1. Consideration for Change of SoC* Initial Product Acceptance Inspection Method

* Substances of environmental Concern

Summary
DENSO is planning to change the initial inspection method for SoC. We will explain the details of the changes that we are planning today. We will appreciate your kind understanding and cooperation.

November 13, 27 and 28, 2018
DENSO CORPORATION
Engineering Development Promotion Div.
Environment Promotion Dept.
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1. Background of changes to initial sample inspection method at DENSO
2. Details of changes to initial sample inspection method at DENSO
3. Revision of documents (company rules, standards, etc.) according to changes to initial sample inspection method at DENSO
4. Application schedule
5. Requests to our suppliers
6. For inquiries
1. Background of change of SoC initial product acceptance inspection method at DENSO

### Change of target chemical regulation

- The EU-ELV Directives required confirmation that the four prohibited substances (lead, cadmium, mercury and hexavalent chromium) were not included in products.

- It is now required to inspect contents of controlled substances (approximately 3,000 types) in America, Canada, etc. such as by EU-REACH.

### Requirement change from stakeholder

- Our customers discontinued their request for analysis of the four substances prohibited for ELV (lead, cadmium, mercury and hexavalent chromium).

- This has been changed to confirming the inclusion of controlled substances using IMDS.

### Benchmark

- The main automobile manufacturers and part makers around the world confirm controlled substances in components by IMDS.

[Currently, only a limited number of manufacturers including the DENSO Group confirm that the four prohibited substances are not contained by analysis.]

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Based on the background described above:

We will change the initial sample inspection method from “confirming the results of analyses on the four substances performed by suppliers” to “confirming the inclusion of 3000 substances using IMDS data”, which is the standard approach in this industry.

*International Material Data System*
2. Details of change of SoC initial sample inspection method at DENSO

*International Material Data System

[In the case of purchased parts, assemblies]

<Current>

Suppliers

<table>
<thead>
<tr>
<th>DENSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mfg. Div. (Parts inspection)</td>
</tr>
</tbody>
</table>

<Submit MDS>

Submit data (Through Procurement/Directly)

<Initial inspection>

Submit inspection report and 4 SoC analysis data

Analysis data etc.

Initial good receiving inspection record

Check evidence of 4 substance in receiving inspection

<Future>

Suppliers

<table>
<thead>
<tr>
<th>DENSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mfg. Div. (Parts inspection)</td>
</tr>
</tbody>
</table>

Submit IMDS* and contact DENSO

Confirm, approve IMDS data

Get IMDS approval before initial inspection

Change (1)

Change (2)

Fill in IMDS ID in inspection report; submit

Change (3)

Confirm whether IMDS ID is approved in initial inspection

Confirm, approve IMDS data

MDS request (Through Procurement/Directly)

Investigation Trigger (new part instruction・Engineer Change Instruction etc.)

Refer DN contact from DENSO HP

Contact suppliers

(1) Suppliers are kindly requested to acquire approval using the IMDS data before delivery of initial goods.

(2) We will request you to discontinue submission of the analysis data, as a rule*, and to enter the (approved) IMDS ID in the initial goods receiving inspection record.

* We may request our suppliers to submit the analysis data if required by the customer.

(3) It will be confirmed in the initial inspection at DENSO that the IMDS ID data indicated on the initial goods receiving inspection record has been approved.
If “〇” has been added to the “DDS2004 conformity check” column and the “IMDS ID approved by Denso” is filled in and confirmed that it has been approved by the Engineering Division, the ISIR is judged as “qualified”.

A transition period will be set after applying; if “〇” is added to the “DDS2004 conformity check” column in the ISIR and the “Reason for not adding IMDS ID” and “IMDS ID acquisition date coordinated with IMDS approval division of DENSO” are provided, the ISIR will be judged as “qualified”.

Fill in SoC information
2. Details of change of SoC initial inspection method at DENSO

[In the case of purchased materials and sub materials]

<Current status>

<table>
<thead>
<tr>
<th>Suppliers</th>
<th>DENSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit MDS</td>
<td>Initial sample inspection div.</td>
</tr>
<tr>
<td><strong>Submit JAMA sheet data.</strong> <em>(Through Procurement/Directly)</em></td>
<td>Sections that approve substance data</td>
</tr>
<tr>
<td><strong>Submit inspection report and 4 SoC analysis data</strong></td>
<td>Confirm, approve IMDS data</td>
</tr>
<tr>
<td><strong>Description of SoC on Material Certification Sheet</strong></td>
<td><strong>Analysis and confirm that the prohibited four substances are not included by the section in charge of initial sample inspection.</strong></td>
</tr>
</tbody>
</table>

<Initial inspection>

<table>
<thead>
<tr>
<th>Suppliers</th>
<th>DENSO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Submit MDS</strong></td>
<td><strong>Submit IMDS data.</strong> <em>(Through Procurement/Directly)</em></td>
</tr>
<tr>
<td>MDS request <em>(Through Procurement/Directly)</em></td>
<td>Check/approve substance data</td>
</tr>
</tbody>
</table>

<After change>

<table>
<thead>
<tr>
<th>Suppliers</th>
<th>DENSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit MDS</td>
<td>Initial sample inspection div.</td>
</tr>
<tr>
<td><strong>Submit inspection report and 4 SoC analysis data</strong></td>
<td>Sections that approve substance data</td>
</tr>
<tr>
<td><strong>Description of SoC on Material Certification Sheet</strong></td>
<td><strong>Analyze and confirm that the prohibited four substances are not included by the section in charge of initial product acceptance inspection.</strong></td>
</tr>
</tbody>
</table>

(1) Suppliers need to submit the IMDS data as requested by our Planning Division.

(2) Suppliers will no longer be requested to submit the analysis data and the Inspection Division will not analyze the data.*

* We may request our suppliers to submit the analysis data if required by the customer.

