

HBK A/S REGULATORY REQUIREMENTS AND MARKINGS

This document contains short descriptions of selected national/international safety and environmental requirements with relevance to the handling and shipment of electrical and electronical equipment such as HBK A/S and BKS SV products, henceforth HBK.

Notes regarding EU Directives:

- "CE" and "Crossed-out Wheeled Bin" indicates compliance with more than one directive
- EU Directives also cover the EEA countries Norway, Iceland and Liechtenstein

The survey will be kept updated as new requirements are brought forward.

Page 3 - CE-marking directives and requirements

EU: ATEX Directive

EU: EMC Directive

EU: Ecodesign Directive (ErP)

EU: Low Voltage Directive

EU: Machinery Directive

EU: RoHS Directive

EU: RED (Radio Equipment Directive)

Page 6 - Other EU Directives and Requirements

EU: Battery Directive

EU: MID Directive

EU: Packaging Directive

EU: REACH Regulation

EU: Waste handling WEEE Directive

Page 8 - Rest-of-world Requirements

Australia¹⁾: RCM marking

Canada¹⁾: CSA marking

China: RoHS

China: Compulsory Certification (CCC)

China: WEEE

India: Compulsory Certification

Japan: J-MOSS

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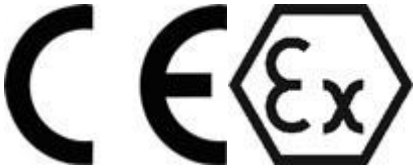
Japan ¹⁾: PSE marking
Korea: Resource Recycling (RoHS)
Norway: PoHS
UN: Persistent Organic Pollutants
USA: California RoHS
USA ¹⁾: Federal Communications Commission (FCC)


¹⁾ Mutual Recognition Agreements (MRA) have been made between the European Union (EU) and some countries: United States, Canada, Japan, Switzerland, Australia and New Zealand regarding product approvals.


Relevant to HBK products the agreement is covering EMC and Safety - i.e. the CE mark is recognized by the countries within this agreement.

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CE-marking directives and requirements


	EU: ATEX Directive
Subject	Equipment and protective systems intended for use in potentially explosive atmospheres (ATmosphères EXplosibles)
Reference	EU Directive 2014/34/EU
HBK relevance	Only a few HBK products are covered by the scope of this directive
Notes	Equipment under the ATEX directive is required to have the CE mark and also the ATEX symbol affixed alongside with the relevant equipment group and category markings. If applicable, the CE mark must be followed by the identification number of the notified body involved in the production control stage


	EU: EMC Directive
Subject	The EMC Directive is specifying <u>E</u> lectro <u>M</u> agnetic <u>C</u> ompatibility in terms of emission and immunity under different circumstances
Reference	EMC directive 2014/30/EU
HBK relevance	The requirements of the EMC directive are applicable to all products that are liable to cause electromagnetic disturbance, or whose performance is liable to be affected by such disturbance

	EU: Ecodesign Directive (ErP)
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Subject	Framework for ecodesign of <u>E</u> nergy-related Products in order to contribute to a sustainable development by increasing the energy efficiency and the protection of the environment.
Reference	EU ErP Directive 2009/125/EC
HBK relevance	The scope of the Directive includes all products that use, generate, transfer or measure energy.
Notes	Actual requirements are set forth in the implementation measures for specific product groups. The only HBK products affected at this stage are external power supplies (via regulation 2009/1782/EC).


	EU: Low Voltage Directive
Subject	Specification of safety requirements for equipment within certain voltage limits
Reference	EU Low Voltage Directive 2014/35/EU
HBK relevance	The requirements are applicable to all mains-supplied products, or products operating with high voltages (e.g. condenser microphone polarization voltages)

	EU: Machinery Directive
Subject	Health and safety requirements to Machinery and Safety Components
Reference	EU Directive 2006/42/EC Specifies the essential health and safety requirements for machinery products.

