that have harmful effects on air and water;
- the risk of allergies is low;
- products have colors that withstand repeated washing, drying and forced to withstand sunlight without discolored;
- products have long durability.



**Figure 1. Graphic symbol of eco-label**

EU Eco-label created by the European Commission in 1993, is a single certification scheme to help consumers to distinguish products and green services, which affect the environment, and it is not granted for food and medical products.

It is a voluntary scheme designed to encourage businesses to market goods and services with reduced environmental impact and European consumers - including public and private purchasers - to easily identify them.

European flower can be found throughout Europe as well as Norway, Liechtenstein and Iceland. Community eco-label is part of a broader strategy geared towards promoting domestic production and consumption.

Community eco-label is a "passport" that allow free movement of goods within the EU. It is mandatory for

products sold in Europe and the export of products to Europe. All EU states have adopted the Community eco-label. Its main advantage is its European dimension. The product is the eco-label awarded by a European Union member state, can be used in all other Member States.

In essence, eco-label is represented only by the above graphic symbol, but it is accompanied by a short descriptive text on the product, packaging, a brochure or other document accompanying the product information and provide information on at least one and three types of environmental impact (see Figure 2).

Eco-label for consumer products for specific textile and leather case covers the following product categories:

- textile clothing and accessories: handkerchiefs, scarves, bags, shopping bags, backpacks, belts with a textile fiber content of at least 90% of their weight;
- textile products for interior designing, textile fibers whose content is at least 90% by weight, except the walls and floor coverings;
- yarn, textile fibers and fabrics, knitted textiles for apparel and accessories or interior textiles;
- footwear and leather goods.

Eco-label (see Figure 2) is comprised of two parts (columns 1 and 2) and include information for consumers, as follows:

Eco-label	
	<ul style="list-style-type: none"> <li>• _____</li> <li>• _____</li> <li>• _____</li> </ul>
<i>The registration number of the contract: .....</i>	

Column 1	Column 2
70 mm	100 mm

Column 2 contains information on the reasons for granting Ecolabel and must cover at least one of the three types of environmental impact:

•	low air pollution
•	energy efficient
•	low toxicity

**Figure 2. Form and content of eco-label**

## 2. EUROPEAN AND NATIONAL REGULATORY GRANT FOR ECO-LABEL

Eco-label for textile and leather products are made under Regulation no. 1980/2000/EEC transposed into Romanian legislation by / 3, 4 /:

- GD 254/2004 laying down the criteria for eco-label for footwear (Official Gazette No. 185/03.03.2004, Council Decision 231/2002/CEE on establishing criteria for eco-label for footwear);
- GD 177/2004 establishing criteria for eco-textiles (Official Gazette No.198/05.03.2004, Council Decision 371/2002/CEE on establishing criteria for eco- textiles). To qualify for green businesses (manufacturers, importers, service providers, traders) must take the following steps (see Figure 3);

- eco-label request to the Ministry of Environment and Forests (EFM), which is the competent authority;
- achievement tests produced by specialized institutes recommended by the competent authority and / or other institutions that have accredited laboratories;
- product performance evaluation by the competent authority that works with the National Commission for awarding the decision-making and awarding National Consumer Protection Authority to assess how effectively the eco-label information needs comsumatorilor;
- eco-label.

After granting the right to use eco-label competent authority concluded a contract with the applicant setting out the conditions for its use. This contract is provided in Appendix. 4 H.G. 189/2002 laying down the procedure for eco.

