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Title
Guidelines – Definitions and reports in the environmental field



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1 Guideline to this document

The purpose of this document is to provide guidelines and general requirements to supplier and seller to Saab how to report health and environmentally hazardous substances in components and products when delivered to Saab.

2 Requirements for material declarations

Material declaration is a declaration and reporting of substances and materials which a component, sub-unit and/or product (article) contain. The mass and were the substances are found shall be stated in the declaration.

Information about other production chemicals not contained in the final product/component will be handled in other ways and shall not be accounted for in the material declaration. These shall be accounted and reported in accordance with Saab requirements for Environmental and Health Hazardous Materials Report.

Additional information that also can be available in a material declaration is about the particular product, sub-units and/or compliance with laws and legislation (i.e. regulated substances such as RoHS).

2.1 Detail requirements for material declaration

There are several industry-specific Material Declaration standards regarding reporting of chemical substances in products and components.

Saab prefers that suppliers and sellers to Saab use the industry-specific standards IEC 62474 and IPC 1752 for reporting of material declarations. These standards also use a common XML format for reporting and Saab prefers this format at delivery of the material declarations.

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Reporting of substances according to industry-specific standards normally fulfils the requirements in RoHS and REACH. However, to avoid uncertainties such as a substance that has been proposed for regulation but not yet has been incorporated in the standards, shall criteria for reporting of substances be applied according to JIG-101. For reporting of material declarations shall Material Declaration Classification format according to IPC1752A be used.

Saab normally requires a “Full Material Declaration” according IPC1752A Class D from supplier or seller, which means that all constituent substances in the product or article shall be reported.

2.2 Full material declaration

Full declaration of product’s/component’s material content, meaning that the complete weight of the part and its substances shall be declared. Saab normally requires a full material declaration.

JIG-101 Criteria’s 1, 2 and 3 are applied for full material declaration.

Material declaration classification D format is applied for full material declaration.

2.3 Complete material declaration

Declaration of the product/component of all substances that are subjected to regulations and to forthcoming regulations.

JIG-101 Criteria’s 1 and 2 are applied for complete material declaration.

Material declaration classification C format is applied for complete material declaration.

2.4 Partial material declaration

Declaration of the product/component of all substances that are subjected to regulations.

JIG-101 Criteria 1 is applied for partial material declaration.

Material declaration classification B format is applied for partial material declaration. Classification C format is preferred by Saab for partial material declaration, but is optional.



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2.5 IPC1752A Material Declaration Classification/Category

Class	Description	Declaration type	Detailed requirements
A	Reporting in reply format.	Reply	<ul style="list-style-type: none"> Supplier provides responses to standard queries and/or optional custom queries format.
B	Material group reporting.	Material group	<ul style="list-style-type: none"> Supplier states the amount of different groupings of materials within a product.
C	<ul style="list-style-type: none"> JIG-101 substance category reporting for the product/component. Additional substances categories reporting at the product level. 	Substance summary groups	<ul style="list-style-type: none"> Supplier provides mass and/or concentration of JIG-101 substance category at the product level if the above thresholds. Additional substance categories can be added and reported at the product level.
D	<ul style="list-style-type: none"> Substances reporting at the homogeneous material level. JIG-101 substances and additional substances are accommodated. 	Full substances	<ul style="list-style-type: none"> Supplier provides location, mass, substances at homogeneous material level.

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Class C is used for reporting a summary of types of substances within a product/component. This section is aligned with the JIG-101 guide and supports the JIG 101 substance categories, RoHS substance categories and REACH SVHC substance categories, as well as allowing custom lists to be added by either the requester (Request/reply) or the supplier (Distribute).

Saab (Requester) customer list is the GMS-0110 List of Hazardous Chemical Substances.

Class D is used for reporting all substances at the homogeneous material level. For consistency in reporting JIG-101 substances, any software tools developed shall include the JIG-101 substances categories, substance lists, and associated CAS numbers per the JIG-101.



