DENSO TEN

IMDS Operation Manual

DENSO TEN Limited
QEP)Engrg Mgt Div. Engrg Mgt Dept. Standard Management Sect.

11A-411624-0002
Established September 4, 2019
Revised November 3, 2025
Ver.1.40

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Contents

1. Introduction ・・・ P3

2. Basic stance of IMDS reporting ・・・ P6

3. IMDS entry method (Basic) ・・・ P9

4. IMDS entry method (DENSO TEN-specific requests) ・・・ P12

5. Warnings in IMDS ・・・ P38

6. Points on Creating MDS ・・・ P48

7. IMDS report using DENSO part number (supplementary information) ・・・ P66

8. Inquiries ・・・ P70

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1.

Introduction

(1) Purpose

(2) Scope of application

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1. Introduction

(1) Purpose

This manual is summarized about submitting IMDS* data.

・About basic input method of IMDS data, please refer to the IMDS User Manual and IMDS Recommendation to understand how to use the IMDS.

・This manual intends to make IMDS data according to DENSO TEN request.

*IMDS: International Material Data System
・Developed mainly by the German Association of the Automotive Industry (VDA)
・The automotive industry’s global standard database operated by the membership consisting of major automotive manufacturers in the world, including Japan

・This manual intends to improve data quality in IMDS.

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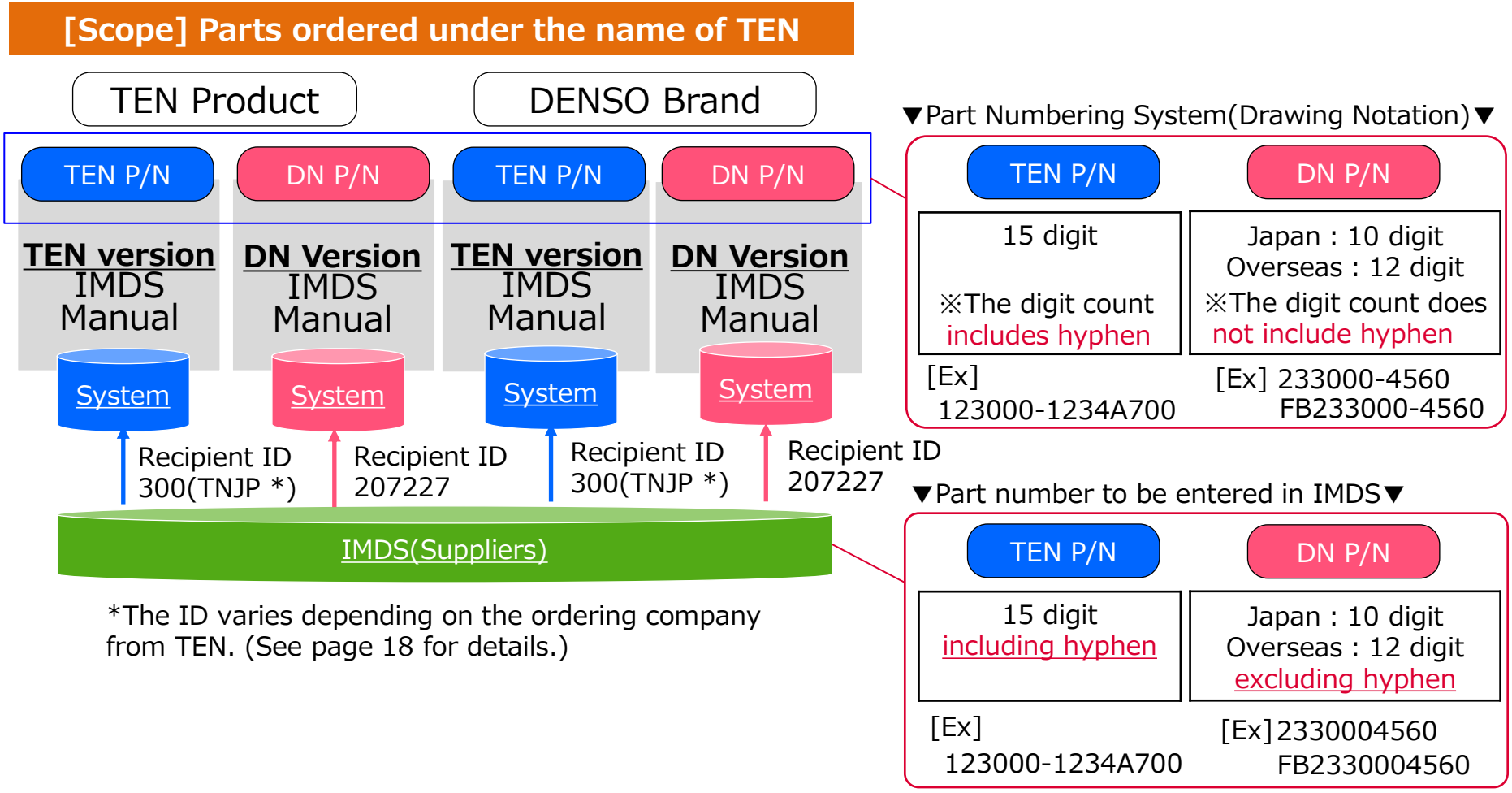
(2) Scope of application

・This manual applies to the IMDS data reported by suppliers to DENSO TEN, which is operated by DENSO TEN part numbers. The Denso version of the manual applies to those operated with the Denso part



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2.

Basic stance of IMDS reporting

(1) Investigation / Reporting
(2) Confidential information
(3) Reactive material included in delivery product

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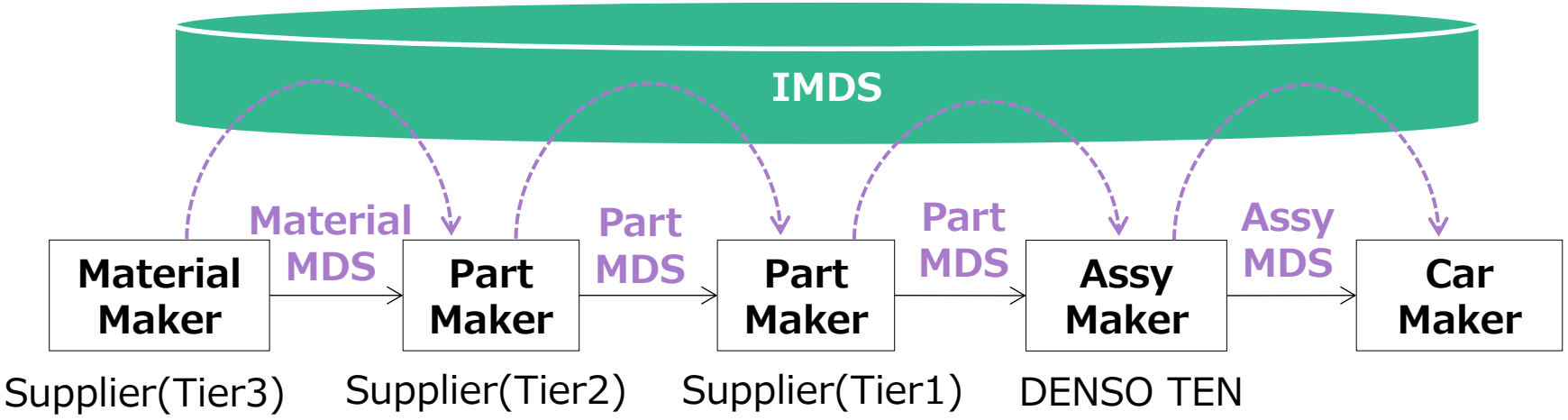
2. Basic stance of IMDS reporting

(1) Investigation / Reporting

The supplier shall trace purchased parts/materials along the supply chain to check contained substances (components) and report the result to DENSO TEN.



