

The Sustainability Approach and Management of Substances in Products



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Sony Ericsson

Rev

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Sony Ericsson - Background

- Joint venture since October 2001



- Global provider of multimedia devices – phones, accessories and PC Cards



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Locations



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Environmental aspects and compliance



- Wide range of products
- Fulfil requirements from customers, authorities, NGOs and end users
- Large amount of substance restrictions, labelling and information requirements
- Many suppliers that need to follow requirements
- How can this be controlled?

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Ensuring and fulfilling global compliance

One World - One Product Requirement

Ensuring legal compliance globally and fulfilling legislations in;



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Enhancement and improvement of chemicals legislations

- **Create and implement rigid chemicals legislations**
- **Governments as well as industry must take their respective responsibilities**
- **Gives us the opportunity to increase the phase out of unwanted substances**
- **Legislations need to be clear and workable with defined criteria**
- **Take into account technical progress**
- **Work together with suppliers and customers to improve our products even more**



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Sony Ericsson Banned & Restricted Substances List



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The Sony Ericsson list of banned substances (in products)

Group of substances	Banned Substance	CAS number	Examples of main areas of use	Main risks	Maximum Concentration Values ¹
Metals and their compounds	Cadmium and its compounds	Various	Stabilizers or pigments in plastics, organic in capacitors, batteries	Toxic	Plastics, inks, paints, textiles, rubber and resins: 5 ppm Others: 100 ppm
	Chromium (VI) compounds	Various	Corrosion inhibitors, pigments in plastics and inks, surface coatings	Allergenic, carcinogenic	Leather and textiles: 10 ppm Others: 1000 ppm
	Lead and its compounds	Various	Plastics, priming inks, solders, surface finishes	Bioaccumulative	Plastics, inks, paints, textiles, rubber and resins: 100 ppm Others: 1000 ppm
	Mercury and its compounds	Various	Batteries	Toxic	Plastics, inks, paints, textiles, rubber and resins: 5 ppm Others: 1000 ppm
	Antimony and its compounds Application: See section 4.	Various	Flame retardants, electronic components, LCD's	Toxic, negative for recycling	1000 ppm
	Beryllium, beryllium alloys and beryllium compounds Application: See section 4.	Various	Connectors	Carcinogenic	1000 ppm
	Nickel, nickel alloys except in steel alloys and nickel compounds Application: See section 4.	Various	Decorative metal finishes, barrier layers	Allergenic	See section 4.
Halogenated flame retardants	All halogenated flame retardants, including: • Polybrominated biphenyls (PBBs), • Polybrominated diphenyl ethers (PBDEs), • Tetrahydrophthalocyanine (THPA, TBPA) and • Hexachloro cyclotriphosphazene (HCCTCP) Application: See section 4.	Various	Printed boards, plastics, textiles	Bioaccumulative Ecotoxic	See section 4.
Polymers	All chromated polymers including polyvinylchloride (PVC), PVC blends and Chloroprene Rubber	Various	Packaging, cables, gloves, electronic and mechanical equipment	Corrosion and/or risk of formation of chlorinated dibenzodioxins and furans if uncontrolled fire	500 ppm
	Synthetic and natural Latex Rubber	Various	Covers, rubber, soft materials	Allergenic	N/A

¹ For more details on Maximum Concentration Values, please refer to section 4 in this document.

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Sony Ericsson Banned & Restricted Substances List



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Management of Substances and materials by Banned & Restricted Lists

Input from legislations, customers, NGOs and other stakeholders...

Be prepared for upcoming legislations

Regular update of the list

Be a fore-runner in the industry

TT

Group of substances

Metals and their compounds

Halogenated flame retardants

Polymers

For more details on

Maximum Concentration Values¹

Plastics, textiles, inks, 5 ppm

Leather, 10 ppm

Others, 1000 ppm

Plastics, textiles, inks, 100 ppm

Others, 1000 ppm

Plastics, textiles, inks, 5 ppm

Others, 1000 ppm

Plastics, textiles, inks, 5 ppm

Others, 1000 ppm

Plastics, textiles, inks, 5 ppm

Others, 1000 ppm

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Others, 1000 ppm

Plastics, textiles, inks, 5 ppm

Others, 1000 ppm

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Substance achievements

Achieved phase outs

- Halogenated flame retardants in boards, casing and cables since 2006
- PVC in all applications since 2007
- All chlorinated polymers since 2007
- Nickel in surface applications since 2008



