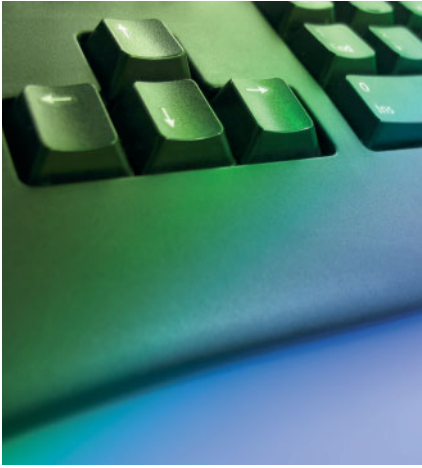




ANALYSES OF HAZARDOUS SUBSTANCES IN **ELECTRICAL AND ELECTRONIC** EQUIPMENT



HAZARDOUS SUBSTANCES OF ELECTRICAL AND ELECTRONIC EQUIPMENT AND ANALYSIS

RoHS

The RoHS directive (Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment) restricts the use of certain hazardous substances. The directive is valid for electrical and electronic equipment operating with max. 1000 V AC or max. 1500 V DC.

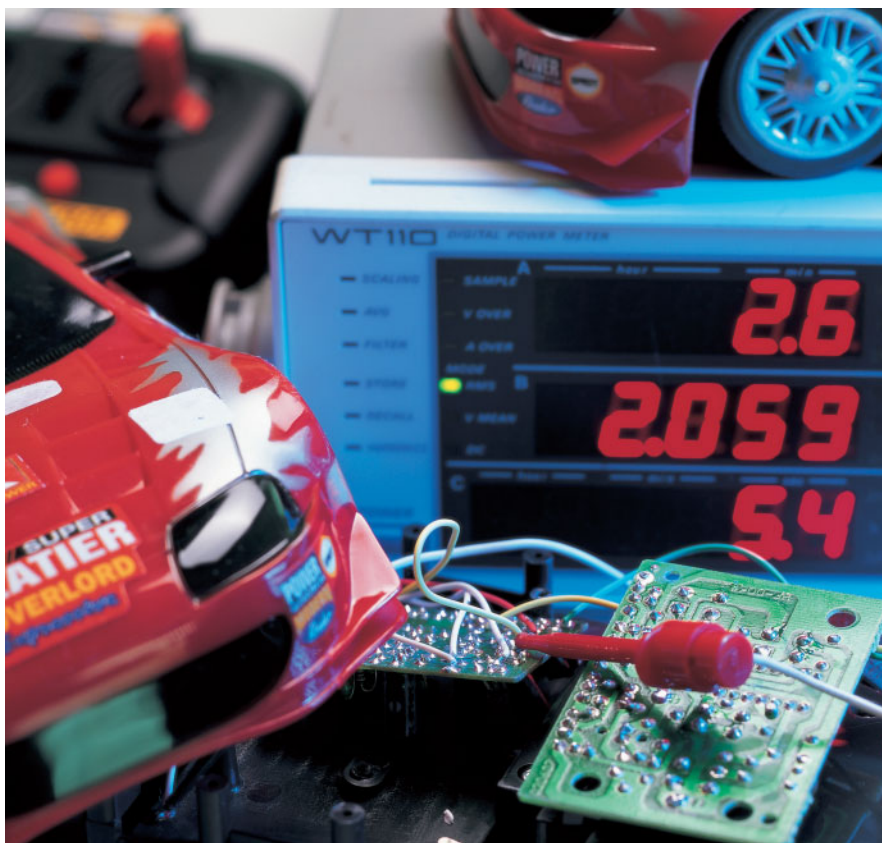
From July 1, 2006 the use of hazardous substances mentioned in the directive cannot be used in electrical and electronic equipment. The aim of the directive is to reduce health and environmental risks caused by electrical and electronic equipment. International investigations show that the restricted substances have caused cancer, allergies and other illnesses.