IMDS (International Material Data System)

The database on the Web where the automobile industry collects MDS for compliance with environmental regulations. It is widely used as a means of MDS information transmission in the supply chain for the purpose of finally submitting MDS to automobile manufacturers.

MDS (Material Data Sheet)

The data of the materials that structure products and parts and the substances that structure the materials.

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(2) Confidential information

The disclosed substances (components) shall be up to 10% per homogeneous material. However, substances subject to “TDC-002 Control Criteria for Chemical Substances Contained in Products” must not be included in disclosed substances.

(3) Reactive material included in delivery product

The reactive material shall be reported in the state as included in the final product of DENSO TEN. In particular, in cases of thermosetting resin, adhesive, paint, solder, etc., the supplier shall report substances finally included in (attached to) the product of DENSO TEN after reaction.

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3.

IMDS entry method (Basic)

(1)IMDS Recommendation

(2)IMDS User Manual

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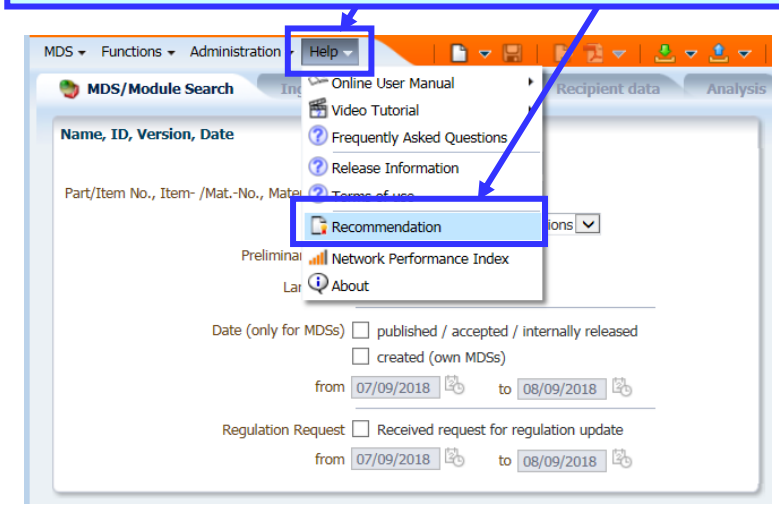
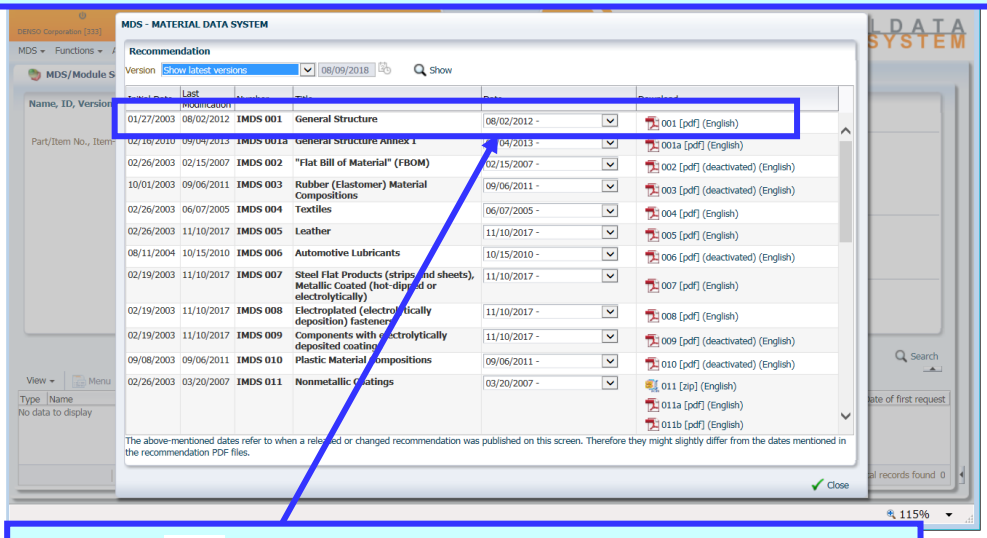
2. IMDS entry method (Basic)

(1) 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

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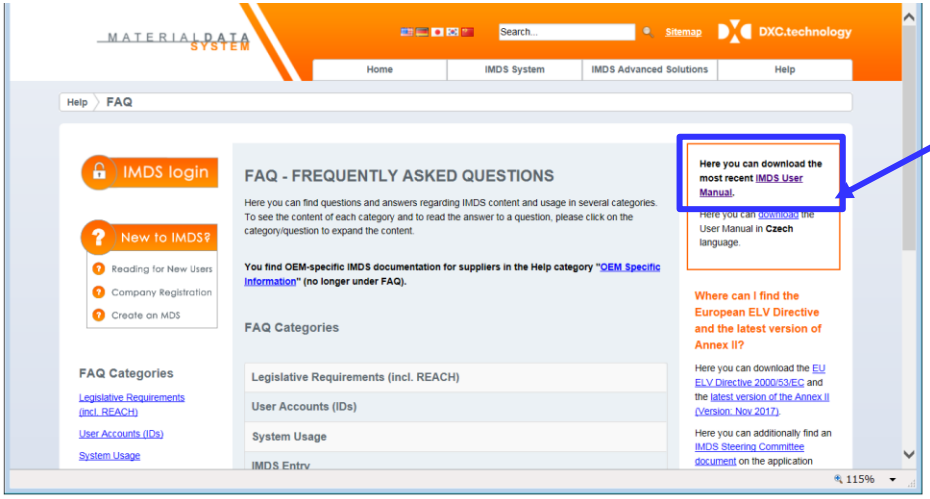
(2) IMDS User Manual

Download the IMDS User Manual from the following URL:

https://public.mdsystem.com/en/web/imds-public-pages/faq

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.

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4.