Ongoing phase outs

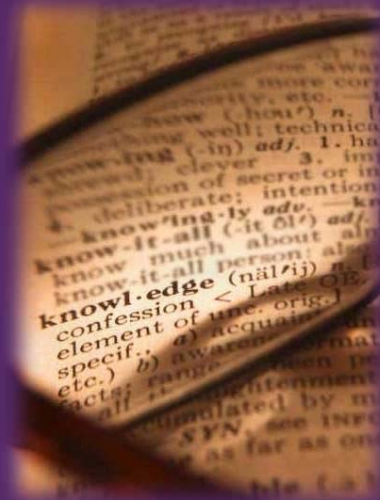
- All beryllium compounds
- All antimony compounds
- All remaining uses of halogenated flame retardants
- Bisphenol-A residues in Polycarbonate and Epoxy

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The importance of information...

- **Ensure fulfillment of legal, internal and customers' requirements**
- **Proactive to new regulations and requirements**
- **Facilitate global environmental design review work**
- **Control the Phase out of Restricted Substances**



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Sony Ericsson Material Declarations Module

- Material declarations with full disclosure of chemical substances are collected
- Industry standard template – IPC 1752
- Material declarations are uploaded into a Sony Ericsson database
- Compliance is calculated for each component
- Compliance is aggregated for the entire product



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Sony Ericsson Material Declarations Module – Example

Teamcenter Environmental Compliance

home search import

23055210 Logout

TEAMCENTER

Search for External Part

External Part Actions: Export to Excel Go Search Actions: Edit Search Go

Item	External Part	Part ID (IP Status)	Commodity Code	External Part Description	Supplier	Reported	Distance	RoHS	J10-A	SEMC-B	SEMC-R
1	AFD9-0023	10007587.1 (RELEASED)	EL2			07/24/2007 00:00:00		✓	✓	✓	✓
2	BLM30A02459YD	10002503.1 (RELEASED)	EL3			08/08/2007 00:00:00		✓	✓	✓	✓
3	BLM30A07009Y1	10000126.1 (RELEASED)	EL3			08/08/2007 00:00:00		✓	✓	✓	✓
4	BLM15A01925N1D	10002008.1 (RELEASED)	EL3			08/08/2007 00:00:00		✓	✓	✓	✓
5	BLM15B070019Y1	10000120.1 (RELEASED)	EL3			08/08/2007 00:00:00		✓	✓	✓	✓
6	BLM15E01215N1	10002817.1 (RELEASED)	EL3			08/08/2007 00:00:00		✓	✓	✓	✓
7	BLM15A01925N1J	10002817.1 (RELEASED)	EL3			08/08/2007 00:00:00		✓	✓	✓	✓
8	BLM15A01925N1D	10002818.1 (RELEASED)	EL3			08/08/2007 00:00:00		✓	✓	✓	✓
9	BLM15E01215N1	10011896.1 (RELEASED)	EL3			08/08/2007 00:00:00		✓	✓	✓	✓
10	BLM15P01215N1D	10000118.1 (RELEASED)	EL3			08/08/2007 00:00:00		✓	✓	✓	✓
11	CM3C1918219EA	10000079.1 (RELEASED)	EL3			01/18/2008 00:00:00		✓	✓	✓	✓
12	CM3C18102110AAT	10000090.1 (RELEASED)	EL3			01/18/2008 00:00:00		✓	✓	✓	✓
13	CM3C18102110AAT	10000093.1 (RELEASED)	EL3			01/18/2008 00:00:00		✓	✓	✓	✓
14	CM3C171471619EA	10000048.1 (RELEASED)	EL3			01/18/2008 00:00:00		✓	✓	✓	✓
15	ALM3035C1E1808801D	10011173.1 (RELEASED)	EL3			08/08/2007 00:00:00		✓	✓	✓	✓