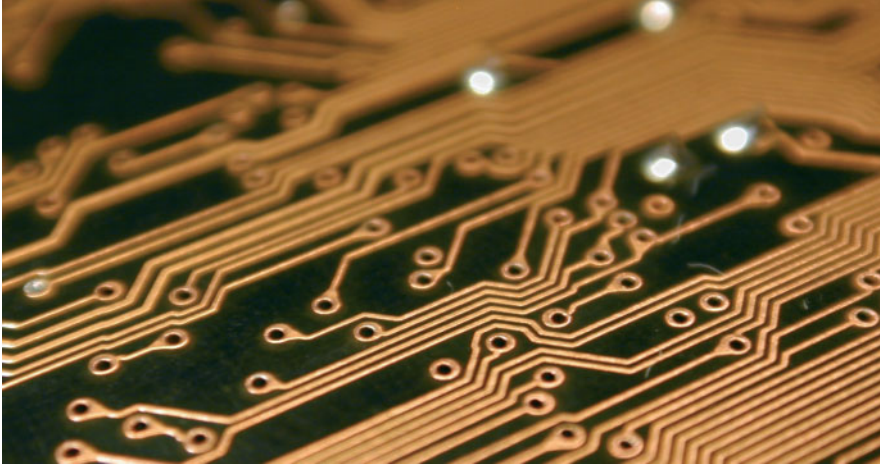
The RoHS directive includes six restricted substances

- Cadmium
- Mercury
- Lead
- Hexavalent chromium
- Brominated flame retardants (PBB and PBDE)

The RoHS directive is valid for the following products

- Household appliances
- Information technology and telecommunication equipment
- Consumer equipment
- Lighting fittings
- Electrical and electronic tools
- Toys
- Sports and leisure equipment
- Vending machines





Product development and type testing

Similar components and materials can be tested at the same time. If hazardous substances are found during testing, each component is tested separately to find the hazardous substance or the material in question.

Advantages

Faster and cheaper testing.

Quality management of suppliers of raw materials and components

When non-hazardous components are chosen in the product development stage, the sub-contractors of raw materials and components shall monitor their own processes and make sure that all products are non-hazardous. SGS international network is at your disposal.

Quality management of manufacturers and importers

The manufacturer or importer of the final product is the one who is responsible for the compliance with the RoHS directive. The manufacturer should check the quality of materials, components and product being produced by random testing. Correspondingly, also the importer should perform his own quality control by random testing.

The rest of the world

Also outside Europe there are requirements regarding restrictions of hazardous substances. Other countries can have additional requirements or differences in approvable proportion of hazardous substances. SGS international network helps you to clarify the requirements.

Material Testing/ Finished Product Testing

SGS suggests that individual materials and components are tested at the early stages of production, such as at material selection or product development.

SGS services with regard to the RoHS directive

- Clarification of the requirements
- Analysis of hazardous substances for components and materials during the product development stage and during quality control
- Training regarding RoHS directive and analysis of hazardous substances
- Verification of hazardous substance analysis carried out by other laboratories (we interpret test results)
- We grant impartial Statement of Conformity for RoHS directive

What makes a product fulfil the requirements?

- Safety
- EMC
- Energy efficiency
- Recyclability
- Free from hazardous substances
- Environmental conditions
- The national requirements in different countries