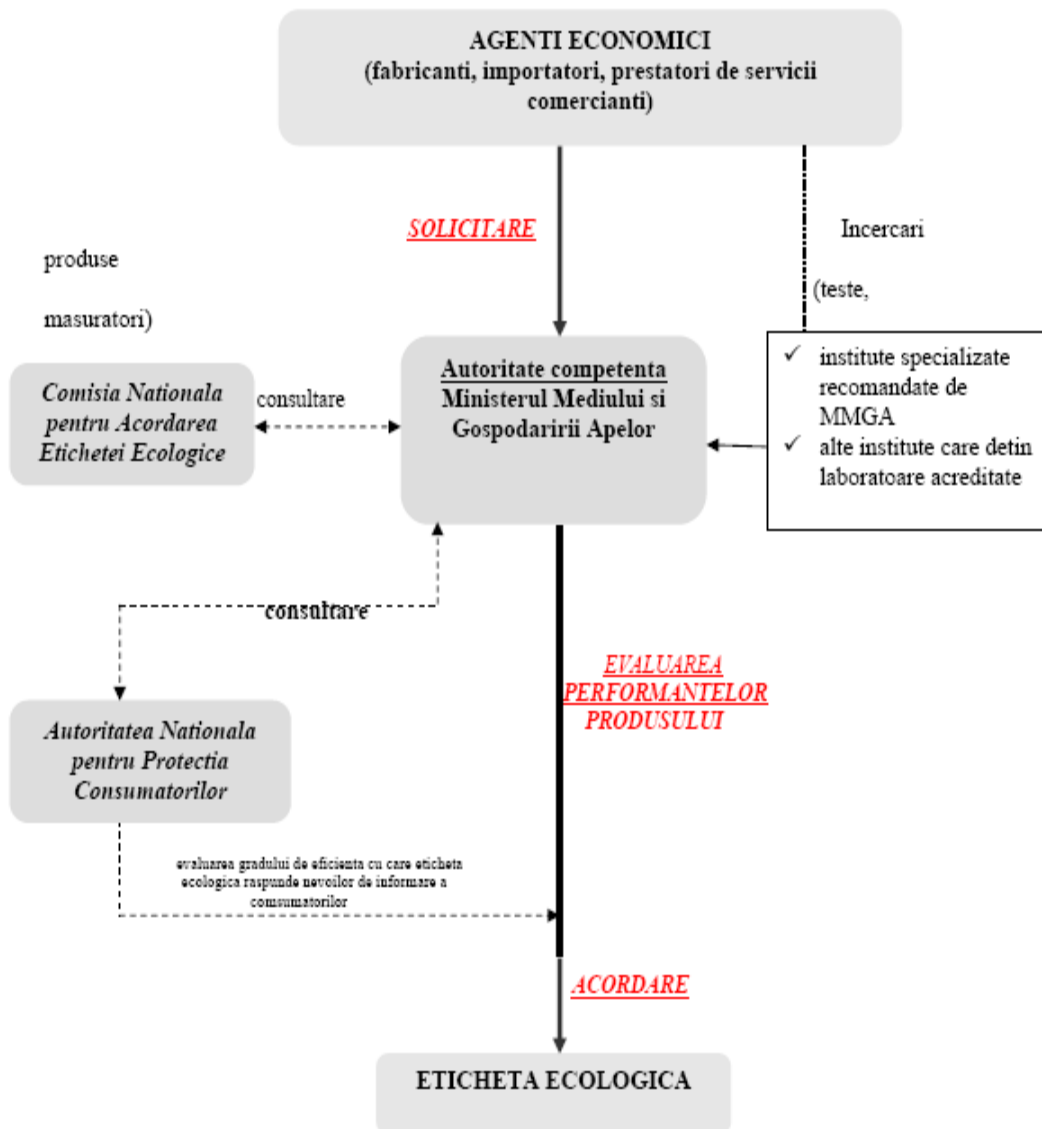


Figure 3. Unitary system of eco-label in Romania

### 3. SPECIFIC CRITERIA FOR ECO-LABEL

Ecolabel is awarded based on specific criteria for each product group, established by decisions of government can not be applied to products not subject to any criterion. These specific criteria are, in fact, requirements for each environmental aspect that an evaluation indicator matrix, on which a textile or leather product

must meet to be granted Ecolabel / 6, 7 /. Therefore, the criteria for EU eco-label provided for textiles designed primarily to reduce water and air pollution associated with production process and promotion of textile products with reduced environmental impact (see Figure 4).



Figure 4. Criteria for evaluating the life cycle of textile products to provide eco-label

In terms of specific ecological criteria needed for the textile material, indicate that the following conditions:

- to limit toxic wastes in textile fibers:
  - acrylic: acrylonitrile < 1.5 mg / kg of fiber;
  - cotton: pesticide residues < 0.05 ppm (parts per million);
  - spandex do not use organic tin compounds;
  - greasy wool and other fibers cheratinizate: limitation of pesticides;
  - artificial cellulose fibers: organochlorine substances - (AOX) < 250 ppm;
  - Polyester: Antimony < 260 ppm;
  - Polypropylene: not using pigments Pb (lead).
- to reduce air pollution:
  - acrylic: acrylonitrile < 1 g / kg fiber;
  - spandex: diizocianți aromatic < mg / kg of fiber;
  - artificial cellulose fibers (viscose)
    - sulfur compounds < 120 g / kg produced filaments;
    - sulfur compounds < 30 g / kg of fiber products.
  - polyester: volatile organic compounds (VOCs) < 1.2 g / kg fiber;
  - polyamide
    - NO<sub>2</sub> (nitrogen dioxide) < 10 g / kg polyamide 6;
    - NO<sub>2</sub> (nitrogen dioxide) < 50 g / kg polyamide 6.6.
- to reduce water pollution during production:
  - flax and other bast fibers: the treatment of waste water from the melting process, the COD (chemical oxygen demand) / TOC (total oxygen consumption) must be reduced by at least 75% (hemp fiber) and