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HBK relevance	Only a very limited number of HBK products are within the scope of this directive.
Notes	Machinery is defined as: products which contain one or more moving parts. Excluded are products whose only power source is directly applied manual effort, however, all machinery intended for lifting loads is included.


	EU: RoHS Directive
Subject	<u>R</u> estrictions <u>o</u> f the use of certain <u>H</u> azardous <u>S</u> ubstances in electrical and electronic equipment
Reference	EU RoHS Directive 2011/65/EU with amendment (EU) 2015/863
HBK relevance	HBK equipment falls under Category 9 "Industrial Monitoring and Control Instruments" in the Directive
Notes	RoHS compliance of Category 9 products is mandatory from 22 July, 2017.

	EU: RED (Radio Equipment Directive)
Subject	Requirements for all products using the radio frequency spectrum (e.g. car door openers, mobile communications equipment like cellular telephones, CB radio, broadcast transmitters, etc.)
Reference	<u>R</u> adio <u>E</u> quipment <u>D</u> irective 2014/53/EU
HBK relevance	Equipment utilizing wireless transmission of data or control signals

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Other EU Directives and Requirements

	EU: Battery Directive
Subject	Collection, treatment, recycling and disposal of waste batteries and accumulators. Prohibition of certain battery types containing Cadmium or Mercury
Reference	EU Battery Directive 2006/66/EC
HBK relevance	The requirements apply to all batteries and accumulators put on the market covering both portable and industrial types.
Notes	Marking requirements: "Crossed-out Wheeled Bin" (as WEEE Directive) Battery's content of hazardous substances (e.g., Hg, Cd, Pb) or Indication of battery chemistry (e.g., Ni-MH, Li-ion) Rated capacity of the battery


 + supplementary metrology marking	EU: MID (Measuring Instruments Directive)
Subject	To facilitate the trade of certain measuring instruments across the EU and to provide common rules to ensure that certain measuring instruments provide a high level of metrological protection
Reference	Measuring Instruments Directive 2014/32/EU The MID covers a number of legally controlled measuring devices, including water -, gas -, heat -, electricity-meters, weighing instruments, taximeters, etc.
HBK relevance	No products are covered by the scope of this directive

Material identification	EU: Packaging Directive
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Subject	Managing of packaging and packaging waste in order to reduce the impact on the environment and to improve reuse, recycling and recovering of packaging waste.
Reference	EU Packaging Directive 94/62/EC & 2005/20/EC
HBK relevance	Applicable to all packaging of products regardless of the materials used
Notes	Marking is required to enable identification of the packaging material, it must be provided with appropriate marking (clearly visible, easily legible, durable, lasting)

As relevant	EU: REACH Regulation
Subject	<u>R</u> egistration, <u>E</u> valuation, <u>A</u> uthorization and Restriction of <u>C</u> hemicals
Reference	EU REACH Regulation 1907/2006
HBK relevance	HBK is solely a downstream user, and does not manufacture, market, import or use any chemical above the quantity threshold of 1.000 kg per year, and is therefore not subject to registration under REACH Further HBK does not manufacture, market, import or use any "Substance of Very High Concern" (SVHC) except for minor quantities in accelerometers and hydrophones.
Notes	Relevant marking is required dependent on the type of dangerous substance involved

	EU: Waste handling (WEEE)
Subject	Prevention and reuse/recycling of <u>W</u> aste <u>E</u> lectrical and <u>E</u> lectronical <u>E</u> quipment (EEE) to reduce disposal
Reference	EU WEEE Directive 2012/19/EU
HBK relevance	The requirements apply to all HBK EEE.
Notes	Annex B defines 10 categories and HBK equipment falls into Category 9. Possible items in HBK equipment requiring special treatment may be: PCB's (>10 cm²), batteries or LCD displays (>100 cm²)

