

Volvo Car Corporation International Material Data System (IMDS) Reporting Guidelines

The Volvo Car Corporation IMDS Reporting Guidelines need to be followed when suppliers submit component/semi-component/material/substance-data via IMDS.

Cascade of IMDS Reporting Requirements internally:

The recipients of documents concerning IMDS are responsible for cascading the information to at least the following organization heads in your company:

- Product Development
- Manufacturing
- Purchasing
- Corporate Environmental/Regulation Staff
- Materials Engineering
- Health, Safety and Toxicology
- Information Technology

Cascade of IMDS Reporting Requirements to Sub-Tier Suppliers:

It is the responsibility of first tier to cascade information to all their sub-tier suppliers and ensure that all other sub-suppliers in their supply chain comply with the same requirements. It is also the first tier's responsibility to ascertain that the submitting of the total material and substance content will be carried out. It is an industry-wide effort to collect all material information. Any broken link within the supply chain will have negative impact on the entire process. 1st tier must also cascade reporting requirements/guidelines throughout the supply chain.

IMDS reporting requirements:

Volvo Car Corporation requires that all parts in production from 01W35 and should be reported through IMDS. The requirement is valid for all part on the lowest level of the submitted part structure.

All Volvo Car Corporation Tier 1 suppliers must use the IMDS system as follows:

- Data submission should begin immediately and proceed until reporting deadline.
- The supplier should continuously update the information as the part changes in IMDS.
- Input your supplier information (Contact person) in the IMDS "supplier information" screen.
- When a data sheet is submitted to Volvo Car Corporation, you will need to select the appropriate company as the recipient i.e. – Volvo Car Corporation, Gothenburg.
- In the recipient pop-up screen (after you have selected a recipient) the Volvo Car Corporation part number needs to be entered (exactly as it is written) All other fields may

be left blank.

- These requirements may change without prior notice when certain functions are added or removed. This will be communicated to each supplier separately.

More information on the IMDS reporting system and specific Volvo Car Corporation requirements can also be found in the Volvo Car Corporation IMDS reporting standard at <http://violin.vtd.volvo.se/depts/06850/docs/503639.pdf>

Volvo Car Corporation also uses the Restricted Substance Management Standard. This is a Ford Motor Company corporate trustmark that can be found at http://www2.car.volvo.se/supplier/xchange/standards/ford_std/99p9999a.pdf

Please advise that Volvo Car Corporation in certain cases have requirements that exceed the Restricted Substance Management Standard, therefore it is very important to consult the Volvo Car Corporation specific guidelines and standards when reporting into IMDS.

Definitions within IMDS to be used when reporting to Volvo Car Corporation

Component / Material / Basic substance content disclosure – and hierarchical structure

The necessary information required in IMDS needs to be presented in a hierarchical structure. This can easily be done building tree structured MDS's, comprising of:

- Component (Part or Assembly) – **REQUIRED**
 - Sub-component(s) (component parts) - **OPTIONAL**
 - Semicomponent – **OPTIONAL (required in certain cases)**
 - Material(s) - **REQUIRED**
 - ◆ Basic Substance(s) – **REQUIRED**
- **Every Component** must have at least one material (or one component/sub-component with one material) associated with it. Total materials weight under the components (whether attached to a sub-component or not) will define the total component weight.
- **Sub-component** when used must have at least one material associated with it. Total material weight under sub component **must** equal total sub-component weight.
- **Semicomponent** this is not the same thing as a sub-component within a part. The definition of a semicomponent is an object with physical properties that will NOT be used in the final product without further improvement, i.e. leather that needs to be cut and sown into upholstery or the base for a cogwheel that needs further machining. Surface treatment should also be defined as a semicomponent. There must always be at least one material associated to a semicomponent.
- **Material - 100% of the materials in your products need to be declared.**
 - Basic substances should only be associated with a material (basic substances should not be attached directly to components or semicomponents).
 - The sum of the materials weight defines the total part/assembly weight.
 - The material classification field must be filled in.
- ◆ **Basic Substance(s) – All substances added intentionally must be disclosed.**
 - Must be entered in the form they exist in the material i.e. elemental breakdown for polymers (C,H,N,O etc.) is **NOT** acceptable.
 - A material needs to have 100% basic substances associated to it, before it can be sent to an OEM.
 - When plausible a substance should always be associated with the most specific CAS-number. Jokers are not accepted.

Sending / Proposing / Publishing Material Data Sheets

IMDS provides three ways of distributing material data sheets (MDS's) to other users (both suppliers and OEMs).

From information currently received by Volvo Car Corporation, the need for clarification is evident.