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15 rows/page

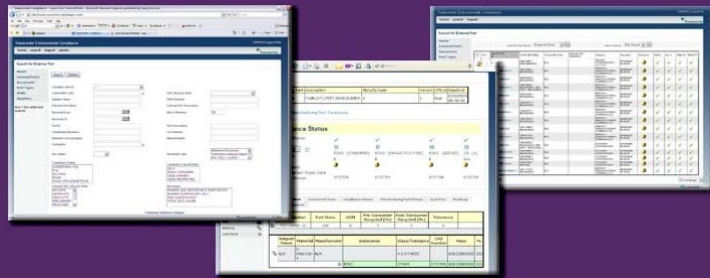
Local Intranet

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Sony Ericsson Material Declarations Module – Benefits

- Full disclosure of material content in all procured components
- Automatic generation and tracking of environmental compliance
- Quick identification of the presence of substances of interest or concern in components or entire product
- Producing necessary information to stakeholders



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Know what you have in your products - not what you don't have!

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Information sharing among suppliers

- Be open and sincere
- Long term business collaboration
- Not disqualify suppliers due to lack of environmental consideration
- Helping and training suppliers to understand our requirements and design for environment



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Understand the value

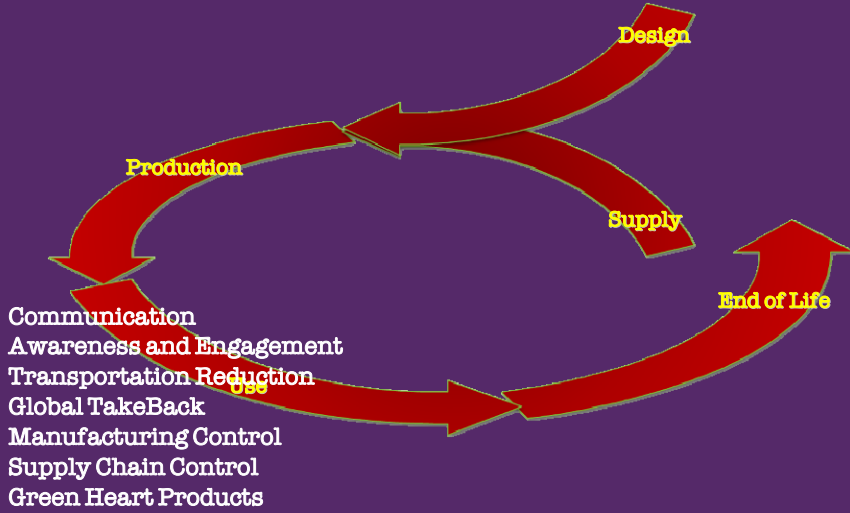
- Collaboration with suppliers leads to understanding and greater environmental awareness
- Understanding the competition advantage
- Be ahead of the legislator creates business opportunities for suppliers
- Supplying to our competitors when these are implementing the same requirements



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Sustainability Approach



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GreenHeartProject A Sony Ericsson Concept study

GreenHeartPhone GreenHeartPackaging GreenHeartZeroCharger

No-load power consumption score chart
The more stars, the more energy efficient

★★★★★	≤ 0,03 W
★★★★	> 0,03 to 0,10 W
★★★	> 0,10 to 0,30 W
★★	> 0,30 to 0,50 W
★	> 0,50 to 0,8 W
No Stars	> 0,8 W

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GreenHeartProject A Sony Ericsson Concept study



- Bioplastics in casing
- Recycled plastics (from milk bottles) in keys
- Integrated electronic manual to minimize paper consumption
- Application games to measure your environmental performance
- Electronics built on T650 platform – awarded by Greenpeace as most environmental friendly mobile in march 2008



- Lightweight moulded paper
- Minimize transport weight and volume
- Only ship and sell what you need – charger can be sold in separate packaging



- User friendly On/Off switch
- 3,5 mW no-load power (99% better than average on market)
- Housing in bioplastics

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The future



- Roll out different aspects from the concept study into future projects
- Continue the complete phase out of unwanted substances
 - Antimony
 - Beryllium
 - Phtalates
 - Halogenated Flame Retardants
- Further improve energy efficiency of chargers
- Decrease carbon footprint for our products
- Continue and strengthen the training and environmental cooperation with our suppliers

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Thank you!

Questions?



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