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Rest-of-world Requirements

	Australia: RCM Marking
Subject	EMC and Safety requirements for electrical and electronic equipment as stated in ACMA technical standards and associated requirements
Reference	Australian Communications and Media Authority (ACMA) framework under the Telecommunications Act 1997 and Radiocommunications Act 1992 - further information on http://acma.gov.au
HBK Relevance	CE marked products complying with European Directives and relevant harmonised standards will be in conformity with the corresponding ACMA standards acc. to Mutual Recognition Agreement per 1 January 1999
Notes	The new RCM marking replaces previous C-Tick marking with a transition period of 3 years after the date of commencement, 1 March 2013, for current ACMA registered suppliers

As relevant	Canada
Subject	The regulatory framework of Canada is governed by Innovation, Science, and Economic Development Canada (ISED)
Reference	More on conformity assessment procedures and technical rulings can found on ISEDs website – link
HBK relevance	CE-marked products complying with European Directives and relevant harmonised standards will be in conformity with the corresponding CSA standards acc. to Mutual Recognition Agreement per 31 September 2001
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	China: "China RoHS"
Subject	Restrictions on certain hazardous substances (very similar to EU RoHS) and requirements for marking of packaging materials
Reference	Ministry of Information Industries of the People's Republic of China Administrative Measures on the Control of Pollution caused by Electronic Information Products
HBK relevance	All of HBK EEE products are within the scope of The List but not of The Catalogue (batch 1 covering all types of telephones and computer printers)
Notes	<p>The "List": Products complying with the restrictions shall be marked with the green e-label while others must be marked with the orange label and have a note included, defining which hazardous materials are present and where in the product. The environmentally safe period for HBK products is estimated to 25 years after manufacturing except 5 years for batteries.</p> <p>"The Catalogue": Products that must comply with the restrictions, and that must be certified as per September 2010.</p>

	China: Compulsory Certification
Subject	<p>Safety and EMC requirements for certain equipment (mainly products for household and industrial use) including a number of non-electrical products like automobile tires, agricultural machinery and safety glasses</p> <p>The equipment in question is listed in the "Catalogue of Products Subject to Compulsory Certification" comprising 22 product groups and subdivided into 157 product categories</p>
Reference	Compulsory Product Certification Scheme (CPCS)
HBK relevance	HBK products are not included in the CCC-catalogue and, for this reason, are not subject to CCC marking and certification

	China: "China WEEE"
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Subject	Regulation of recycling and disposal of waste electrical and electronic products as well as protect the environment and human health Equipment listed in the "Catalogue for Disposal of Waste Electrical and Electronic Products" are covered in the scope of the regulation
Reference	Chinese law "Management of Recycling and Disposal of Waste Electrical and Electronic Products" effective 2011-01-01
HBK relevance	The "First Product Catalogue" of China WEEE has been published (2010-09-08) specifying 5 product categories: Televisions, refrigerators, washing machines, air conditioners, computers Producers/importers of products listed have the following responsibilities: · pay for waste handling to the Chinese authorities · facilitate recovery and harmless treatment with no/low hazard material design No marking is required.

	India: Compulsory Certification
Subject	Safety and EMC requirements for certain equipment (mainly products for household and industrial use) including a number of non-electrical products like automobile tires, agricultural machinery and safety glasses
Reference	Compulsory registration scheme through Bureau of Indian Standards (BIS) coming into force on 3 July 2013
HBK relevance	HBK products are not within the scope, i.e. not included in any of the 15 defined groups of electronics and information technology goods
Notes	Marking contains relevant Indian Standards (IS no.) and Manufacturer Reg. no.