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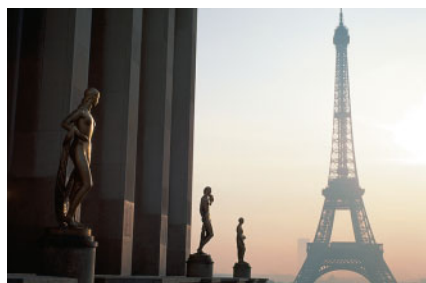
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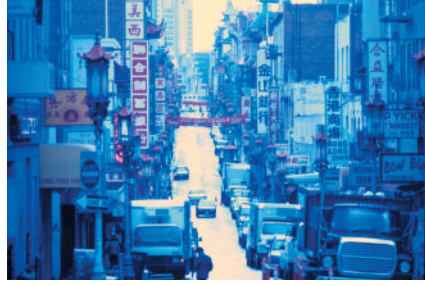
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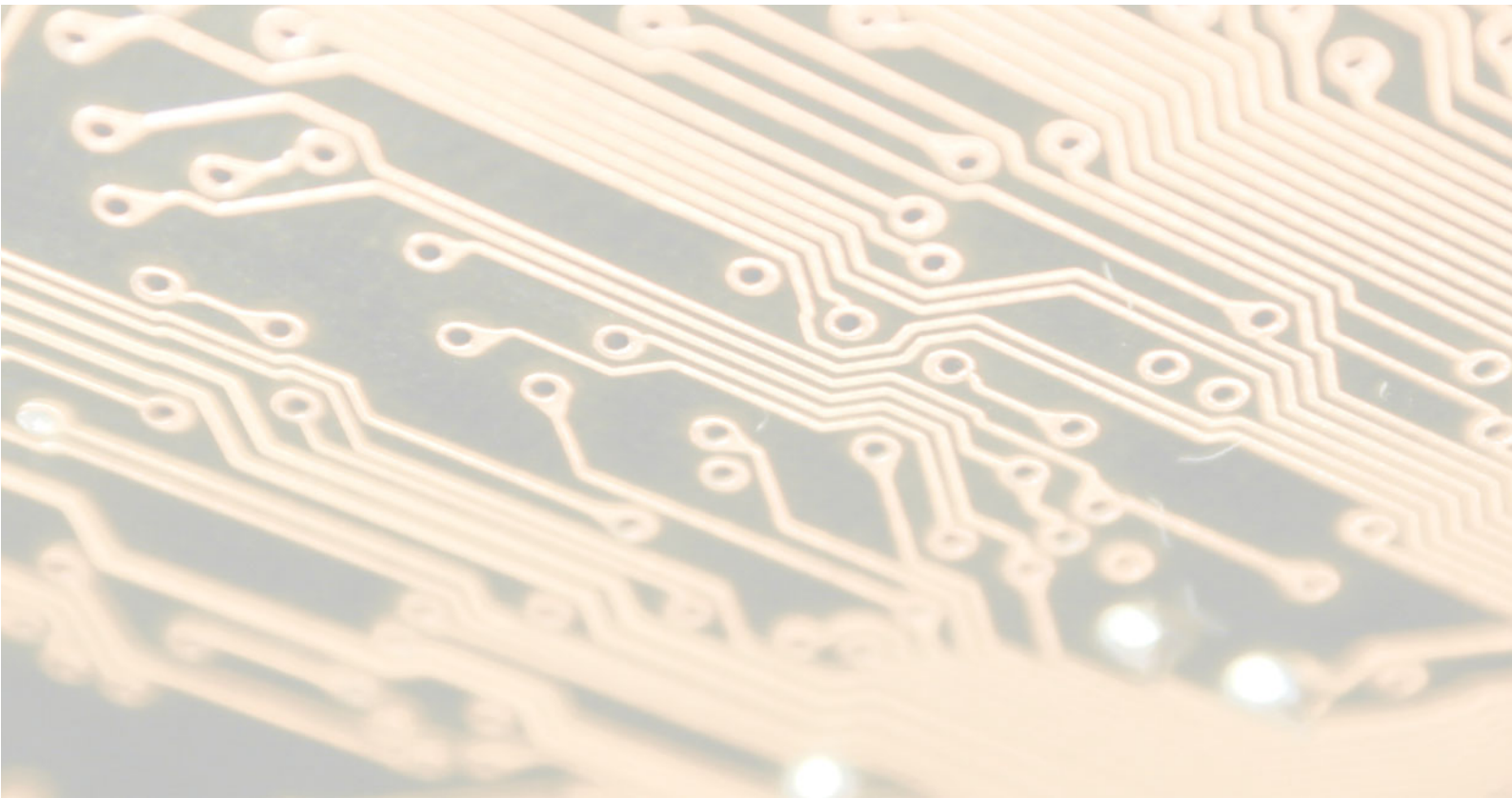
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