

Environmental declaration

DSI-Smart / Intellect-Regulator / -Energy / -Digital

	Yes	No	No information	Not relevant for this product	See comment
Produkt					
1.	Plastic components in the product (except electronic ballasts in lighting fittings)				
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			
2.	Electronics and soldering (Includes ballasts)				
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			
3.	Metallic components in the product				
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	
4.	Other components				
4.1				X	
4.2				X	
5.	Paint / Varnish				
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	
Manufacture						
6.	Solvents					
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 (chloroflourocarbonates / flourocarbonates) used in the production of the product or packaging?		X			X5
6.3	Are chlorated solvents used in the production of the product or packaging?		X			
6.4	Are cyanides used in surface treatment of metal components?				X	
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
7.	Other surface treatment of metals					
7.1	Report the methods for surface treating metal components (zinc plating, chrome plating, etc.):				X	
Packages and recycling						
8.	Packaging (refers to individual packages)					
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			
9.	Recycling					
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



Ruedi Hug
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-Trichlorethane
- Trichlorethylene
- 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
Tel: 08-702 20 17

- 8 "Marque NF-Environment aux peintures, vernis et produits connexes", 3:e audited version 1994-06-10. AFNOR, Frankrike.

Association Francais de Normalisation
Tour Europe
Cedex 7
92049 Paris La Defense
FRANKRIKE
tel: +33 (1) 42 91 55 55
fax: +33 (1) 42 91 56 56

- 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).

Naturskyddsföreningen
Box 7005
402 31 Göteborg
tel: 031-711 64 50
fax: 031-711 64 30

- 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.