- 95% (in other fibers);
- viscosity: Zn (zinc) < 0.3 g / kg fiber;
- fiber copper: Cu (copper) < 0.1 ppm / year;
- wool and other fibers cheratinizate:
  - for washing effluents treated off-site: COD < 60 g / kg, 75% discount on treatment;
  - the treated effluent on site: COD < 5g/kg, pH 6-9, the discharge temperature < 40 degrees.
- to limit the use of chemicals in manufacturing of textile products:
  - 90% of products produced by carding and 95% of the sizing, detergents, fabric softeners and complexing agents must be sufficiently biodegradable or eliminated;
  - the content of polycyclic aromatic hydrocarbons (PAHs) in mineral oil < 1% by weight (a product);
  - are prohibited: heavy metal salts, cerium compounds, auxiliary chemicals;
  - emissions of organohalogen compounds from bleaching agents < 40 mg chlorine / kg (100 mg Cl / kg in some cases);
  - concentrations of ionic impurities in dyes must not exceed the following amounts (in ppm):
    - Ag < 100, Ba < 100, Co. < 500 I < 50, Cd < 20, is < 20;
    - Cr < 100, < 250, Fe < 2500, Hg < 4, Mn < 1000;
    - Ni < 200 Pb < 100 Sb < 50, Sn < 250 Zn < 1500.

- concentrations of ionic impurities in pigments must not exceed the following amounts (in ppm):  
Ba < 100 I < 50, Cd < 50, is < 100, Cr < 100,

Hg < 25, Pb < 100 Sb < 250 Zn < 1000;

- painting is prohibited by etching with chromium-based dyes;

- water emissions of metal complex dyes based on copper, chromium and nickel - 20% max when dyeing cellulose fibers and 7% for other coating processes:

- Cu < 75 mg (fiber, yarn or fabric);
- Cr < 50 mg / kg, Ni < 75 mg / kg.

- be prohibited:

- azo dyes that cleave aromatic amines listed in GD 177/2004;
- dyes carcinogenic, mutagenic or toxic to reproduction;
- dyes potential sensitizers if resistance to perspiration > 4.

- pasta print < 5% volatile organic compounds;
- formaldehyde < 30 ppm for products in direct contact with skin and 300 ppm for other products;
- treat waste water from wet: COD < 25 g / kg / year;

- substances for fireproofing / dressing preparations containing more than 0.1% by weight: carcinogenic, mutagenic or toxic substances are prohibited;

- prohibiting the use of plasticisers and solvents which are carcinogenic, mutagenic or toxic.

- consumer information will be written next to the organic label, following clearly:

- product produces reduced water pollution;
- the product contains no hazardous chemicals;
- product meets specific requirements relating to the whole production process.

Adequacy criteria for use of textile products should consider:

- dimensional changes during washing and drying;

- fastness to washing;
- fastness to wet and dry friction;
- fastness to light.

Eco-label for leather products (footwear and leather goods) is based on specific ecological criteria (see Figure 5) / 1 /.

#### 4. CONCLUSIONS

Knowledge of legal issues through adequate information to producers, traders, but the population and technical requirements for granting eco-label for textile and leather products analyzed, will undoubtedly lead to ensure their quality, may represent such an achievement potential customer requirements can be achieved today through products labeled organic and authorization by such a „European passport" to freedom of movement throughout the Community.

