Guideline for the creation of Material Data Sheets (MDS) in the International Material Data System (IMDS) for the Volkswagen AG and brands

Responsable: Volkswagen AG
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1. General Notes

The parts documented in material data sheets (in the following referred to as MDS) sent to Volkswagen AG must comply with material-related legislation worldwide (particularly the heavy metal ban in Europe, Korea, Japan etc., the European chemical legislation REACH, restrictions in the USA etc.). Only the availability of formal and contentswise correct MDS for all parts allows the monitoring of these legal obligations.

According to VW standards VW 91101, VW 99000 and VW 01155 each supplier is obliged to send MDS for all supplied parts to the Volkswagen AG. The basic requirements for substances, mixtures and products, whose use is limited or subject to other requirements, are regulated by the VW 91101 standard.

Due to the high amount of MDS received by the different brands from various suppliers, Volkswagen applies automatic and / or manual assessment to ensure a high data quality.

All suppliers of the Volkswagen AG are obliged to ensure that the MDS sent to the Volkswagen AG describe the documented part accurately and are created according to the IMDS Recommendations. In addition to the basic requirements of the IMDS recommendations, in particular number 001, further requirements are defined in this document and in the VW 91101.

This document shall support our suppliers in the creation of MDS for the Volkswagen AG. Furthermore, the legal provisions as well as the IMDS Recommendations shall apply.

1.1 Processing of received MDS
Generally incoming MDS are checked regular till 7 days.

1.2 Time of provision of MDS to the Volkswagen AG
The final MDS have to be provided according the VW 91101 complete and error-free no later than 14 months before SOP. It should be noted that all MDS sent to the Volkswagen AG are downloaded once a night. Sufficient time should be calculated to revise possibly rejected MDS.

1.3 Send vs. propose
If possible, please use the option “send” to transfer a MDS to the Volkswagen AG. In that way, you avoid unnecessary versions of IMDS IDs which cannot be corrected anymore. “Propose” should only be used if you want to forward a MDS to the Volkswagen AG.
1.4 Forwarding permitted
In principle, the forwarding of MDS sent to the Volkswagen AG should be permitted in all cases. The organisational structure of the Volkswagen AG and the use of carry-over parts make it often necessary to forward MDS.

1.5 Change Management
In the following cases, changes of the delivered part require the creation of a new version of the existing MDS, which has to be sent to the Volkswagen AG:

- Replacement of materials
- Change in the composition of a material (e.g. substitution of a basic substance)
- Use of an additional material
- Changes in the GADSL which affect the part or a material contained in the part.

If a part gets a new customer part-number, then a new IMDS-ID is required. The complete conditions for change management and the creation of new MDS/MDS versions can be found in IMDS Recommendation 001, chapter 3.2.

1.6 Volkswagen IMDS-ID’s
Please send the MDS to the Volkswagen Organisation Unit where your initial sampling takes place.
In the following chart you will find the IMDS-ID’s of several brands or plants from the Volkswagen AG.

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<thead>
<tr>
<th>Departmental Units</th>
<th>IMDS-ID</th>
<th>Postal code</th>
<th>Place</th>
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<tr>
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2. MDS Structure

The MDS sent to the Volkswagen AG must always follow the latest IMDS Recommendations and Volkswagen standards. Below you find relevant references related to the focus of VW checks.

2.1 Materials
The described composition of materials must represent the reality. The materials need to be described in their homogeneous and (in the case of process materials like lacquers, adhesives etc.) cured state. The usage of liquids, reactive substances, starting products and gases is only allowed if they are indeed contained in the final product. Plastics usually contain additives, which must be documented in IMDS. Materials containing 100% pure plastic are usually rejected. Deleted basic substances do not offer the highest possible quality and are no longer used.

2.2 Jokers and unspecified pure substances
The use of jokers and unspecified substances is generally not permitted. All ingredients of a product must be declared. Excluded is the joker "not yet specified" in preliminary data sheets on development sampling and procurement release. To protect information, substances can be marked as "confidential". At the same time, according to VW 91101, a “Trusted User” must be classified as trustworthy.

2.3 Structure
The structural composition of the MDS (subcomponents) must represent the reality.

2.4 Classifications
The classification must follow the IMDS recommendations 001, specifically the Annex I, and must correspond to the reality.

2.5 Ranges
The ranges of the different node types must comply with the standards prescribed in the IMDS recommendations.

2.6 Material name
The material name should comply with the requirements of the IMDS recommendations. Accordingly, trade names may not be used in the material name.

2.7 Application codes
The application codes must fulfill all corresponding currently legal requirements. Hidden or inactive application codes are generally rejected.
2.8 Biocides
For substances classified as biocides, it is necessary to document the use of substances in conformity with the law. Therefore, the regulatory information (e.g. product-type (PT6, PT7,… ) - to be used as biocide YES or NO) for these substances should be completed.

3. Formal Requirements

The check of the formal requirements takes place automatically and without further revision of the MDS’s tree structure. If a MDS is rejected because of formal reasons, further errors can appear when the MDS is sent again.

3.1 Part Number
The Volkswagen part number must be entered in the MDS on the field “recipient data” following the Standard VW 01098.

Favored format:
(Without points or separators)

<table>
<thead>
<tr>
<th>X</th>
<th>N</th>
<th>N</th>
<th>N</th>
<th>A</th>
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<td>Number</td>
<td>Character</td>
<td>Main</td>
<td>Middle</td>
<td>Final</td>
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</table>

(The last 5 positions are not obligatory available, because they correspond to the index and color code.)

