

## Environmental declaration

## SmartEYE basic

|                | Yes   | No | No information | Not relevant for this product | See comment |
|----------------|---|----|----------------|-------------------------------|-------------|
| <b>Produkt</b> |   |    |                |                               |             |
| <b>1.</b>      | <b>Plastic components in the product (except electronic ballasts in lighting fittings)</b>      |    |                |                               |             |
| 1.1            |   | X  |                |                               |             |
| 1.2            |   | X  |                |                               |             |
| 1.3            |   | X  |                |                               |             |
| 1.4            | Do the plastic components contain any of the following additives?                               |    |                |                               |             |
| 1.4.1          |   | X  |                |                               |             |
| 1.4.2          |   | X  |                |                               |             |
| 1.4.3          |   | X  |                |                               |             |
| 1.4.4          |   | X  |                |                               |             |
| 1.5            |   | X  |                |                               | X1          |
| 1.6            |   | X  |                |                               |             |
| <b>2.</b>      | <b>Electronics and soldering ( Includes ballasts )</b>  |    |                |                               |             |
| 2.1            | Are the following environmentally hazardous substances used in the electronics and soldering    |    |                |                               |             |
| 2.1.1          |   | X  |                |                               |             |
| 2.1.2          | X   |    |                |                               |             |
| 2.1.3          |   | X  |                |                               |             |
| 2.1.4          |   | X  |                |                               |             |
| 2.1.5          |   | X  |                |                               |             |
| 2.1.6          |   | X  |                |                               |             |
| 2.1.7          |   | X  |                |                               |             |
| <b>3.</b>      | <b>Metallic components in the product</b>   |    |                |                               |             |
| 3.1            | Are the following environmentally hazardous substances found in the product's metal components? |    |                |                               |             |
| 3.1.1          |   |    |                | X                             |             |
| 3.1.2          |   |    |                | X                             |             |
| 3.1.3          |   |    |                | X                             |             |
| 3.1.4          |   |    |                | X                             |             |
| 3.1.5          |   |    |                | X                             |             |
| <b>4.</b>      | <b>Other components</b>   |    |                |                               |             |
| 4.1            |   | X  |                |                               |             |
| 4.2            |   |    |                | X                             |             |
| <b>5.</b>      | <b>Paint / Varnish</b>  |    |                |                               |             |
| 5.1            |   |    |                | X                             |             |
| 5.2            |   |    |                | X                             |             |
| 5.3            |   |    |                | X                             | X2          |

|                               |   | Yes | No | No information | Not relevant for this product | See comment |
|-------------------------------|---|-----|----|----------------|-------------------------------|-------------|
| 5.4                           | Are environmentally hazardous metallic pigments used in paint/varnish? (3, 4, 5)  |     |    |                | X                             | X1          |
| 5.5                           | Do metallic paints contain additives with the following substances?   |     |    |                | X                             |             |
| 5.5.1                         | Halogenated organic binders   |     |    |                | X                             |             |
| 5.5.2                         | Phthalates  |     |    |                | X                             |             |
| <b>Manufacture</b>            |   |     |    |                |                               |             |
| <b>6.</b>                     | <b>Solvents</b>   |     |    |                |                               |             |
| 6.1                           | Are aromatic hydrocarbons included in the solvents used in the production of the product or packaging? (5)                            |     | X  |                |                               | X3          |
| 6.2                           | Are the substance groups (chloroflouorcarbonates / flouorcarbonates) used in the production of the product or packaging?              |     | X  |                |                               |             |
| 6.3                           | Are chlorated solvents used in the production of the product or packaging?  |     | X  |                |                               | X5          |
| 6.4                           | Are cyanides used in surface treatment of metal components?   |     |    |                |                               |             |
| 6.5                           | Are there any metal surfaces which are degreased with chlorated organic solvents?   |     | X  |                |                               |             |
| 6.6                           | Is only water-based de-greasing of metal surfaces used, or no degreasing at all?  | X   |    |                |                               |             |
| 6.7                           | Are nonylphenoethoxylates (environmentally hazardous tensides) used in degreasing metal surfaces?                                     |     |    |                | X                             |             |
| 6.8                           | Do any of the metal paints contain more than 5 percent by weight of organic solvents?   |     |    |                | X                             |             |
| 6.9                           | Is the VOC content (Volatile Organic Compounds) in the paints/varnishes used more than 25 percent by weight? (8)                      |     |    |                | X                             |             |
| 6.10                          | Are aromatic hydrocarbons used in the paints/varnishes? (5)   |     |    |                | X                             | X3          |
| 6.11                          | Are water or environmentally acceptable solvents used in in the paints/varnishes? (9)   |     |    |                | X                             | X4          |
| <b>7.</b>                     | <b>Other surface treatment of metals</b>  |     |    |                |                               |             |
| 7.1                           | Report the methods for surface treating metal components (zinc plating, chrome plating, etc.):  |     |    |                | X                             |             |
| <b>Packages and recycling</b> |   |     |    |                |                               |             |
| <b>8.</b>                     | <b>Packaging (refers to individual packages)</b>  |     |    |                |                               |             |
| 8.1                           | The package contains the following pure (not compound) material:  |     |    |                |                               |             |
| 8.2                           | Is shock-absorbing plastic material used in the package?  |     | X  |                |                               |             |
| 8.3                           | Are ozone-destroying compounds used in making the shock-absorbing plastic material in the package?                                    |     |    |                | X                             |             |
| 8.4                           | Are compound materials used in the packages?  |     | X  |                |                               |             |
| 8.4.1                         | The packages consist of the following compound materials:   |     |    |                |                               |             |
| 8.5                           | Are all plastic materials used in the packages marked in accordance with the DIN 6120 standard specification to facilitate recycling? |     | X  |                |                               |             |
| <b>9.</b>                     | <b>Recycling</b>  |     |    |                |                               |             |
| 9.1                           | Is the company a member of the Electrical Recycling Organisation?   |     | X  |                |                               |             |
| 9.2                           | Is the company a member of the REPA register?   |     | X  |                |                               |             |
| 9.3                           | Has the product been prepared for disassembly by making all materials possible to separate?   |     | X  |                |                               |             |
| 9.4                           | Are all larger plastic components (more than 100 g) marked in accordance with the ISO 11 469 standard specification?                  |     | X  |                |                               |             |