#### REFERENCES

- [1] Brătulescu, V., Acordarea etichetei ecologice la articolele de încălțăminte, Seminar Perfectlink, Program Phare, febr. – martie 2005, București.
- [2] \* \* \* <http://europa.eu.int/ecolabel>
- [3] \* \* \* Decizia Comisiei nr. 371/2002/CE privind stabilirea criteriilor de acordare a etichetei ecologice europene pentru produse textile.
- [4] \* \* \* Decizia Consiliului nr. 231/2002/CEE referitoare la stabilirea criteriilor de acordare a etichetei ecologice pentru încălțăminte.
- [5] \* \* \* <http://www.etichetaecologica.ro>.
- [6] \* \* \* Eticheta ecologică europeană, Ghidul produselor de consum etichetate ecologic.
- [7] \* \* \* <http://www.mmediu.ro>.

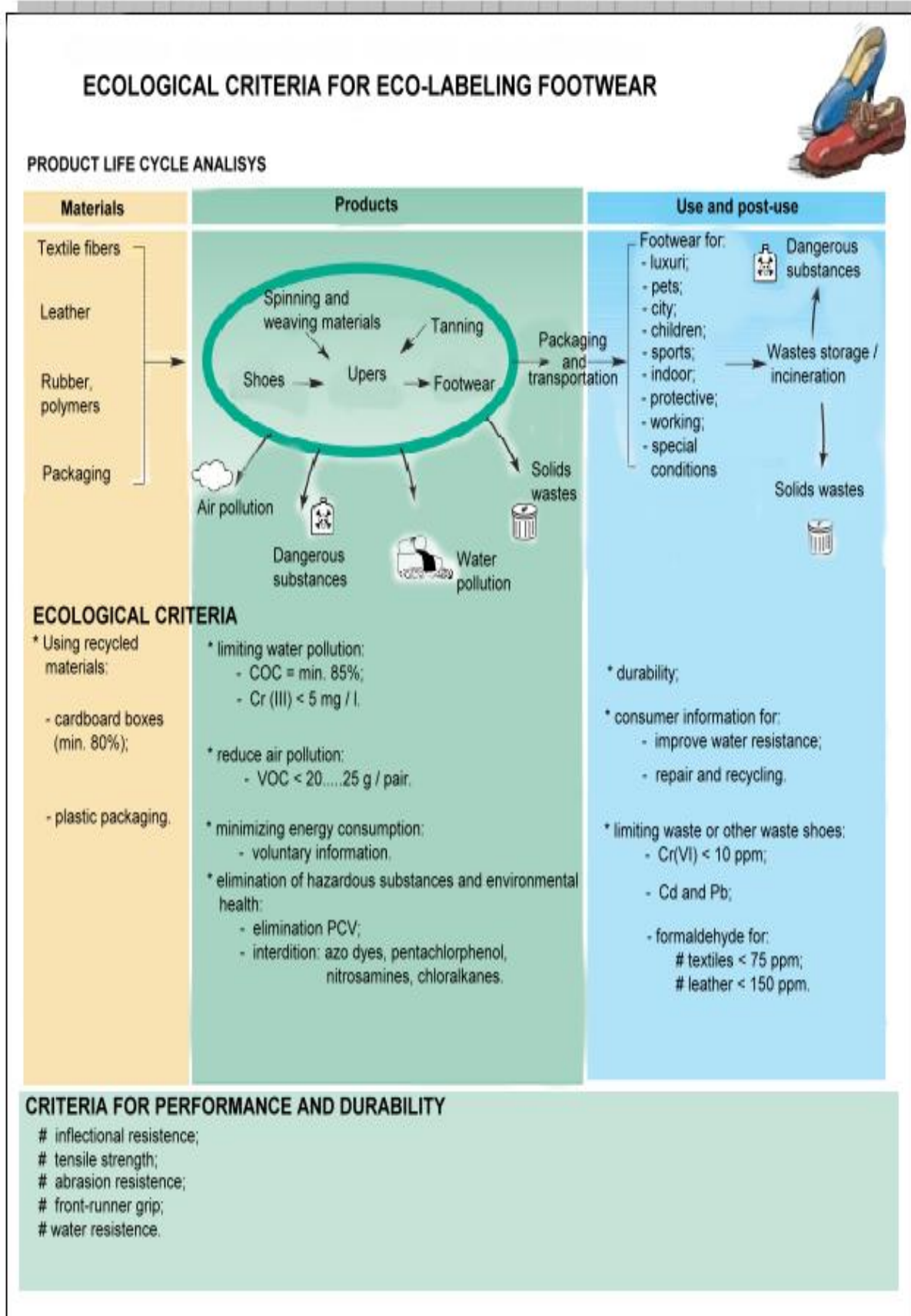


Figure 5. Specific ecological criteria of the award green footwear