- Description of SoC is not required on Material Certification Sheet.
- Submission of evidence showing that the prohibited four substances are not contained is not required.
3. Revision of documents (company rules, standards, etc.) according to changes to initial inspection method at DENSO

- Company rules including “early stage control regulations,” standards including “SoC research and control procedures” and forms including the “initial sample inspection result(report)” are being revised.
- In addition, SQAM (Supplier Quality Assurance Manual) is also being revised.

4.14 Initial inspection procedure

[Example of revision of SQAM (draft)]

4.14.4 Requirements for suppliers

(3) SoC non-inclusion evidence data list
1. According to “Green Procurement” described on our website, suppliers are requested to fill out the initial goods receiving inspection record in order to assure non-inclusion of four substances subject to the SoC regulations and to submit the “SoC non-inclusion evidence data” upon initial product submission inspection.
2. If any of the four substances subject to the SoC regulations is found differently from the result provided in the inspection report when we analyze/confirm the product, the product will not be accepted. Special deviation acceptance is not applicable to the four substances subject to SoC regulations, as a rule.
Green Procurement https://www.denso.com/jp/ja/about-us/procurement/green/

(3) Entry in evaluation result column of chemical substances contained in products
1. You are requested to enter the evaluation result for DDS2004 conformance and the IMDS-ID approved by DENSO.
2. If the transition period is set and the IMDS after approval by DENSO cannot be entered, the initial product will be accepted during the transition period (by ____ ) by entering the evaluation result for DDS2004 conformance, the reason why the IMDS ID cannot be indicated and the acquisition date of the IMDS ID scheduled through agreement with the IMDS approval division of DENSO.
3. Suppliers may be requested to submit the analysis data if required by the customer, etc.
# 4. Application schedule

**<Application schedule>**

<table>
<thead>
<tr>
<th>FY2018</th>
<th>FY2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3Q[10-12]</strong></td>
<td><strong>1Q[4-6]</strong></td>
</tr>
<tr>
<td>Preparation</td>
<td>Transition period for initial inspection (*) </td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>4Q[1-3]</strong></td>
<td><strong>2Q[7-9]</strong></td>
</tr>
<tr>
<td>Partial implem. (Trial)</td>
<td>Formal implementation</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1Q[4-6]</strong></td>
<td><strong>3Q[10-12]</strong></td>
</tr>
<tr>
<td></td>
<td>Start application of revised SQAM.</td>
</tr>
<tr>
<td><strong>4Q[1-3]</strong></td>
<td></td>
</tr>
</tbody>
</table>

Nov. 13, 27, 28: Cooperation requested at suppliers explanation meeting.

(*): Initial sample will be accepted under specified conditions during the transition period (January to December 2019) even when the IMDS ID is not entered (details are on page 5).

---

**<Approach from DENSO for request>**

<table>
<thead>
<tr>
<th></th>
<th>'18/12 (Present)</th>
<th>'19/1-6</th>
<th>'19/7-</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Parts and products</strong></td>
<td>Request from DENSO (From Purchasing Group or directly)</td>
<td>Request from DENSO (From Purchasing Group or directly)</td>
<td>Send New parts order form and Engineering change notice</td>
</tr>
<tr>
<td></td>
<td>JAMA Sheet (due date specified in E-mail)</td>
<td>IMDS (due date specified in E-mail)</td>
<td>IMDS (delivery of initial sample)</td>
</tr>
<tr>
<td></td>
<td>Attach evidence of non-inclusion of 4 prohibited substances.</td>
<td>Evidence of non-inclusion of 4 prohibited substances is not required.</td>
<td>Evidence of non-inclusion of 4 prohibited substances is not required.</td>
</tr>
<tr>
<td><strong>Materials and subsidiary materials</strong></td>
<td>Request from DENSO (From Purchasing Group or directly)</td>
<td>Request from DENSO (From Purchasing Group or directly)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JAMA Sheet (due date specified in E-mail)</td>
<td>IMDS (due date specified in E-mail)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attach evidence of non-inclusion of 4 prohibited substances.</td>
<td>Evidence of non-inclusion of 4 prohibited substances is not required.</td>
<td>Evidence of non-inclusion of 4 prohibited substances is not required.</td>
</tr>
</tbody>
</table>

---

Note) Submission of the analysis data (evidence of non-inclusion of restricted four substances) may be requested if required by customers, etc.

Changes in submission of substance data will be explained as the next theme.

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Note) Initial sample will be accepted under specified conditions during the transition period (January to December 2019) even when the IMDS ID is not entered (details are on page 5).
5. Requests to our suppliers

1. We would like you to register the data of substances included in components and products in the IMDS, acquire approval from our IMDS Approval Division, and then enter the approved IMDS ID in the initial sample receiving inspection result (report).

2. As for materials and subsidiary materials, you are requested to register the data of included substances in the IMDS whenever our Planning Division (IMDS Approval Division) requires so.

3. We will no longer request submission of analysis data of the four SoC, as a rule, and will check the non-inclusion of those substances using the IMDS data. However, submission of analysis data may be requested if required by the customer, etc.

4. Contents described at this meeting will apply to our group companies both in Japan and other countries. Thus, you may receive similar requests also from those group companies. We will appreciate it if you kindly understand and cooperate with us.

5. Similar actions will be taken for this measure also at our overseas group companies. We would like you to provide the information to your overseas bases.

Inclusion of SoC will be confirmed by the IMDS. We would like you to reconfirm that the IMDS data will be the key for quality.
6. For inquiries

Your questions, opinions, etc. on this matter will be welcomed at the following.

<Contact>
(Safety Health & Environment Div.)