IMDS entry method

(DENSO TEN-specific requests)

(1) Basic item
(2) Material
(3) Trade name
(4) Submission of data in the mass-production preparation stage
(5) Application codes
(6) Filler Symbol
(7) Recyclate
(8) Target part number of submission
(9) Supplied part from DENSO TEN
(10) Method of submission(Raw material)

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4. DENSO TEN-specific requests

(1) Basic item

<table>
<tr><th>IMDS Screen</th><th>Item</th><th>Entry method</th></tr>
<tr><td rowspan="4">Ingredients</td><td>①Part/Item No. (TOP)</td><td>・Enter DENSO TEN part number. *15 digit(with hyphen)</td></tr>
<tr><td>②Description (TOP)</td><td>・Enter DENSO TEN part name.</td></tr>
<tr><td>③Part/Item No.
(Child Part)</td><td>・If there is DENSO TEN part number, enter DENSO TEN part number. If not, enter your part number or any part number.</td></tr>
<tr><td>④Description
(Child Part)</td><td>・If there is DENSO TEN part name, enter DENSO TEN part name. If not, enter your part name or any part name.</td></tr>
<tr><td rowspan="5">Recipient data</td><td>⑤Name</td><td>・Enter DENSO TEN part name.</td></tr>
<tr><td>⑥Part/Item No.</td><td>・Enter DENSO TEN part number. *15 digit(with hyphen)</td></tr>
<tr><td>⑦Company ID/Org.ID</td><td>・300 (when the report is to the DENSO TEN Headquarters).
Other country : Please refer to List of Company ID(Org. ID)</td></tr>
<tr><td>⑧Supplier Code</td><td>・Blank.</td></tr>
<tr><td>⑨Forwarding allowed</td><td>・Put a check (forwardable).</td></tr>
<tr><td>Common</td><td>⑩ID/Version</td><td>Confirm which option applies and report.
<table>
<tr><th>Part No.</th><th>ID</th><th>Version</th></tr>
<tr><td>Changed
(Includes minor code change)</td><td>New</td><td>It can be a decimal or an integer</td></tr>
<tr><td>Not changed
(Content correction、Rereport)</td><td>Same</td><td>New Version
It can be a decimal or an integer</td></tr>
</table></td></tr>
</table>

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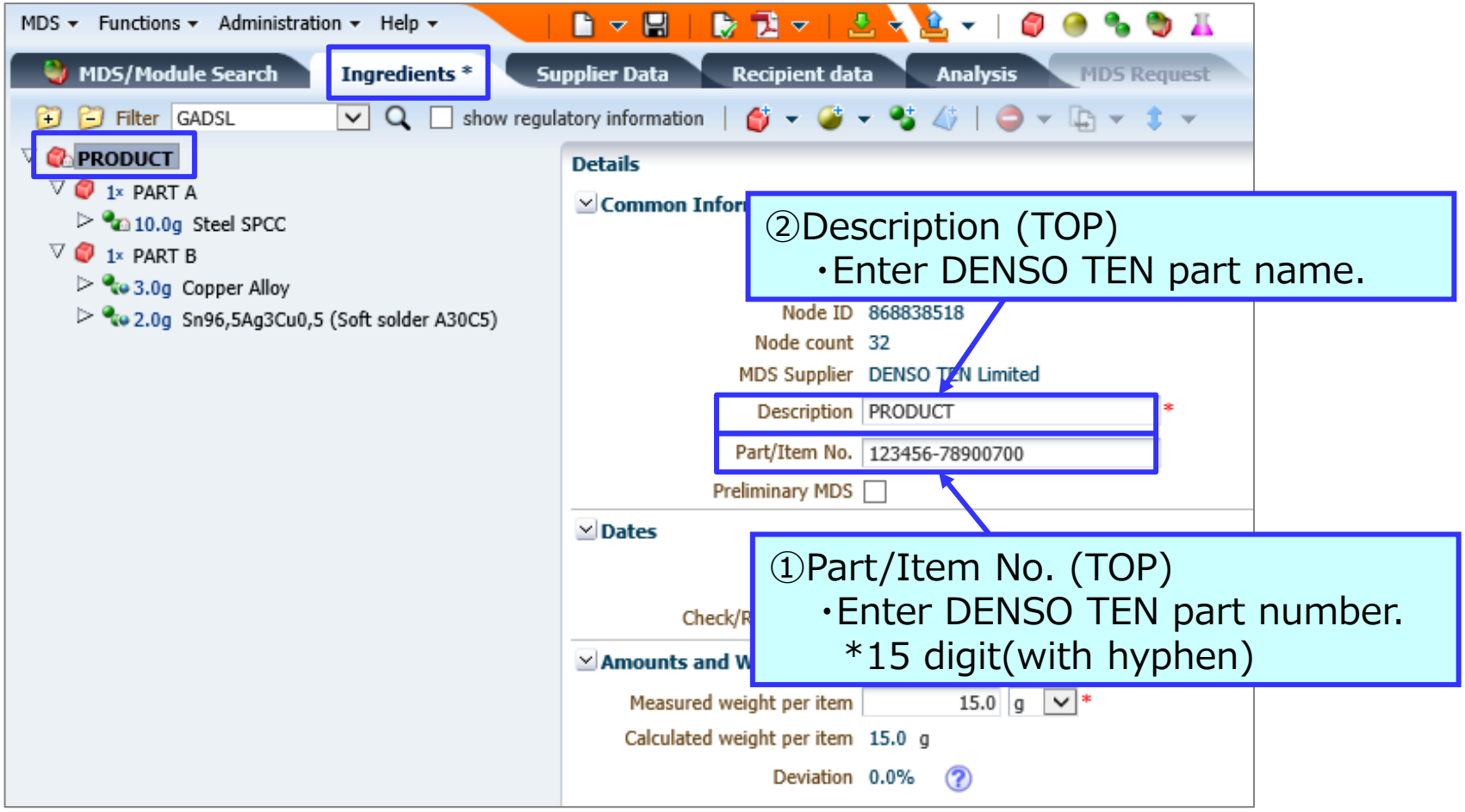
<Ingredients>