Further examples:
Standard part number: N__106 666 01; N0105634
Multi-use part number: WHT 000 000 1N; WHT 000 868

An underscore _ can be used to represent spaces in the part number. Underscores are always formatted as spaces and should not be used as separators. Examples:

Part number B .123.456.AB.9B9 should be specified in IMDS as follows: B__123456AB9B9

Part number 5G0.123.456. A.9B9 should be specified in IMDS as follows: 5G0123456_A9B9
If these rules are violated, the following error messages can appear:

**MULTIPLE_SUPPLIER_PART_NUMBER_PER_DAY**
To ensure that the assignment between part number and ID remains unique, each part number can only be sent once a day. If the same part number is sent multiple times on the same day, all data sheets with that part number are rejected. Only one of the datasheets needs to be resubmitted.

**INVALID_PART_NUMBER / TEIVON_CHECK**
The supplier entered a part number which does not correspond to the Volkswagen part number scheme (INVALID_PART_NUMBER; e.g. submission of the own internal part number and not the VW part number), or a part number that is not known (TEIVON_CHECK) in TEIVON (Volkswagen part number allocation system). The supplier must enter the appropriate part number and resubmit the MDS to Volkswagen. The format of the part number must follow the Standard VW 01098.

### 3.2 Part Name
The name of the part/to-semi-component must be entered according to the Volkswagen drawing and CAD files in MDS under “recipient data”. This entry can be in English or in German. Besides the name, further descriptions are allowed, as long as the name of the drawing is included.

### 3.3 Drawing number/ Drawing dated
The drawing number and the drawing dated must be entered in the MDS under “recipient data”, according to the Volkswagen drawing. The entry of the date must comply with the format DD.MM.YYYY (e.g. 01.02.2013). In case there is no drawing number or date available, the symbol “-“ should be entered.

For operating materials the specific formulation number has to be entered into this field.

If these rules are violated, the following error messages can appear:

**MISSING_DRAWING_NUMBER**
The supplier forgot to enter the drawing number in the submission of the recipient data. The supplier must add the corresponding information (drawing number) and resubmit the MDS to VW.

**MISSING_DRAWING_LEVEL**
The supplier forgot to enter the drawing dated in the submission of the recipient data. The supplier must enter the corresponding information (drawing dated) and resubmit the MDS to Volkswagen.
3.4 Supplier Number
The DUNS number of the supplier must be entered in the MDS under “recipient data”. In order to get the DUNS number accepted, the supplier should have the status “active” in the Volkswagen supplier database. If this is not the case, the supplier can activate the status in the supplier platform under the following link „Team up with us”. http://www.vwgroupsupply.com/

The entry of the DUNS number must comply with the following format:

12-345-6789

If these rules are violated, the following error messages can appear:

MISSING_SUPPLIER_NUMBER
The supplier number was not entered.
The supplier must add the supplier number and resubmit the MDS to Volkswagen.

INVALID_SUPPLIER_NUMBER
A wrong supplier number was entered. The supplier must enter the DUNS number of the producing plant and resubmit the MDS to Volkswagen. If the DUNS number is correct, it has to be activated under the link: http://www.vwgroupsupply.com/ - „Team up with us”.

3.5 Relationship between IMDS ID – Part Number – DUNS Number
Only one part number may be documented for each IMDS ID (independently from the version), so that the relationship part number/IMDS ID is unambiguous. Please note that indices and color codes are integral components of the Volkswagen part number. For example, if the part number 1K0 123 456 A changes to 1K0 123 456 B, a new IMDS ID has to be created instead of a new version.

If a part has been changed and the corresponding actualization of the MDS does not require a new part number, then a new version of the existent IMDS ID has to be created (not a new IMDS ID).

If these rules are violated, the following error messages can appear:

DIFFERENT_ITEM_NUMBERS
It is not allowed to have different part numbers within different versions of the same IMDS ID. Please send a separate MDS for each part number, each with a single IMDS ID (see rule 3.2.2.A from IMDS Recommendations).

DUPLICATE_SUPPLIER_PART_NUMBER
Your company has sent a MDS with an already existing IMDS ID for this part number. For changes, please use the existing MDS ID and create a new version.
4. Valuable tips and Contacts

Assistance with ...

... Volkswagen-specific questions:
   Email: imds@volkswagen.de
   For questions of detail please provide the IMDS ID of the MDS and your contact data.

... Porsche-specific questions:
   Email: imds@porsche.de
   For questions of detail please provide the IMDS ID of the MDS and your contact data.

... GoA-specific questions:
   Email: imds@vw.com
   For questions of detail please provide the IMDS ID of the MDS and your contact data.

... MAN-specific questions:
   Email: imds@man.eu
   For questions of detail please provide the IMDS ID of the MDS and your contact data.

... IMDS-specific questions:
   In your IMDS account you can find the IMDS Recommendations on the left side under the menu point Recommendations.
   Further support is provided on the public website of IMDS Public Pages

... material-specific questions:
   The material experts of the IMDS Helpdesk are ready to assist you in resolving potential issues, for example if a standard material is not available or with errors within the materials of the IMDS Committee.
5. Co-applicable Documents

IMDS Recommendations

Global Automotive Declarable Substance List (GADSL)

VW 99000  General Requirements for the Performance of Component Development Contracts

VW 01054  Engineering Drawings; Dimensioning

VW 01155  Vehicle Parts; Approval of First Supply and Changes

VW 01098  Part Number System

VW 91101  Environmental Standard for Products – Material Conformity

VW 91102  Supplement 3 of the Environmental Standard for Vehicles; Recycling Requirements, Use of Recycled Material, Recyclability Type Approval

VDA 231-106  Material classification in motor vehicle construction - Structure and nomenclature

With best regards,

Your Volkswagen material controlling team