MAKOTO KOYAMA
e-mail: makoto_koyama@denso.co.jp
Phone: 0566-63-2682 [Ex. 551-40797]
When applying for a new product in the initial sample inspection process, we plan to add the following text. "For this part, submit IMDS data before the initial sample inspection and get approval from the IMDS approval section as instructed at the following URL." URL: http://*****

Current products for which this form has already been issued will be treated individually.
[Reference] Screen for automatic e-mail distribution setting function of IMDS

Suppliers may use the automatic e-mail distribution setting function of the IMDS to receive e-mails automatically when DENSO approves the IMDS data (details are provided in the IMDS manual).

[Procedure] Access IMDS. → System control → Personal information → Screen shown below

[Note] Suppliers will be notified of approval/disapproval of the data for all part numbers of all customers transmitted from the company ID (XXX). Setting cannot be made to receive the notice only for the part number that you have registered by yourself.
2. Use of IMDS alone as the MDS investigation tool

Overview

- DENSO will use IMDS as the sole MDS investigation tool to collect MDS data from our suppliers.
- We request you to be prepared to use IMDS to submit your report.

November 13, 27 and 28, 2018
DENSO CORPORATION
Engineering Development Promotion Div.
Product Environment Promotion Dept.

* This document is for suppliers of DENSO Japan.
Use of IMDS alone as the MDS investigation tool

1. Use of IMDS as our sole MDS investigation tool

2. Handling at DENSO and Reporting Method using IMDS

3. Schedule and request method
   (1) In case of parts
   (2) In case of materials and subsidiary materials

4. Details of request method of semi-component data

5. Reporting method
   (1) Entry method for report to DENSO
   (2) Case in which supplied parts and supplied materials are used
   (3) Cautions in data creation

6. Other requests and information

7. Summary

8. Inquiries
1. Use of IMDS as our sole MDS investigation tool

DENSO will use IMDS* alone as our MDS investigation tool in order to globally manage MDS data collected from suppliers.  

* Abbreviation of International Material Data System (MDS investigation tool shared by the automotive industry on a global level)

• The Japan Auto Parts Industries Association made an announcement about the “JAMA Sheet upgrade”, but DENSO will use the IMDS as the MDS investigation tool.

Source: Japan Auto Parts Industries Association Website
http://www.japia.or.jp/event/jamasheet-setumeikai.html

* The successor JAMA Sheet is not interchangeable with the IMDS, which is the tool for reporting to the automotive manufacturer and requires use of a separate conversion tool.
2. Handling at DENSO and Reporting Method using IMDS

- Due to the transition from the JAMA Sheet to the IMDS, “semi-component” will be added as a new data type.
- At DENSO, we will be handled in the following manner.

* The example below shows a basic combination.

<table>
<thead>
<tr>
<th>Handling at DENSO Category</th>
<th>Examples</th>
<th>Reporting method using IMDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parts/Products</td>
<td>General parts (electronic components, packing, purchase ASSY products, etc.)</td>
<td>Component</td>
</tr>
<tr>
<td>Material/Subsidiary material</td>
<td>Items made of a single homogeneous material</td>
<td>Iron material, resin, etc.</td>
</tr>
<tr>
<td></td>
<td>Items made of multiple materials</td>
<td>Tape, copper wire, etc.</td>
</tr>
</tbody>
</table>
### 2. Schedule and request method

<table>
<thead>
<tr>
<th>(1) In case of parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>• There are two ways to make a report using the IMDS (using the [1] MDS investigation request or using the [2] initial sample inspection report) and the requesting method (trigger) varies between them.</td>
</tr>
<tr>
<td>• The advance application period will be followed by full-scale application.</td>
</tr>
</tbody>
</table>

#### Advance application

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[1] MDS investigation request (for reporting to customer)</td>
<td>JAMA Sheet</td>
<td></td>
<td>Request from DENSO (From Purchasing Group or directly)</td>
<td>JAMA Sheet (due date specified in E-mail)</td>
</tr>
</tbody>
</table>

#### Full-scale application

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[2] Entry into Initial sample receiving inspection record</td>
<td></td>
<td></td>
<td>Report all items using IMDS</td>
<td>IMDS (due date specified in E-mail)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Request from DENSO (From Purchasing Group or directly)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>* E-mail from DENSO’s in-House system</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Send New parts order form and Engineering change notice</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IMDS (delivery of initial sample)</td>
<td></td>
</tr>
</tbody>
</table>
[1] MDS investigation request method (in case of parts)

• When requested by the customer or for other reasons, a request for investigation will be made using the IMDS by the Purchasing Group or the Business Unit in charge for some parts.

*Upon receipt of the E-mail shown below, you are requested to make a report using the IMDS.

• Because the IMDS data will be necessary prior to the delivery of the initial sample, requests will be made in a separate E-mail for each part number.

• You are requested to create IMDS data, send it, and notify the requester of the IMDS ID.

<Image of the request E-mail>

From: <****@denso.co.jp>
To: SUPPLIER@SUPPLIER.co.jp
Subject: [Part no 1234567890 :Name :COMPUTER ASSY ]

Target Org.-Unit: DENSO Corporation[333]
MDS Type: Component
Due date: 2018/04/30
Customer Part No: 1234567890
Customer Description: COMPUTER ASSY

Recipient company ID
DENSO’s company ID: 333
Company name: DENSO Corporation
MDS type (component)
Due date
Part no.
Part name
[2] Entry method into initial sample inspection report

- When the IMDS data needs to be submitted prior to the delivery of the initial sample, entry of the IMDS ID into the initial sample inspection report will be requested using the New parts order form/Engineering change notice (see the figures below).

- You are requested to create IMDS data and submit it prior to the delivery of the initial sample.

- Upon submission of the IMDS data, you are requested to notify the person in charge of approval (*) at DENSO of the IMDS ID, request him/her to approve it, and enter the approved IMDS ID in the initial sample inspection report.