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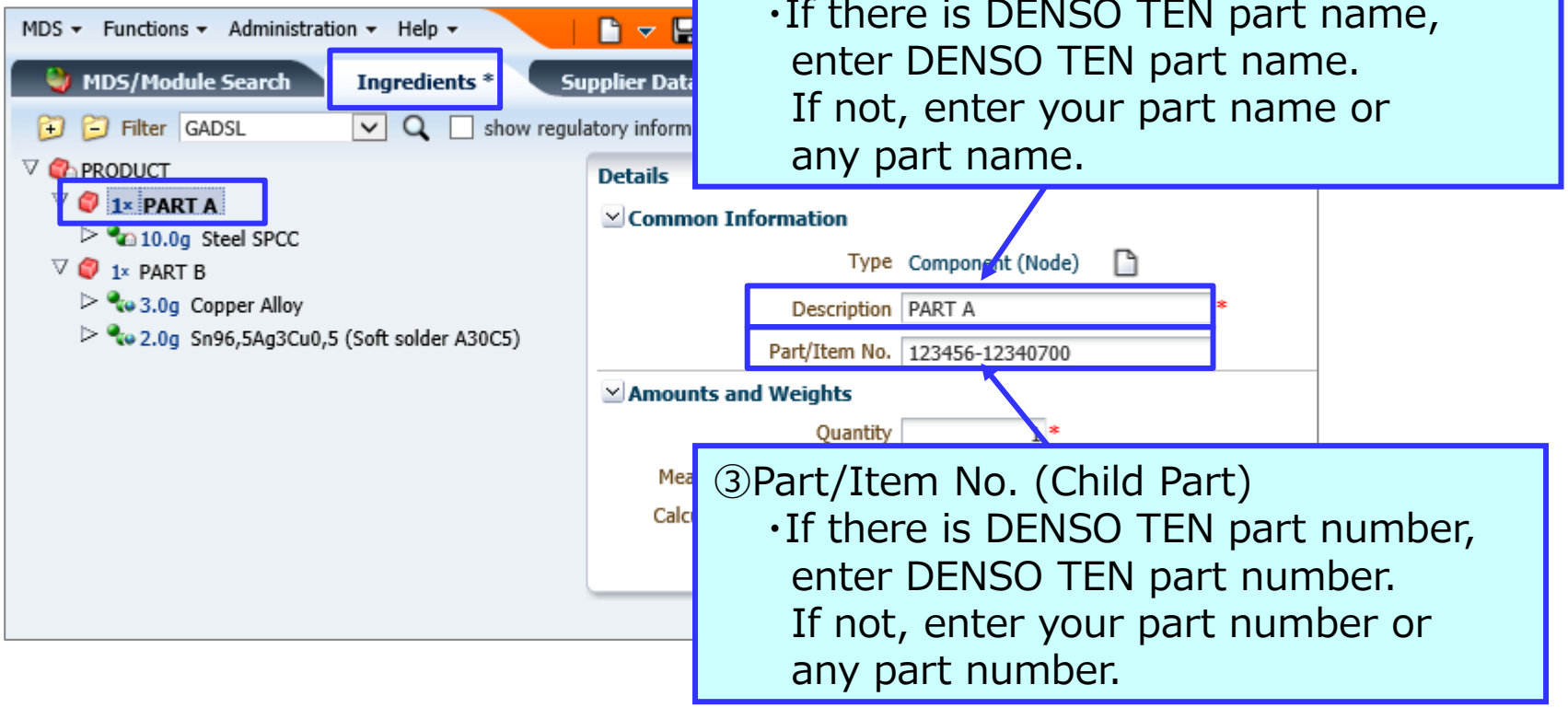
<Ingredients>



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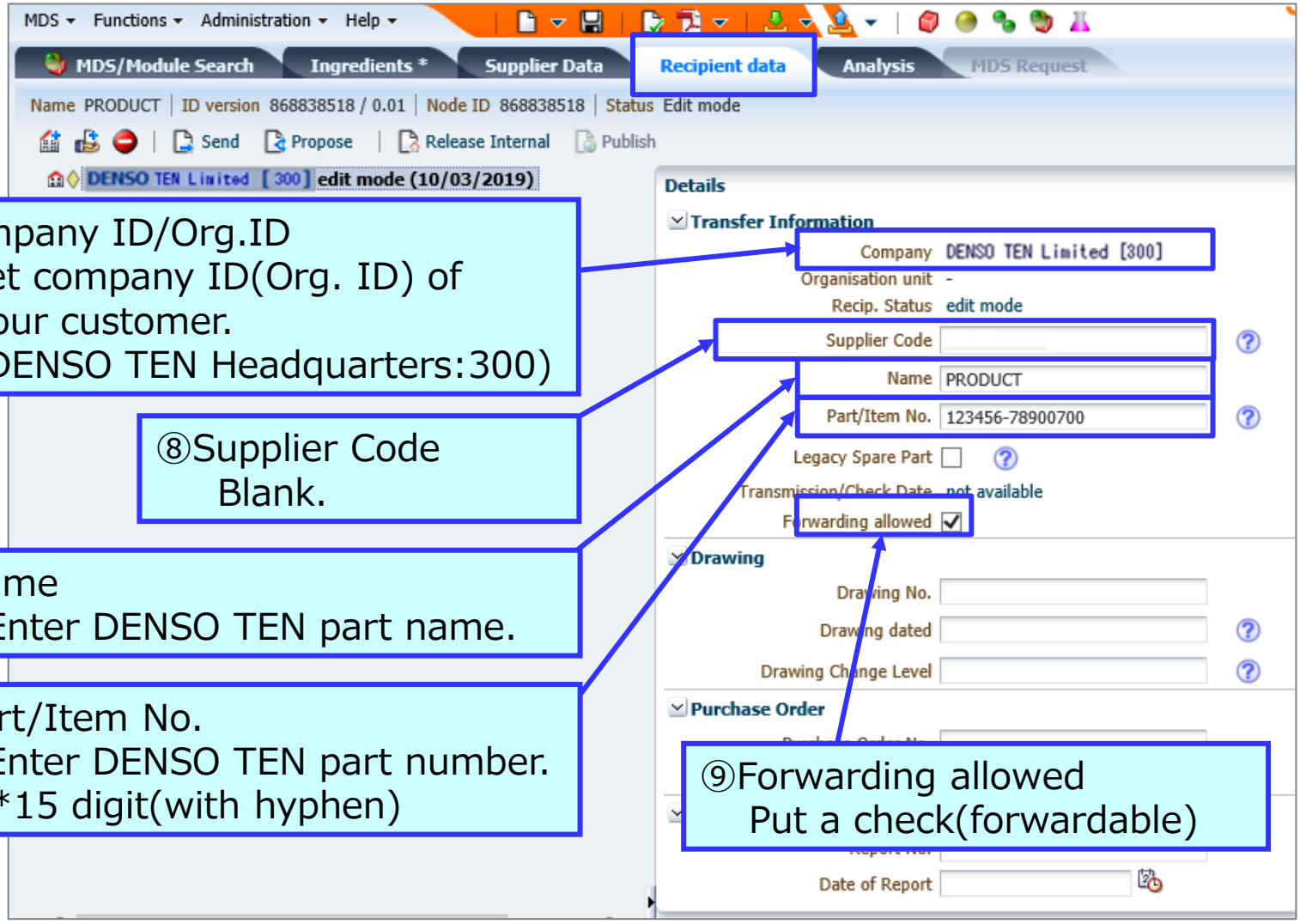
<Recipient data>