**Comments:****X1**

Pigments Environmentally hazardous pigments are the following:

- Arsenic (including compounds) (3, 4)
- Lead (including compounds) (3, 4, 5)
- Cyanides (including compounds) (5)
- Cadmium (including compounds) (3, 4, 5)
- Copper (including compounds) (4)
- Chromium (including compounds) (4)
- Mercury (including compounds) (3, 4, 5)
- Nickel (including compounds) (5)

**X2**

“Environmentally hazardous chemical products” are the following:

- Pure substances marked by one of the following risk classifications:  
R52, R53, R54, R55, R56, R57, R58, R59
- Preparations where the percentage of pure substances marked by one of the following risk classifications exceeds 2% by weight:  
R52, R53, R54, R55, R56, R57, R58, R59

**X3**

Aromatic hydrocarbons:

- Benzene (5)
- Toluene (Methylbenzene) (5)
- Xylene (Dimethylbenzene) (5)

Manufacturer: KNOBEL AG  
Lighting Components  
CH-8755 Ennenda

CH-8755 Ennenda, 22.05.02



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Managing Director

**X4**

Environmentally acceptable solvents are as follows (as ref. 9):

- Water
- Ethanol (not denatured with phthalals)
- i-Propanol
- Propylene glycol
- n-Paraffins
- Glycerol (= alcohols with more than 4 carbon atoms)
- Acetone
- Isopropyl laurate
- Isopropyl palmitate
- Isopropyl myristat
- Methyl pyrrolidon
- Gamma-Butyrolactone
- Ethylacetate

**X5**

- Chlorated solvents:
- Hexachlorbutadiene
- Methylene chloride
- Tetrachlormethane
- 1, 2, 4-Trichlorbenzene
- 1, 1, 1-Trichloretane
- Trichloretylene
- Trichlormethane



Felix Tobler  
R & D Manager

## References

- 1 Greenpeace list over municipalities that are positive to the liquidation of their PVC-usage.
- 2 "Environmental aspects when setting agreement upon furnishing". Miljöförvaltningen, Göteborgs kommun, PM 1994-06-15, Maria Berglund.  
  
Miljöförvaltningen  
Göteborgs kommun  
Box 360  
401 25 Göteborg  
Tel: 031-61 26 10
- 3 Chemicals authority. Kemikalieinspektionen, Limitationlist.
- 4 Chemicals authority, OBS-list may 1996.
- 5 US Environmental Protection Agency: Industrial Toxics Project (1990). A list over high prioritized environmentally hazardous chemicals for which the discharge shall decrease with a minimum of 50 percent until 1996.
- 6 The councils directive 92/112/EEG of the 15 of december 1992, regarding "Measures to be taken to decrease and finally eliminate pollution through waste from the titandioxindustry.
- 7 Good Wood Guide, Friends of the Earth U.K. 1987.  
  
Jordens Vänner  
Fjällgatan 23 A  
116 28 Stockholm  
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- 8 "Marque NF-Environment aux peintures, vernis et produits connexes", 3:e audited version 1994-06-10. AFNOR, Frankrike.  
  
Association Francais de Normalisation  
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- 9 Judgement and comparison of solvent in the households chemicaltechnical - Basis för Naturskydds-föreningens work within the projectarea Buy Environmental Friendly. Anders Östman and Ulf Karlström, march 1993 (the list is audited 1993).  
  
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Box 7005  
402 31 Göteborg  
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- 10 The Montrealprotocol 1987 (inkl. the Londonamendment 1990 and the Köpenhamnemendment 1992) regarding certain states undertaking of the liquidation of ozone-destroying compounds, and the Regulation of CFC and Halon etx, SFS 1988.716.