* The party to send the request for approval to, the new form (initial sample inspection report), and the like will be posted on DENSO's website prior to the start of the advance application. The location of the forms on the DENSO website will be provided in the forms shown below.

New parts order form

Engineering change notice

- When applying for a new product in the initial sample inspection process, we plan to add the following text. "For this part, submit IMDS data before the initial sample inspection and get approval from the IMDS approval section as instructed at the following URL."
  URL:http://****

- Current products for which this form has already been issued will be treated individually.
(2) In case of materials and subsidiary materials

(2.1) Schedule and request method

- In case of materials and subsidiary materials (semi-component and materials), DENSO will request a MDS investigation.
- The advance application period will be followed by full-scale application.

<table>
<thead>
<tr>
<th>Advance application</th>
<th>Full-scale application</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAMA Sheet</td>
<td>Request from DENSO (From Purchasing Group or directly)</td>
</tr>
<tr>
<td>Report some materials/ subsidiary materials using IMDS</td>
<td>Report all items using IMDS</td>
</tr>
</tbody>
</table>

* E-mail from DENSO’s in-House system
[2.2] MDS investigation request method (in case of Material / Subsidiary material)

- When requested by the customer or for other reasons, a request for investigation will be made using the IMDS by the Purchasing Group or the Business Unit in charge for some Material / Subsidiary material.

*Upon receipt of the E-mail shown below, you are requested to make a report using the IMDS.

- Requests will be made in a separate E-mail for each Material / Subsidiary material.

- You are requested to create IMDS data, send it, and notify the requester of the IMDS ID.

*Image of the request E-mail*

送信者: <***@denso.co.jp>
宛先: SUPPLIER@SUPPLIER.co.jp
件名: [Part no 1234567890 :Name :COMPUTER ASSY]

Target Org.-Unit: DENSO Corporation [333]
MDS Type: Semicomponent
Due date: 2018/04/30
Customer Part No: 756123456
Customer Description: Aluminum tape with PP
4. Details of request method of semi-component data

(1) Request method

- Due to the transition from the JAMA Sheet to the IMDS, “semi-component” will be available as a new data type.
- The numbering system for semi-component will be specified by DENSO.

<table>
<thead>
<tr>
<th>Reporting method</th>
<th>DENSO</th>
<th>Your company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Number specified by DENSO</td>
<td>• Creation of semi-component data</td>
</tr>
<tr>
<td>semi-component</td>
<td>Material</td>
<td>• Enter the number specified by DENSO in the number field of the recipient information screen.</td>
</tr>
<tr>
<td></td>
<td>Substance</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Send the data using IMDS.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Notify DENSO of the ID number.</td>
</tr>
</tbody>
</table>
(2) Creation example of semi-component data

- The semi-component is not covered by the JAMA Sheet. It is explained using the example given below.

**Example: Aluminum tape with polypropylene**

<table>
<thead>
<tr>
<th>Cross-section of tape</th>
<th>Aluminum alloy (A1050)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape</td>
<td>Polypropylene (PP)</td>
</tr>
</tbody>
</table>

**Points in IMDS entry**

- **semi-component symbol**
- **Aluminum alloy (A1050)**
  - IMDS committee material 16384471 / 5
  - Sample data DENSO-released material 780235361 / 1
  - For a material, enter the portion.
- **Polypropylene (PP)**
  - 90%
  - 1g/m
  - For a semi-component, enter the mass per unit.

*As sample data for a semi-component, the DENSO-Published Material 780235556 / 1 is used here.*
Creation example of semi-component (continued)

Structure information screen

[1] Name and code of semi-component at the top of the structure information tree

- Either your internal code and name for control purposes or the number specified by DENSO may be used.

Recipient information screen

[2] Name and code of semi-component of recipient information

- Please enter the name and material code specified by DENSO.

DENSO will manage the data based on the code and name entered as recipient information.
5. Reporting method

(1) Entry method for reporting to DENSO

- Please refer to the following table for the method for entering parts data into the IMDS.

**<In case of parts>**

<table>
<thead>
<tr>
<th>IMDS画面/項目</th>
<th>項目</th>
<th>Entry method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingredients</td>
<td>Part/Item No.（TOP）</td>
<td>• Enter your part number. (*)</td>
</tr>
<tr>
<td>Description（TOP）</td>
<td></td>
<td>• Enter your part name. (*)</td>
</tr>
<tr>
<td>Part/Item No.（Child Part）</td>
<td></td>
<td>• Enter your part number. (Please enter the DENSO part number if specifically instructed.)</td>
</tr>
<tr>
<td>Description（Child Part）</td>
<td></td>
<td>• Enter your part name. (Please enter the DENSO part name if specifically instructed.)</td>
</tr>
<tr>
<td>Recipient data</td>
<td>Name</td>
<td>• Enter DENSO’s part name (*).</td>
</tr>
<tr>
<td></td>
<td>Item- /Mat.-No.</td>
<td>• Enter DENSO’s part number (without hyphens) (*).</td>
</tr>
<tr>
<td></td>
<td>Company ID</td>
<td>• 333 (when the report is to the DENSO Headquarters). When not 333, the number will be provided.</td>
</tr>
<tr>
<td></td>
<td>Supplier Code</td>
<td>• Enter a hyphen or leave the field blank.</td>
</tr>
<tr>
<td></td>
<td>Forwarding allowed</td>
<td>• Select “Yes” (forwardable).</td>
</tr>
<tr>
<td>Common</td>
<td>ID/Version</td>
<td>• When resending corrected data or making another report of the same part number, prepare new version data using the same ID. • The version can be numbered using a decimal number or an integer.</td>
</tr>
</tbody>
</table>

* When DENSO is the recipient, the part number entered as part of the recipient information will be shown as the part number of the item at the TOP of the structure information.
• Please refer to the following table for the method for entering component/material data into the IMDS.