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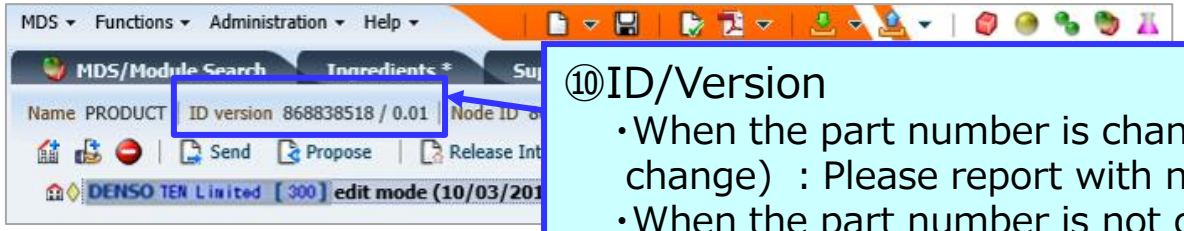
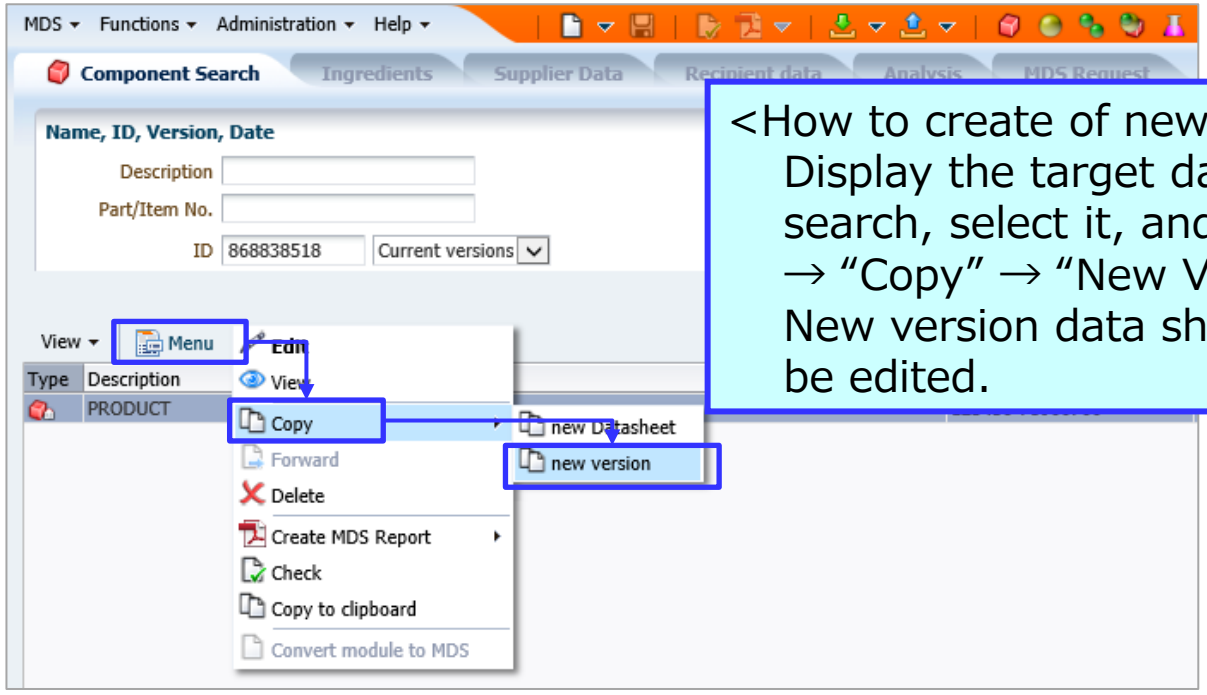
<Common>



⑩ID/Version

- When the part number is changed (Includes minor code change) : Please report with new ID.
- When the part number is not changed(Content correction, rereport):Please report with same ID/new version.
- The version can be numbered using a decimal number or an integer.



<How to create of new version>

Display the target data in the component search, select it, and then select “Menu” → “Copy” → “New Version”.

New version data sheet is created and can be edited.

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<List of Company ID(Org. ID)>

・Please send IMDS data to company ID(Org. ID) of your customer.

Company name	Abbreviation	Company ID	Org. ID
DENSO TEN Limited	TNJP	300	–
DENSO TEN AMERICA Limited	TNAM	–	58351
DENSO TEN ESPAÑA, S.A.	TNES	–	100225
DENSO TEN (THAILAND) Limited	TNTH	–	133074
電装天国際貿易（天津）有限公司 （DENSO TEN TRADING (TIANJIN) Limited）	TNTT	–	71506
電装天電子（無錫）有限公司 （DENSO TEN ELECTRONICS (WUXI) Limited）	TNWX	–	59556
DENSO TEN PHILIPPINES CORPORATION	TNPH	–	209754
DENSO TEN MINDA INDIA Private Limited	TNMI	–	209755

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(2) Material

・When there are IMDS committee materials in a public standard in IMDS, it is necessary to use IMDS committee materials on the rule.
・Please use IMDS committee materials without inputting a hand when there are IMDS committee materials. (IMDS Recommendation 4.4.1.1)

※About IMDS committee Material

<IMDS rule 4.4.1.1 Material MDSs Published by the IMDS Steering Committee >

・IMDS committee materials mean standard materials (materials data sheet shown by IMDS steering committee) in IMDS.
・In IMDS, the public standard materials such as EU (EN, DIN standard), Japanese (JIS), American(ASTM, UNS) , ISO are registered as IMDS committee materials, and, as for the IMDS committee materials, an error check of IMDS is exempted.

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<Input method of IMDS committee materials>

①Confirmation of the information of materials

You will confirm a JIS number, materials code from the information such as specifications, a drawing, the JIS.

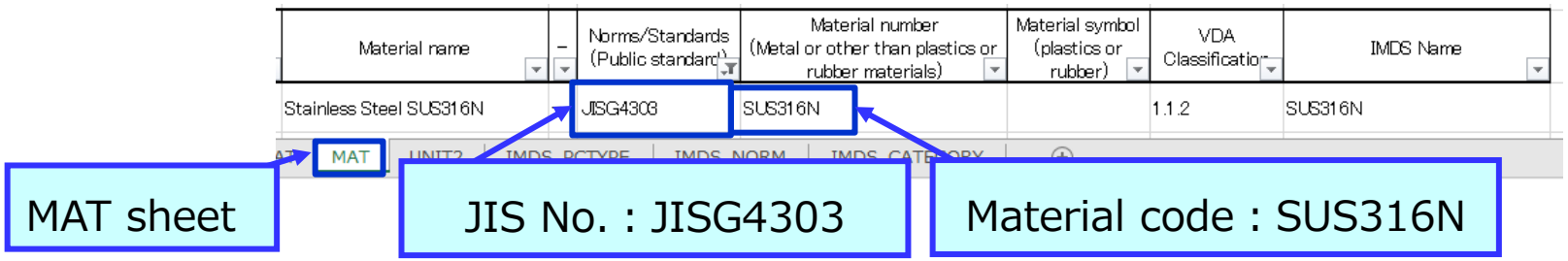
<example>We show it in the example of the stainless steel.

JIS No. : JISG4303　　Material Code : SUS316N

You can confirm JIS number, the materials Code on homepages of the JIS.

Homepage of the JIS : Japanese Industrial Standards　:　http://www.jisc.go.jp/

In addition, JAMA/JAPIA Standard Material Datasheet external file : Abstract of the "MAT" sheet as reference.



