science summary

Environment Agency

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SCHO0809BQWO-E-P

# Emission Scenario Document (ESD) for chemicals used in the electronics industry

## Science Summary

The Environment Agency has published a report describing how chemicals are used in the electronics industry, to help risk assessors evaluate how these chemicals could be released to the environment.

The UK electronics industry is very varied, with over 11,000 companies involved in the design, production and distribution of electronic products employing over 250,000 people.

Over 500 different chemical substances are used in the manufacture of electronic components, as cleaners, dopants, etchants, plating chemicals, solvents and numerous other applications.

This Emission Scenario Document (ESD) is intended to help with environmental risk assessment of chemicals. Such assessments are required under the REACH regulation, which requires a Chemical Safety Reports and risk characterisation for chemicals. Risk assessments are also increasingly being undertaken by organisations on a voluntary basis.

The ESD provides information on chemicals used in various processes within the electronics industry, along with typical release rates.

It covers the life cycle stages of chemical products and how they are used in the manufacture of electronic components. The ESD considers formulation, industrial use, waste disposal, in-service loss, and recycling and waste as distinct life cycle stages.

Specific processes and types of chemicals used within the industry are covered, with worked examples to demonstrate how to find the correct release scenario information within the document and calculate release rates for a particular chemical.

While the ESD contains recommendations and suggested default values, it can also be used as a framework to identify information requirements to calculate accurate release rates. Where site-specific information is available, this should be used rather than the suggested default values.

As many industries are involved with electronics, it is unlikely that users will read the entire ESD, but rather dip in to use specific sub-sections. The document has therefore been compiled with ease of use in mind, and split into various sections and sub-sections. It can be approached from the perspective of a chemical supplier, a processor or those interested in generic product types.

This ESD is intended to be used in conjunction with other similar documents, and references to these materials are made where relevant.

This summary relates to information reported in detail in the following output:

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**Project manager:** Ian Doyle

**Research Contractor:** Peter Fisk Associates, Herne Bay, Kent, CT6 7EX

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