<In case of semi-component and materials>

<table>
<thead>
<tr>
<th>IMDS画面</th>
<th>項目</th>
<th>Entry method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingredients</td>
<td>Article Name</td>
<td>• Please enter your name. (*)</td>
</tr>
<tr>
<td></td>
<td>Item- /Mat.-No.</td>
<td>• Please enter your code. (*)</td>
</tr>
<tr>
<td>Recipient data</td>
<td>Name</td>
<td>• Enter the name specified by DENSO (*).</td>
</tr>
<tr>
<td></td>
<td>Item- /Mat.-No.</td>
<td>• Enter the number specified by DENSO (*).</td>
</tr>
<tr>
<td></td>
<td>Company ID</td>
<td>• 333 (when the report is to the DENSO Headquarters). When not 333, the number will be provided.</td>
</tr>
<tr>
<td></td>
<td>Supplier Code</td>
<td>• Enter a hyphen or leave the field blank.</td>
</tr>
<tr>
<td></td>
<td>Forwarding allowed</td>
<td>• Select “Yes” (forwardable).</td>
</tr>
</tbody>
</table>
| Common     | ID/Version   | • When resending corrected data or making another report of the same part number, prepare new version data using the same ID.  
|            |             | • Report the version using an integer.                                     |

*When DENSO is the recipient, the part number entered as part of the recipient information will be shown as the part number of the item at the TOP of the structure information.
(2) Case in which supplied parts and supplied materials are used

• When there are supplied parts/materials, unlike the JAMA Sheet, you are requested to conduct the MDS investigation according to the workflow given below to cope with the constraints of the IMDS.
• It is a general workflow for the procedure using the IMDS. Basically, use of this workflow is preferred.

**Workflow in which supplied parts and supplied materials are used**

• Supplier [1] is requested to send the data to Supplier [2] following the logistics workflow.
• Supplier [2] is requested to make a report by adding the data (supplied part data) received from Supplier [1].

* In cases to which the workflow above is not applicable, please consult us.
* The case above involves data transfer between suppliers. For confidential portions of the information, please show consideration as far as possible to IMDS rules (Misc., not to declare, use of pseudo substances, deletion of material trade names, etc.)
(3) Cautions in data creation

- Unlike the JAMA Sheet, when reported using the IMDS, DENSO cannot revise the received data. Thus, cooperation in the following areas is encouraged.

(3.1) Check of errors and warnings

- When a warning is displayed in the error check of the IMDS, the report should be made after checking the details of the warning.

* Please refer to this link (  ) for how to run the IMDS error check and how to check the errors and warnings.

(3.2) Requests

- After our confirmation, you may be requested to make corrections related to warnings.

- Even after our approval process, you may be requested to make corrections in response to an individual request of the customer or for other reasons.

* In case of corrections in response to an individual request of the customer or for other reasons, you may be requested to re-submit individual data (new datasheet).
6. Other requests and information

Preparation for reporting using IMDS
• If you do not have a company ID, please obtain one.
• You are requested to prepare to create data. Exercises can be used as necessary.

Handling of data that was once submitted in the JAMA Sheet format in the past
• This transition does not involve re-submission of all data already reported in the JAMA Sheet format.
• However, you may be requested to re-submit the JAMA Sheet format data from a data quality perspective or for other reasons.

Conversion from JAMA Sheet to IMDS
• Please refer to the link on the right for the conversion method of the data prepared using the JAMA Sheet to the IMDS.

7. Summary

• We would like you to submit MDS data using IMDS according to the procedures explained today. Your cooperation will be appreciated.
8. Inquiries

• Please contact the contact person below when you have questions or comments regarding this subject (use of IMDS as sole MDS investigation tool at DENSO).

DENSO CORPORATION Engineering Development Promotion Div.
Kazuaki Ezaka
  e-mail : ZOMB06_GIKAN-M4@denso.co.jp
  Tel : 0566-25-5922
  Tel (In-house) : 551-23323
* Please contact the requester of each investigation regarding questions concerning individual investigation requests.

• Please contact the below office for questions concerning the IMDS operation method, data creation method, education, manuals, setting method, and the like.

<IMDS Service Center>
  e-mail : jpmimds-helpdesk@dxc.com
  Tel : 03-4530-9270
Reference materials

1. Check function of IMDS
2. List of preparations for IMDS entry
3. Registration of company ID
4. Manuals
   (1) Official IMDS manual and the like
      (1.1) IMDS User Manual
      (1.2) IMDS Recommendation
   (2) Exercises prepared by DENSO
5. Conversion from JAMA Sheet to IMDS
1. Check function of IMDS

(1) Errors and Warnings in IMDS

• When a warning is displayed in the error check of the IMDS, the report should be made after checking the details of the warning.
(2) How to read warning details

Please refer to these documents for how to run the IMDS error check and how to check the errors and warnings.


You will find『FAQ - FREQUENTLY ASKED QUESTIONS』

You will find『IMDS Errors and Warnings』
Click [IMDS Errors and Warnings]

Detailed information is displayed.

You will find『IMDS Errors and Warnings』

Detailed information is displayed.

Please refer to these documents

- What do the warnings and errors in IMDS mean and how can I fix them?

- Why am I getting ERROR messages: only valid Applications can be used for Basic Substances?
2. List of preparations for IMDS entry

(1) Registration of your company ID, user ID, and so on, to IMDS
   • If your company is not registered, go to the IMDS home page to apply for registration. (Free of charge) P24
   • Please refer to the User Manual for the registration of user ID.

(2) IMDS operation training
   • Each supplier is requested to learn how to operate the IMDS at your company.

(2.1) Manuals, data entry rules, and so on
   • Some manuals are available for your reference (official documents: P26, document created by DENSO: P28)

(2.2) Education and training
   • Please attend training courses provided by IMDS as required.
     * DENSO is not planning to provide our suppliers with IMDS training programs.