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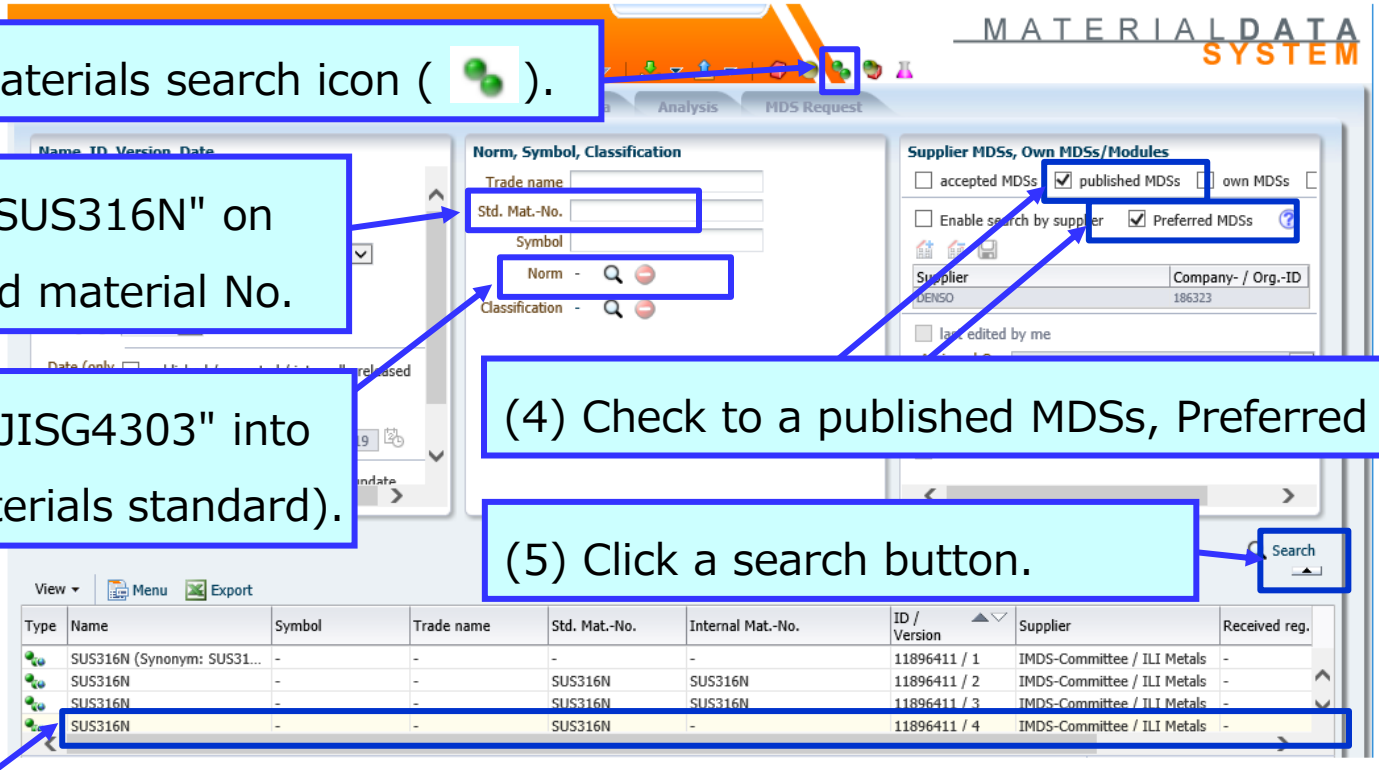
②Confirmation of the registration situation of IMDS

・To materials search screen of IMDS, it is a Japanese Industrial Standards number : JISG4303, materials code: SUS316N.

・In IMDS, IMDS set module ID and a version to materials and manage. The data of the new version may be registered by the update of the public standard, an error in writing correction.



(1) Click materials search icon ( ).

(2) Input "SUS316N" on standard material No.

(3) Input "JISG4303" into Norm (materials standard).

(4) Check to a published MDSs, Preferred MDSs

(5) Click a search button.

(6)Applicable IMDS committee materials are displayed.
(→ next page that detailed information is displayed when you click it)

・About same SUS316N, the IMDS committee materials which are different in version are registered.

・For Denso TEN, please report it using the most recent version (this case, 11896411/4).

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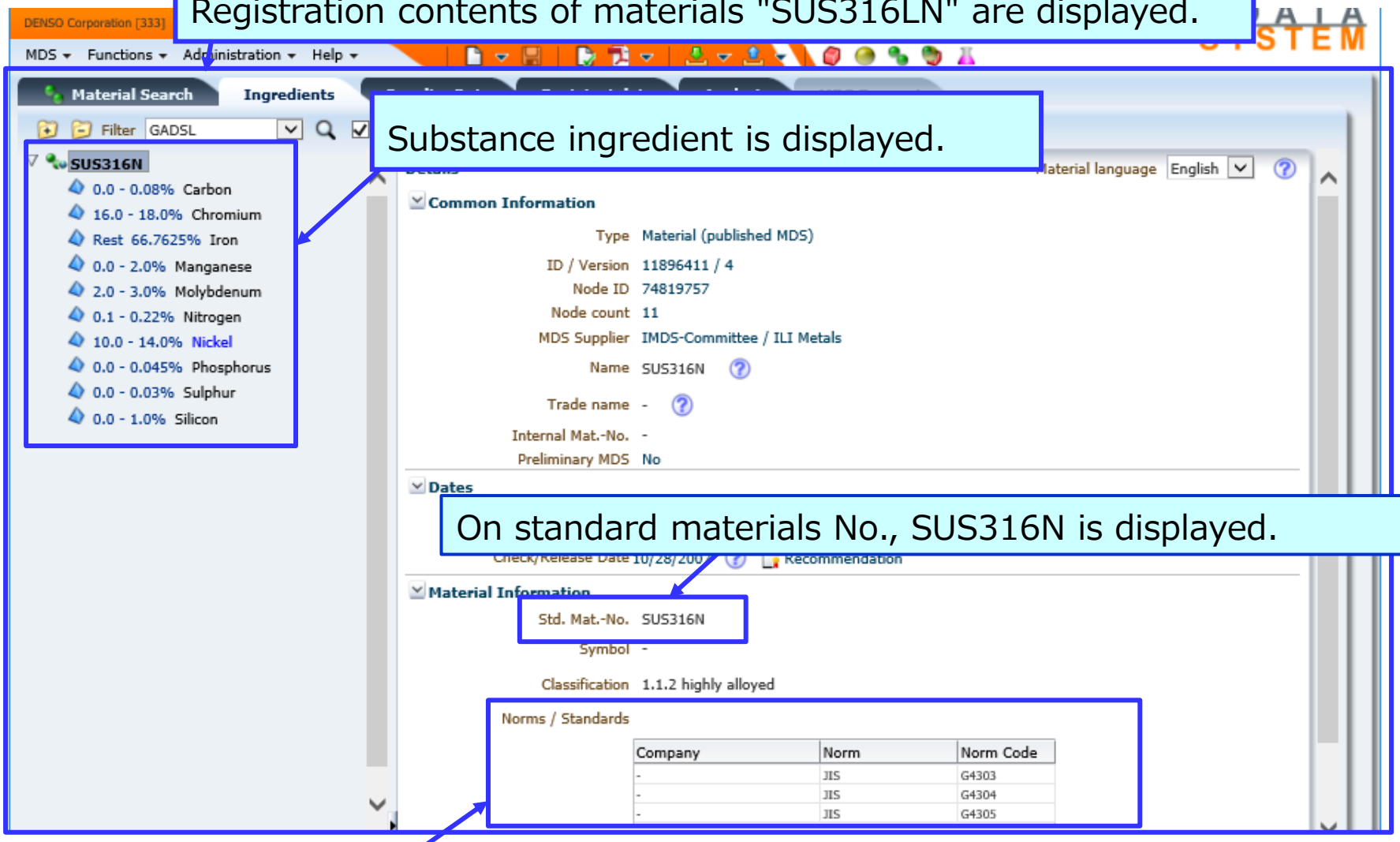
③Confirmation of registration contents of IMDS