Publishing MDS's

- MDS's that are published are available for **all OEMs and suppliers to view**.
- Publishing MDS's should ideally be used for suppliers to share Material information (**not** component information), i.e. standard materials (metals / polymers / adhesives / paints etc.) that are used by one or more **suppliers**, and contain no commercially sensitive information.
- **1st tier suppliers, sending a 1st tier part to Volvo Car Corporation must not publish the MDS**. As Volvo Car Corporation downloads only all of their own MDS's from IMDS, the published ones will not be included.

Sending MDS's

- This function is used to send an MDS to a single recipient only.
- The recipient is specified and can either be another a supplier or an OEM.

Proposing MDSs

- This function is used to send an MDS to several recipients.
- The recipients are specified and can either be another supplier or an OEM.

1st suppliers sending Material Data Sheets for 1st Tier parts to Volvo Car Corporation must only use the send or propose functions and always report on the correct part No.

Clarification on the copy function within IMDS.

As an aid to data input, a copy function is included to replicate MDSs. On selecting "copy" for a particular MDS, you are left with 2 options:

1. **COPY** – this assigns a new id number to the MDS, and should be used if your end item has a different part number to the originally selected MDS (i.e. used for **similar** parts, LH /RH parts etc.).
2. **NEW VERSION** – this keeps the same id. number, but updates the version number. This should be used if the MDS is for the **same** part number as the originally selected MDS.

General Guidelines

(Summarized in table below)

Field	Requirement	Comment
Material Name	<ul style="list-style-type: none"> • Polymer material to ISO 1043 • Should be descriptive and not generic, e.g. "Spring Steel Wire A DIN 17223" not "Steel" 	MUST BE INSERTED
Trade Name	Insert Trade Name here	
Material No.	The number that specifically identifies the material within the Norm. e.g. 301S26 a grade of Stainless Steel defined in BS 2056, 1.5510 a grade of Steel defined in DIN 1654-4	
Symbol	Following ISO 1043 requirements to enter the appropriate symbols	Must be inserted for polymeric parts
Classification	e.g. steels / thermoplastics 50 + material classifications. Choose the most applicable.	Must be filled in – used in recyclability calculations.
Norms / Standards	Industry Norms may be added here	
In-house norms	OEMs in-house Norms and standards may be referenced here	
Supplier	Material supplier	
Remarks		
Development Sample Report	Not used by VCC	
Restricted Substances	All substances of concern according to RSMS must be reported in Basic Substances field. The supplier must know the reason the substance is used.	E.g. For PVC (<i>restricted material</i>), chloroethylene polymer is the basic substance.
Material Composites	All substances added intentionally, and being an integral part of the product must be disclosed.	

Field	Requirement	Comment
Security/Environment (Chapter 2)	<p>Questions 1-6 are optional and do not need to be answered. Questions 7-10 concern the recycled content of the part and are mandatory. Questions 7-10 ask for the content of recycled material in the part, not the recyclability of the part.</p> <p>7. Amount of contained recyclate, as released? What is stated on the drawing or the documentation of the part.</p> <p>8. Amount of contained recyclate as measured? What is the actual content of recycled material in the part.</p> <p>9. Amount of contained recyclate - post industrial recyclate? How much of the recycled content is from postindustrial waste (per part weight).</p> <p>10. Amount of contained recyclate - post consumer recyclate? How much of the recycled content is from post consumer waste (per part weight).</p>	
Jokers	<p>Jokers are defined by that there is no information attached to the substance. Everything is labeled as "System".</p> <p>Jokers are Not To Be Used By VCC suppliers</p>	E.g. Miscellaneous, Request (Hg/Pb/Cd/Cr6+), Biocides etc.

How to Access the International Material Data System

IMDS can be accessed through: <http://www.mdssystem.com>. There you can click on 'contact' to get the IMDS service center telephone number and email address, which are currently:

IMDS help desk Europe:

+49 (0) 421 52 56 666.(GMT + 1 Time Zone: Germany 8am-5pm).

or imds-eds-helpdesk@eds.com

IMDS help desk North America

+1 (765) 854-6501 (8 a.m. to 5 p.m. CST)

or imds-eds-helpdesk-nao@eds.com

The IMDS service center will register your company and provide login user ID's for your system administrator(s). Your system administrator(s) will get the authority to provide login user ID's for your IMDS end users. For any system help you require, first contact your system administrator.

The IMDS website also provides questions and answers, system requirements, contact information, etc. Classroom IMDS training can be requested using the web page. IMDS also provide an online tutorial web-based training. Online help is available within IMDS.

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