For details on training courses provided by IMDS, refer to the following website:

(3) Inquiries (how to operate, etc.)
   • Please contact IMDS service center.

<IMDS SERVICE CENTERS>
9:00am - 5:00pm (except Weekends and holidays)
03 4530 9270  jpimds-helpdesk@dx.com
3. Registration of company ID

(1) Registration method

- When your company uses IMDS, follow the steps below to register your company ID.

  Go to the IMDS home page.
  http://www.mdsystem.com/imdsnt/startpage/index.jsp#

  * The registration is required only when your company is a new user of IMDS. The registration of your IMDS company ID is free of charge.

Select [COMPANY REGISTRATION].

Select [Online Registration].

Select [Register your company] for registration.

Go to the following site to refer to [Tips for your company registration]:
(2) Setting company ID

For a trading company

- Unlike the JAMA Sheet, you are required to log in to the IMDS to check IMDS data. You are requested to set your company ID for the IMDS.

<When transferring data>

- When you are a trading company who is a tier-1 supplier to us and receive data from a tier-2 supplier, a report can be made by forwarding the data to us.

- Please refer to the IMDS entry exercises “Sample data entry into IMDS,” “Parts, answer version,” and “Materials, answer version” created by DENSO for how to forward data on the IMDS.
4. Manuals

(1) Official IMDS manual and the like

(1.1) IMDS User Manual

- Download the IMDS User Manual and IMDS Training Guide from the following URL:


The URL will lead you to the Frequently Asked Questions (FAQ) page.

You will find the IMDS User Manual (English).

- This is the IMDS Manual. It contains the procedure for checking the data sheet for errors.
(1.2) IMDS Recommendation

- It contains IMDS entry rules. You can view the recommendations of the IMDS Steering Committee.
- These files can be downloaded from the IMDS screen after you log in.

Log in to the system, select [Help] from the menu bar, and select [Recommendation] from the pull-down menu.

Click [ ] to download the file.

(Example) IMDS Recommendation 001
(2) Exercises prepared by DENSO

• We have prepared some IMDS data preparation exercises. They are posted on the web page below.
• Please use the exercises to promote the use of the IMDS at your company and your suppliers.

Green Procurement, DENSO home page:
https://www.denso.com/jp/ja/about-us/procurement/green/meeting/

<table>
<thead>
<tr>
<th>資料名称</th>
<th>無期限</th>
<th>ファイル</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDSへの一元化のスケジュールの変更について</td>
<td>2018年6月13日</td>
<td>日本語（PDF 1.9MB）</td>
</tr>
<tr>
<td></td>
<td>2018年9月7日</td>
<td>英語（PDF 1.9MB）</td>
</tr>
<tr>
<td>IMDSへのサンプルデータの入力について（部品-問題編）</td>
<td>2018年10月5日</td>
<td>日本語（PDF 1.7MB）</td>
</tr>
<tr>
<td></td>
<td>2018年10月5日</td>
<td>日本語（PDF 3.1MB）</td>
</tr>
<tr>
<td>IMDSへのサンプルデータの入力について（材料-問題編）</td>
<td>2018年10月5日</td>
<td>日本語（PDF 1.3MB）</td>
</tr>
<tr>
<td></td>
<td>2018年10月5日</td>
<td>日本語（PDF 2.2MB）</td>
</tr>
</tbody>
</table>
(2) Manuals created by DENSO

- We created a simple manual on how to create an IMDS data sheet. Please download the manual from the URL given below.
- We hope that you will find it useful for your employee/supplier training.

Green Procurement, DENSO home page:

<table>
<thead>
<tr>
<th>资料名称</th>
<th>更新日</th>
<th>Ver.</th>
<th>ファイル</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAMA/JAPIA統一データシート・データの作成マニュアル</td>
<td>2017年12月1日</td>
<td>1.00</td>
<td>日本語 (PDF:2.0MB)</td>
</tr>
<tr>
<td><strong>IMDS Data Sheet Creation Manual</strong></td>
<td><strong>April 1, 2018; 1.00</strong></td>
<td></td>
<td>Japanese (PDF:XXMB)</td>
</tr>
<tr>
<td>JAMA/JAPIA統一データシート・IMDS報告データの作成要領書</td>
<td>2017年9月1日</td>
<td>1.00</td>
<td>日本語 (PDF:2.3MB)</td>
</tr>
</tbody>
</table>
5. Conversion from JAMA Sheet to IMDS


- If you conclude an AI agreement (IMDS Advanced Interface) with the IMDS, you will have additional IMDS screen menu items, including a function that lets you load XML files. Please contact the IMDS Advanced Solutions Service Center for details.

<IMDS Advanced Solutions Service Center>
https://public.mdsystem.com/ja/web/imds-public-pages/contact

9:00am - 5:00pm (except Weekends and holidays)
03 4530 9277    jpmlds-solutions@dxc.com
3. Request for MDS Quality Improvement

Outline

Here is the explanation on the points requiring your attention with recent examples. When creating or correcting data, please pay attention to them.

November 13, 27 and 28, 2018
DENSO CORPORATION
Engineering Development Promotion Div.
Product Environment Promotion Dept.
Request for MDS Quality Improvement

1. Introduction

2. Instructions for Improving MDS Quality
   2-1 Process Chemicals
   2-2 Epoxy Adhesives and Potting Compounds
   2-3 Wildcard
   2-4 VDA Material Classification
   2-5 Application ID and Entry of Portion Range
   2-6 Instructions on Correction
1. Introduction

As mentioned in the last briefing session, the following manuals for reports of substance information are posted on DENSO website to improve quality of the IMDS/JAMA datasheets prepared by suppliers.


We request that you read these documents and confirm correctness of your data before submitting it to us.

Our explanation today focuses on the recent problems with the submitted data.
1. Introduction (Continued)

The manuals posted at our site are summaries of the documents below. For further detailed information, please refer to the following documents.