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2.6 JIG-101 Criterias for adding substances in the material declaration

Criteria 1 – R (Regulated)

Substances that are subject to enacted legislation that (a) prohibits their use; or (b) restricts their use; or (c) requires reporting or results in other regulatory effects (e.g. labelling) and where the substance-specific effective date is currently in effect or scheduled to go into effect at a specific date in the future.

Criteria 2 – A (For Assessment Only)

Substances that are likely to be subject to enacted legislation where the substance specific effective dates of the regulatory requirements are uncertain.

Criteria 3 – I (For Information Only)

Substances that are not regulated but where there is a recognized market requirement for reporting their content in products. Reporting is used to facilitate company assessment regarding widely adopted industry environmental agreements or standards.

3 Requirements for documents and reports

When Saab requires specific environmental documents and reports from supplier or seller, the following definitions and its contents shall be followed.

3.1 Environmental Assurance Plan

Environmental Assurance Plan (EAP) describes product and its sub-units designated and overall environmental requirements towards the customer.

EAP is used to define the project and/or product environmental assurance activities and customer and legal environmental requirements.

EAP is used to provide the customer an overview of the different activities to be performed as environmental assurance, and of the organization responsibilities for these activities.

3.2 Environmental and Health Hazardous Materials Report

Environmental and Health Hazardous Materials Report identifies hazardous substances and verifies if the product complies with environmental requirements and legislation.

The purpose of this document is to provide and report health and environmentally hazardous substances and materials in the product, including components and chemical products, and chemical products to be used for maintenance.



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An Environmental and Health Hazardous Materials Report shall at minimum contain the following headlines and contents, if there is relevant information to the related topics:

- system description and definition
- referenced requirements and documents (legal and customer)
- hazardous substances in product (placement and its location)
- summary of the analysis
- hazardous substances according to requirements
- hazardous substances according to legislation
- substances restricted in RoHS
- substances restricted in ECHA Candidate List.

3.3 Environmental Impact (Assessment)

The purpose of Environmental Impact Assessment (EIA) is to summarize, analyse and evaluate the impact on environment and health at a specified life-cycle phase (or several).

Life-cycle phases can be development, manufacturing, storage, operation and maintenance and end of life/decommissioning phase, etc.

The document shall validate that the requirements are met as well as demonstrate overall environmental performance and environmental aspects.

3.4 Environmental Product Declaration

The purpose of an environmental product declaration is to provide the customer information about a product's or system's environmental performance and environmental impact.

An environmental product declaration, with a whole life cycle perspective, is a way to meet customer and governmental demands for reliable, understandable and comparable environmental information. An environmental product declaration is also an excellent basis for further improving the product's or system's environmental characteristics.

To produce an environmental product declaration, requires detailed information on, for example, the product's contents such as the materials, substances, chemical products, mass and the types of components.

In addition to the hazardous substances identified, the environmental product declaration shall include data on emissions, noise and facts about energy consumption, etc.



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4 Definitions

The following definitions are used by Saab.

4.1 Environment

- Definition of environment according to ISO 14001: surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelation.
- Surroundings in this context extend from within an organization to the global system.

4.2 Environmental analysis

Investigations and minor analyses focusing on environmental considerations. Can be about noise, emissions, hazardous substances, environmental impact, substitution and legislation reviews etc.

4.3 Environmental Assurance

All planned and systematic activities implemented within the management system, and demonstrated as needed, to provide adequate confidence that an entity will fulfil requirements for environment.

4.4 Homogeneous material

One material of uniform composition throughout or a material, consisting of a combination of materials, that cannot be disjointed or separated into different materials by mechanical actions, such as unscrewing, cutting, crushing, grinding or abrasive processes.

4.5 Article (according to Reach)

An object which during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition.

