

Hong Kong Green Label Scheme

Product Environmental Criteria for

Computer Monitor (GL-006-002)



BACKGROUND

The Hong Kong Green Label Scheme (HKGLS) is an independent and voluntary scheme, which aims to identify products that are, based on life cycle analysis consideration, more environmentally preferable than other similar products with the same function. The Scheme is organized by the Green Council (GC) with contributions from the HKGLS Advisory Committee and a number of supporting organizations.

The prime objectives of HKGLS are:

- For Consumers: assist in making purchases of products that are less harmful to the environment;
- For Industry: stimulate development and production of environmentally preferable alternatives.

This specification sets out the requirements that computer monitors will be required to meet in order to be licensed to use the HKGLS label. The requirements include environmental criteria and product characteristics. The specification also defines the testing and other means to be used to verify conformance with the criteria and product characteristics.

POTENTIAL ENVIRONMENTAL IMPACTS

Personal computers and associated display monitors burden the environment throughout the entire product life cycle stages, including the consumption of natural resources, the production of raw materials, the production of electronic and other components, the assembly into a finished product, the use of products, the transport and maintenance services, and finally the waste disposal. The packaging of the computer products also contributes to solid waste generation.

LABEL OBJECTIVE

The aim of the environmental criteria developed for computer monitors is to:

- Reduce the material types and the use of the environmentally harmful substances;
- Reduce energy consumption and promote energy-saving computer monitors;
- Promote improved durability and recyclability of computer monitors; and
- Minimize waste production by reducing the amount of primary packaging and promotion its reusability and/or recyclability.

PRODUCT DEFINITION

This document and all product environmental criteria therein apply to the flat type computer monitors. Product with multifunction with monitor function as standard and additional function such as TV receiving or audio output may also qualify. CRT type monitor or monitor marketed and sold as televisions are not included.

The product criteria for the computer main systems and printers are available and presented in separate fact sheets of GL-006-001 and GL-006-003 respectively.

Hong Kong Green Label Scheme
Product Environmental Criteria for
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PRODUCT ENVIRONMENTAL CRITERIA

The table below sets out the product environmental criteria for computer monitors (GL-006-002) under the HKGLS.

Product Environmental Criteria	Verification Method(s)*
1. The On Mode, Sleep Mode and Off Mode power consumption as well as Sleep Mode Default Time of the product shall comply with the phase II requirement of the HKSAR EMSD Energy Efficiency Labelling Scheme (EELS).	✓ Review of laboratory test report(s). ¹
2. The following design-for recycling features shall be incorporated into the casing and chassis of personal computer: <ul style="list-style-type: none"> • Plastic parts weighing over 25g and with an even surface of over 200mm, excluding extruded plastic materials, shall be marked for identification. • Plastic parts and metal parts shall be separable; • Plastic parts made of recyclable and non-recyclable materials shall be separable; and • Labels/markings/stickers must be made of the same material as the parts to which they are affixed or meet VDI 2243 Part I² requirement if they are difficult to separate 	✓ Inspection of product samples; AND ✓ Review of supporting information
3. Plastic parts shall have no lead or cadmium added by the manufacturer and plastic parts weighing over 25g shall not contain flame retardants containing polybrominated biphenyls (PBBs), polybrominated diphenylethers (PBDEs) and chloroparaffins with 10-13 carbon atoms per molecule and chlorine content of greater than 50% by weight.	✓ Review of laboratory test report(s). ³
4. Packaging requirements: <ul style="list-style-type: none"> • Packaging materials shall not contain chlorine-based plastics; • General packaging requirements(refer to criteria for packaging materials: GL-Packaging). 	✓ Inspection of product samples; AND ✓ Review of supporting information; AND ✓ Interview with relevant personnel.

*Analytical testing should be accredited and performed by laboratories that meet the requirement laid out in the IEC/ISO 17025 or EN45001 standards or any equivalent systems e.g. HOKLAS, CNAS. Under special situation and with the approval from GC, test can be performed by in-house method by the accredited laboratory or manufacturer.

Hong Kong Green Label Scheme

Product Environmental Criteria for Computer Monitor (GL-006-002)



Note:

1. Test Method: HKSAR EMSD EELS or International Energy Star Program or certificate of equivalent
2. In case synthetic resin is mixed, 'compatibility of thermoplastic resin' for evaluating the recyclability of mixed synthetic resin is as follows. Here, the level which does not cause inconvenience in recycling is set less than '3'.

Plastic Matrix		Additive of Plastic											
		PE	PVC	PS	PC	PP	PA	POM	SAN	ABS	PBTP	PETP	PMMA
Plastic Matrix	PE	1	4	4	4	1	4	4	4	4	4	4	4
	PVC	4	1	4	4	4	4	4	1	2	4	4	1
	PS	4	4	1	4	4	4	4	4	4	4	4	4
	PC	4	3	4	1	4	4	4	1	1	1	1	1
	PP	3	4	4	4	1	4	4	4	4	4	4	4
	PA	4	4	3	4	4	1	4	4	4	3	3	4
	POM	4	4	4	4	4	4	1	4	4	3	4	4
	SAN	4	1	4	1	4	4	4	1	1	4	4	1
	ABS	4	2	4	1	4	4	3	4	1	3	3	1
	PBTP	4	4	4	1	4	3	4	4	3	1	4	4
	PETP	4	4	3	1	4	3	4	4	3	4	1	4
PMMA	4	1	3	1	4	4	3	1	1	4	4	1	

Remarks

1 : suitable 2 : limitedly suitable 3 : suitable in small amounts 4 : unsuitable

Data: The Association of German Engineers(VDI: Verein Deutscher Ingenieure) VDI 2243 Part 1

3. **Test Method for cadmium, lead, hexavalent chromium and mercury:** US EPA 3050B/3051A/3052/3060A or equivalent with detection limits shall be no greater than 2 ppm.

Test Method for PBBs and PBDEs: US EPA 3540C/8081A/8082A/8270D or equivalent with detection limits shall be no greater than 5 ppm.

Test Method for chloroparaffins: US EPA 8270D/3540C/GC-MSD or equivalent with detection limits shall be no greater than 5 ppm.