(1) JAMA/JAPIA Standard Material Datasheet Operation Procedure

This was established to facilitate smooth information collection within the supply chain for the investigation of substance information with the JAMA datasheet.


(2) IMDS Recommendation

This shows what is recommended by IMDS(*) Steering Committee. The rules for filling in the JAMA datasheet are based on the IMDS Recommendation, so please also refer to it when entering data in the JAMA datasheet.

http://www.mdsystem.com/imdsnt/startpage/index.jsp#

After logging into the IMDS, please select “Recommendation” from the Help pulldown menu on the menu bar to obtain it.

* IMDS (International Material Data System)

The system collects information on the materials used in automobiles and the chemicals contained in the materials. The system is used for certification of compliance with EU ELV Directive and for compliance with REACH and laws/regulations of each country.

(3) IMDS User Manual

This is the IMDS manual, also including information on error check.

[https://www.mdsystem.com/imdsnt/faces/login](https://www.mdsystem.com/imdsnt/faces/login)
2. Instructions for Improving MDS Quality

This section explains the following items that may cause a problem with the quality of data on Substances of Concern (SoC) you provide.

- 2-1 Process Chemicals
- 2-2 Epoxy Adhesives and Potting Compounds
- 2-3 Wildcard
- 2-4 VDA Material Classification
- 2-5 Application ID and Entry of Portion Range
- 2-6 Instructions on Correction
2-1 Process Chemicals

| Rule 4.4.1.B | A material must be described in its final state. Only basic substances contained in the final material are to be reported (example: cured adhesives or paint coatings are entered without the evaporating solvents). |
|Rule 4.4.1.C | Process chemicals used in the production of a material/part that are not contained in the final material/part must not be reported. |

• Recently new liquids, gases, and reactive substances have been registered as process chemicals. As of October, 1,286 substances are registered as process chemicals. Please check whether process chemicals are present in the final part/material and enter them only when present.

• If the past data submitted to us includes the data of the substances newly registered as process chemicals, an error occurs during transmission in IMDS. We may make a request for correction.

• The SoC data (MDS) in the automobile industry must report on substances present in a vehicle at point of sale. The above data is different from the substance data provided for safe work (SDS) in terms of purpose, substances to be identified, and way of data provision. Please understand that the data of the latter cannot be used in MDS.
2-1 Process Chemicals (Continued)

The following list shows the process chemicals common in our company. If MDS includes these chemicals, please recheck them for correctness. Even when a process chemical is not included in the list below, please describe only process chemicals present in the final part/material.

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Substance name</th>
<th>Remarks</th>
<th>m.p.</th>
<th>b.p.</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>Solvent</td>
<td>–95</td>
<td>111</td>
</tr>
<tr>
<td>108-05-4</td>
<td>Vinyl acetate</td>
<td>Resin material</td>
<td>–93</td>
<td>72</td>
</tr>
<tr>
<td>100-42-5</td>
<td>Styrene</td>
<td>Resin material</td>
<td>–30.6</td>
<td>145</td>
</tr>
<tr>
<td>79-06-1</td>
<td>Acrylamide</td>
<td>Resin material</td>
<td>84.5</td>
<td>125</td>
</tr>
<tr>
<td>108-95-2</td>
<td>Phenol</td>
<td>Resin material</td>
<td>40.5</td>
<td>181.7</td>
</tr>
<tr>
<td>7782-44-7</td>
<td>Oxygen</td>
<td>Oxygen of oxide</td>
<td>–218.78</td>
<td>–182.96</td>
</tr>
<tr>
<td>1330-20-7</td>
<td>Xylene</td>
<td>Solvent</td>
<td>–48 –13</td>
<td>138 –144</td>
</tr>
<tr>
<td>7782-50-5</td>
<td>Chlorine</td>
<td>Chlorine and toxic gas of chloride</td>
<td>–101</td>
<td>–34.04</td>
</tr>
<tr>
<td>100-41-4</td>
<td>Ethylbenzene</td>
<td>Dye material and solvent</td>
<td>–95</td>
<td>136</td>
</tr>
<tr>
<td>107-13-1</td>
<td>Acrylonitrile</td>
<td>Resin material</td>
<td>–84</td>
<td>77</td>
</tr>
<tr>
<td>79-10-7</td>
<td>Acrylic acid</td>
<td>Resin material</td>
<td>14</td>
<td>141.6</td>
</tr>
<tr>
<td>80-62-6</td>
<td>Methyl methacrylate</td>
<td>Resin material</td>
<td>–48</td>
<td>101</td>
</tr>
<tr>
<td>67-63-0</td>
<td>Propan-2-ol</td>
<td>Solvent</td>
<td>–89.5</td>
<td>82.3</td>
</tr>
<tr>
<td>110-54-3</td>
<td>Hexane</td>
<td>Solvent</td>
<td>–95</td>
<td>69</td>
</tr>
<tr>
<td>7782-41-4</td>
<td>Fluorine</td>
<td>Fluorine and toxic gas of fluoride</td>
<td>–217.9</td>
<td>–188</td>
</tr>
<tr>
<td>78-93-3</td>
<td>Butanone</td>
<td>Dye material and solvent</td>
<td>–86</td>
<td>79.64</td>
</tr>
<tr>
<td>91-66-7</td>
<td>N,N-Diethylaniline</td>
<td>Dye material</td>
<td>–38</td>
<td>216.3</td>
</tr>
<tr>
<td>112-15-2</td>
<td>2-(2-Ethoxyethoxy)ethyl acetate</td>
<td>Solvent</td>
<td>–68</td>
<td>230</td>
</tr>
<tr>
<td>64-19-7</td>
<td>Acetic acid</td>
<td>Organic material and solvent</td>
<td>16.7</td>
<td>118</td>
</tr>
<tr>
<td>1336-21-6</td>
<td>Ammonia, aqueous solution</td>
<td>Solvent and deleterious substance (10% or more)</td>
<td>–58</td>
<td>38</td>
</tr>
<tr>
<td>108-10-1</td>
<td>4-Methylpentan-2-one</td>
<td>Solvent</td>
<td>–84</td>
<td>117 –118</td>
</tr>
<tr>
<td>110-80-5</td>
<td>2-Ethoxyethanol</td>
<td>Solvent</td>
<td>–70</td>
<td>135.6</td>
</tr>
</tbody>
</table>
2-2 Epoxy Adhesives and Potting Compounds