Registration contents of materials "SUS316LN" are displayed.



Substance ingredient is displayed.

On standard materials No., SUS316N is displayed.

In a public materials standard column, it is a JIS number　: JISG4303 is displayed.
※There is three JIS No., but the IMDS committee materials are registered only with one.

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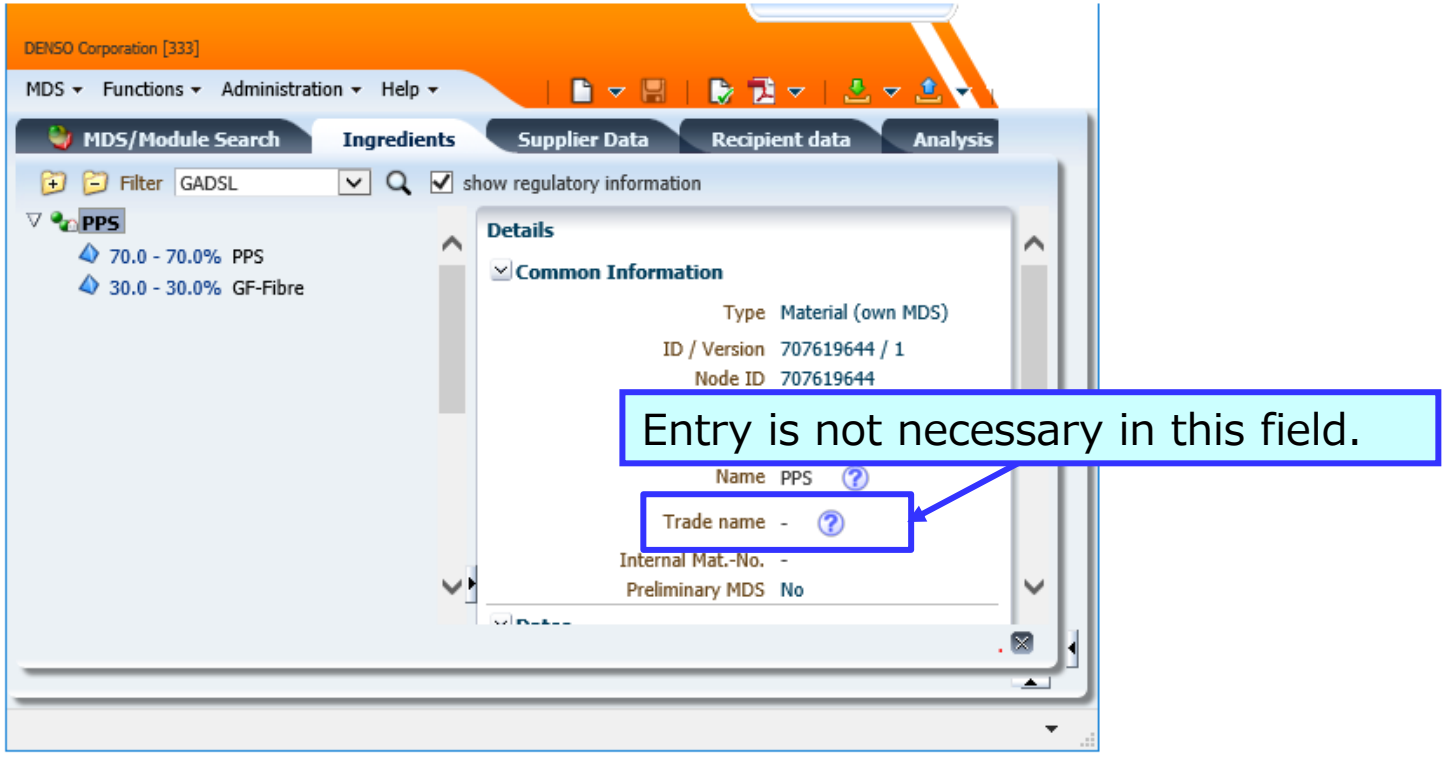
(3) Trade name

・This field should be left blank at the time of the report to DENSO TEN.
The provided data cannot be revised at DENSO TEN.
Confidential portions of your products and materials should be handled accordingly by each supplier before submission.



* Please consult us when corrections cannot be made because the material was prepared by the material manufacturer or for other reasons.

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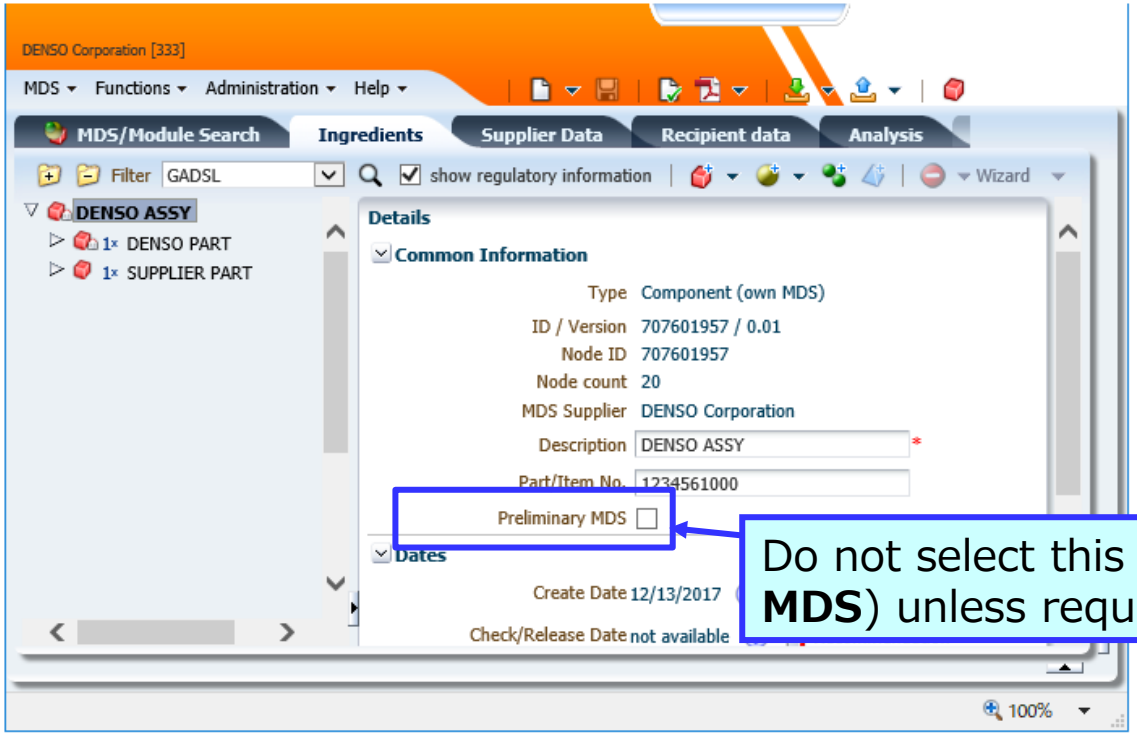
(4) Submission of data in the mass-production preparation stage