	Japan : J-MOSS ("Japan RoHS")
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Subject	To reduce generation of used goods/products, and utilization of reusable parts and recyclable resources - based on 3R Policy (Reduce - Reuse - Recycle)
Reference	Marking requirements are described in JIS C0950 - an amendment to "Law for promotion of Effective Utilization of Resources" The aim is information and promotion, but it is not a regulatory requirement
HBK relevance	HBK products are not in scope (PCs, Air Conditioners, TV Sets, Refrigerators and Washing Machines)
Notes	Target substances are the same as EU RoHS Marking is only compulsory for products within the scope of the regulation

	Japan : PSE Marking
Subject	Technical requirements for electrical equipment, aiming to prevent the occurrence of hazards and damage
Reference	"Electrical Appliance and Material Safety Law" issued by the Ministry of Economy, Trade and Industry (METI)
HBK relevance	Category A (diamond PSE mark) equipment includes specified equipment like Power Supply Units, detachable mains cables, etc. Category B (circle PSE mark) is mainly components with no relevance to the HBK portfolio
Notes	Category A equipment must be notified to METI with a PSE Certificate from an accredited lab, and must have the PSE diamond mark Category B equipment must be notified to METI and have the PSE circle mark

No marking required	Korea: Resource Recycling ("Korea RoHS")
Subject	Recycling, design for the environment and restriction of hazardous substances in electrical and electronic equipment and vehicles, and appropriate treatment of their waste
Reference	Korean law "Act for Resource Recycling of Electrical and Electronic Equipment and Vehicles" (No. 6319 per 2. April 2007) effective 1. January 2008

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HBK relevance	<p>HBK products are not subject to the Act.</p> <p>The scope of the regulation only covers products which are typically massproduced (TV's, Refrigerators, Washing Machines, Air Conditioners, PC's, Audios, Mobile Phones, Printers/Copiers/Facsimiles and Vehicles)</p>
Notes	<p>Technical guidelines on design and recycling methods will be issued.</p> <p>Restricted substances are the same as EU RoHS (see this)</p>


No marking required	Norway: PoHS ("Norwegian RoHS")
Subject	<u>Prohibition of Hazardous Substances</u> in consumer products (PoHS)
Reference	<p>As of December 20, 2011, Norway restricted lead (at 0.01% vs. 0.1% for EU RoHS), PCP, PFOA and MCCP</p> <p>Refer to https://www.miljodirektoratet.no/ for more information.</p>
HBK relevance	HBK products are not within the scope of the planned regulation.
Notes	<p>A large number of "consumer products" are concerned, excluded are, however food, medical products, tobacco, vehicles and vehicle accessories (e.g. tyres).</p> <p>Also excluded are products only used for commercial and industrial purposes.</p>

No marking required	UN : Persistent Organic Pollutants
Subject	Identification and management of chemicals covered by the United Nations Stockholm Convention on Persistent Organic Pollutants
Reference	https://www.unep.org/explore-topics/chemicals-waste/what-we-do/persistent-organic-pollutants-pops
HBK relevance	HBK products do not contain any of the identified pollutants - nor are any used in the product manufacturing processes.
Notes	No marking is required

No marking required	USA : "California RoHS"
Subject	Recycling and restricted substance requirements on video display devices, and later general restrictions of certain Hazardous Substances in electrical and electronic equipment

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Reference	SB20 "Electronic Waste Recycling Act", and later amendment SB50 "CaliforniaRoHS"
HBK relevance	"Covered electronic devices cannot be sold in California if prohibited for sale in the EU under the EU RoHS Directive" - i.e., products complying with "EU RoHS" comply with "California RoHS"
Notes	Only CRT and LCD displays with diagonal measure > 4 inches/10 cm are covered by SB20
	Hazardous Substances cover heavy metals (as EU RoHS) but nothing else No marking is required

	USA: Federal Communications Commission
Subject	EMC requirements covering electro-magnetic emission only
Reference	47 CFR Part 15 – Radio Frequency Devices
HBK relevance	HBK equipment is classified as "Digital devices – Unintentional radiators" but can be considered to be "Exempted devices" as defined in <i>Section 15.103 (c): "A digital device used exclusively as industrial or commercial test equipment"</i>
Notes	All HBK products that are potential sources of RF energy are subjected to testing in order to assess their RF emission characteristics. Although not mandatory, the vast majority of HBK products are in compliance with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules The remaining very few products comply with the Class A limits and are provided with the information to the user as required in Section 15.105 of the FCC Rules