Some substances may be different in their final state even when not registered as process chemicals. A material/part must be described in its final state. (IMDS Rule 4.4.1.B/JAMA Rule 6.6.1)

Example: Wrong description of epoxy resin (descriptions of intermediate and prepolymer)

25068-38-6
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane

Other similar substances
58421-55-9
25928-94-3
40039-93-8
25085-99-8

A cured epoxy resin form a crosslinked structure, but this polymer is linear and requires a hardener for curing. Accordingly, this does not show the end state.
2-2 Epoxy Adhesives and Potting Compounds (Continued)

How to describe cured epoxy resin

Many cured resins do not have an assigned CAS RN, but you can use basic duromers (without CAS RN) prepared by IMDS as shown below.

<table>
<thead>
<tr>
<th>Bisphenol A resin:</th>
<th>Epoxy resin made from Bisphenol A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brominated epoxy resin:</td>
<td>Brominated epoxy resin (fireproofing)</td>
</tr>
<tr>
<td>Epoxy resin:</td>
<td>General epoxy resin</td>
</tr>
</tbody>
</table>

If a resin contains 0.1% or more of a declarable substance defined by GADSL, you must add the declarable substance name to the basic duromer. Reaction residues other than the declarable one can be included in the basic duromer.

Note: Basic polymers must be used for thermoplastic resins. For thermosetting resins, basic duromers must be used.
2-3 Wildcard

General rules
Wildcards are used to hide highly confidential substances except the declarable substances defined by GADSL and can be used for up to 10% of a homogeneous material. In IMDS, the portion of the confidential substance(s) disclosed only to the specified users is included as a part of the portion of the wildcards in a material.

Exception 1 (only in IMDS)
When a color masterbatch is used, the portion of confidential substances may be seemingly over 10%. However, there is no problem if the portion is 10% or less in the homogeneous material level.

PA6-GF30

- Rest 95.0% PA6-GF30
- 5.0% Further Additives, not to declare
- Rest 65.0% PA6
- 30.0% GF-Fibre
- 5.0% PA6 Colour Masterbatch
- 1.0% Further Additives, not to declare
- Rest 80.0% Pigment portion, not to declare
- Rest 19.0% PA6

PA6-GF30

- 4.8% Further Additives, not to declare
- 28.5% GF-Fibre
- 4% Pigment portion, not to declare
- 62.7% PA6
2-3 Wildcard (Continued)

Exception 2
Materials prepared and officially approved by IMDS committee are exempt from the 10% limit.

Notes on correction of process chemical data
When a process chemical turns out not to be present in the final material/part and you correct the data by deleting the process chemical, the portion of the wildcards may exceed 10%. In that case, a part of the substances replaced by the wildcards must be disclosed so that the sum of the wildcards does not exceed 10%. (IMDS Rule 4.5.2.C)

Data check and correction with update of the GADSL
The GADSL list is updated at least once per year (usually in February). With this update, you must check that none of wildcards represents any new declarable substance. If you found a new declarable substance, it must be revealed. And you should re-submit it promptly. (IMDS Rule 4.5.2.A, B)
2-4 VDA Material Classification

We have received wrong descriptions on 7.2 (glass and ceramics) of VDA classification.

[1] Semi-conductor

**Metal and intermetallic compound:** Select 4.2 (Other special metals) or 8.1 (Electronics).

**Oxide, nitride, and carbide:** Select 7.2, 7.3 (depending on form) or 8.1.


**Magnets made from alloys (neodymium, samarium–cobalt, Alnico, etc.):** Select 4.2.

**Oxide magnet (Various ferrites):** Select 7.2.

**Plastic magnet:** Depending on the matrix material

(5.1.a: Filled thermoplastics, 5.4.x: Duromer, etc.)

In a past example, in spite of an engineering change from oxide magnet (ferrites) to magnet from alloy (neodymium), only chemical substances were changed without any change of the material name and classification. Please pay attention to the above point because the reverse change may be expected with the recent trend in use of rare metal alternatives.
2-5 Application ID and Entry of Portion Range

When defining the portion range of a substance that has an application ID other than 44 to 47 (not exceeding GADSL threshold) and 72, you must not set zero as the minimum value. Our customers may reject this description.

Application IDs are basically to represent the use and purpose subject to exemption of prohibited substances. If the portion “0” is included as the range, this means that the purpose can be achieved without the substance, being inconsistent with the use of the prohibited substance.

We have seen “0 to threshold” as the entry of the portion with the fact of whether the substance is contained or not is uncertain. However such description is unacceptable. If the substance is contained as impurities, the upper limit (not exceeding threshold) must be defined according to the fact. In addition, the application IDs 44 to 47 must be used.
2-6 Instructions on Correction

[1] Data obtained from your supplier:

Your company must not correct the data. You must ask your supplier to correct the data.

[2] Data of material undergoing substance change in your company:

You must obtain necessary information from your supplier to create data. (You must not use the data of a similar material without grounds).
Contact information on this matter

Please send your email to the address below to contact us about the quality of SoC data you provide.

ZOMB06_GIKAN-M4@denso.co.jp
Hayashi at Engineering Development Promotion Div., DENSO CORPORATION