4.6 Component

Component is a product, or an article, without:

- a) revision, and
- b) sub-structure and
- c) purchased to a manufacturer part number



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4.7 Product

Any goods or service, which is:

- 1) an item generated in response to a defined set of requirements
- 2) something that is used or produced to satisfy a need or is the result of a process; e.g. documents, facilities, firmware, hardware, materials, processes, services, software, systems.

4.8 Hardware

- 1) Physical components in a system.
- 2) Electronic hardware including configuration file for Programmable Logic Device (PLD).

4.9 Product family

Group of products each of which contains the same substances or material at a similar concentration level.

Note A common case would be an electrical component supplier having many products of the same substance content that have different electrical values, such as a capacitor, resistor, inductor or an integrated circuit.

4.10 Product structure

The Product Structure describes the relationships and the position of contained parts.

4.11 Product part

Sub-unit of a product or another (product) part.

4.12 Substance

A chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Reference

Globally Harmonized System of Classification and Labelling (GHS):2003, Chapter 1.2, Definitions and Abbreviations.



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4.13 Hazardous chemical substance

A substance that poses a risk to human health or the environment by their inherent properties.

4.14 Reporting threshold level

Concentration level at or above which the presence of a substance in a material, component or product is declared if declaration of the substance is mandatory according to laws and regulations, or if it is agreed on to be declared.

Numerical threshold levels are provided in weight % (and parts per million, or ppm). The conversion to be used to calculate ppm is $0.1 \% = 1\ 000\ \text{ppm}$.

4.15 Substance group

One or more substances, where in the case of multiple substances they share at least one chemical sub-structure, or chemical or physical property under a generic name.

4.16 Material class

Defined classification of materials that are established in referenced IEC 62474 database for purposes of inventorying aspects of a product, such that no two classes contain the same materials.

4.17 Material

A material is made up of one or more substances (e.g., an alloy is a material, which in turn is made up of a number of substances).

4.18 Material Group

A set of materials selected by reason of importance with respect to legislative, economic, environmental, or other management concern and listed together for the purpose of their management.

The Material Group is to identify a family or group of materials to which the related homogeneous material substances belongs. Examples of Material Groups might include “halogens” or “phthalates”.

4.19 Mixture

Mixture or solution composed of two or more substances in which they do not react.



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4.20 Intentionally added

Deliberately used in the formulation of a product where its continued presence is desired to provide a specific characteristic, appearance, property, attribute or quality.

4.21 Material declaration

Material declaration is a declaration and reporting of substances and materials which a component, sub-unit and/or product (article) contain. The mass and where the substances are found shall be stated in the declaration.

Information about other production chemicals not contained in the final product/component will be handled in other ways and shall not be accounted for in the material declaration. These shall be accounted and reported in accordance with Saab requirements for Environmental and Health Hazardous Materials Report.

Additional information that also can be available in a material declaration is about the particular product, sub-units and/or compliance with laws and legislation (i.e. regulated substances such as RoHS).

4.22 IPC

IPC, the Association Connecting Electronics Industries, is an organization whose aim is to standardize the assembly and production requirements of electronic equipment and assemblies. IPC standards are used by the electronics manufacturing industry.

4.23 JIG

The JIG guide (101) represents industry-wide consensus on the relevant materials and substances that shall be disclosed by suppliers when those materials and substances are present in packaging that is used to transport and protect electrotechnical products. Substance content disclosure information is relevant because manufacturers and other purchasers require this data in order to determine the status of the packaging with respect to applicable regulation, design specifications, or other objectives.



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4.24 IEC 62474

The electrical and electronics industry and its supply chain use material declarations to track and declare specific information about the material composition of its products. IEC 62474 provides an International Standard for the exchange of material composition data and provide requirements for material declarations. This International Standard benefits the electrotechnical industry by establishing requirements for reporting of substances and materials, standardizing protocols, and facilitating transfer and processing of data.

5 Change History

Issue	Date	Change
1-2		Change history is not introduced.
3	2016-11-02	Changed template.

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