・You are requested to submit the data of mass-produced parts to DENSO TEN.

・Submission of the “**Preliminary MDS**” in the mass-production preparation stage shall be avoided unless requested by DENSO TEN.

<Attention>

It may sometimes include this check in the MDS data which you obtained from your overseas second supplier. We may receive reject from our customer when your MDS include such data. In that case, even if the contents of MDS data are the same as the MDS of product, you need re-investigation.



Do not select this checkbox (**Preliminary MDS**) unless requested by DENSO TEN.

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(5) Application codes

Important

<Entry rules>

・Enter the application code appropriate to the use of each product.

* If entering lead as impurity of 0.1% or less, report this with the application code 44. Entering a code other than 44 to 47 means intentional use of the substance; therefore, you should not enter “0” as the minimum value.
If our customer makes a request on the above, we may ask you a revision.

・When reporting to DENSO TEN, **do not use the application codes (IDs) shown in the list of next page.**

* If your product is affected by exemption change (subdivision of application code) or invalidation of application codes (13, 16, 58, etc.), we may request update of already reported data.

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Important

<Unusable application codes (IDs)>

Compound	Application code (ID)	Definition of application code: APPLICATION	EU ELV Directive
Lead and its compound	1	Alloying element in steel for machining purposes or galvanised steel	1(a)、1(b)
	2	Alloying element in aluminium for machining purposes	2(a),(b),(c)(i) 2(c)(ii)
	13	Solder in electronic circuit boards and other electric applications * New use prohibited in IMDS	(Old) 8
	16	Electrical components which contain lead in a glass or ceramic matrix compound except glass in bulbs and glaze of spark plugs * New use prohibited in IMDS	(Old) 10
	58	Lead in compliant pin connector systems * New use prohibited in IMDS	(Old) 8(f)
	20	Other application (potentially prohibited)	-
Hexavalent chromium compound	21	Corrosion preventive coatings	13(a)
	22	Absorption refrigerators in motorcaravans	14
	20	Other application (potentially prohibited)	-
	49	Corrosion preventive coatings related to bolt and nut assemblies for chassis applications	13(b)
Cadmium and its compound	29	Batteries for electrical vehicles	16
	28	Thick film pastes	-
	50	Optical component in a glass matrix used for Driver Assistance Systems	-
	20	Other application (potentially prohibited)	-
Mercury and its compound	25	Discharge lamps and instrument panel displays	15(a), 15(b)
	20	Other application (potentially prohibited)	-
Nickel	32	Component of a surface likely to be routinely touched (eg. handles and buckles), that have a nickel release rate exceeding 0.5µg/cm2/week.	-
PAHs	40	Not applicable	-

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Important

<Application codes (IDs) that can be used depending on the purpose>

Compound	Application code (ID)	Definition of application code: APPLICATION	EU ELV Directive
Lead and its compound	53	Lead in solder used in electronic circuit board applications	8(a)
	54	Lead in solders in electrical applications other than soldering on electronic circuit boards or on glass	8(b)

- The above is an application code that can be used for a limited time, so please be sure to check for any mistakes before submitting. We may contact you.
- We may make inquiries other than the above.

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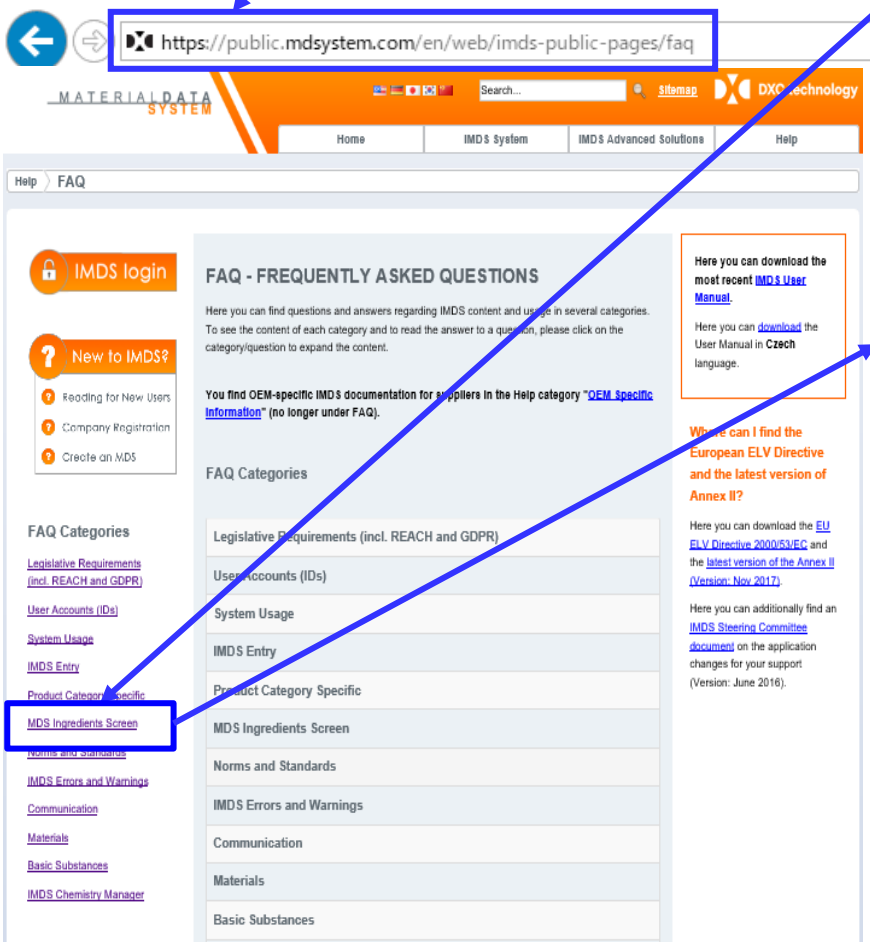
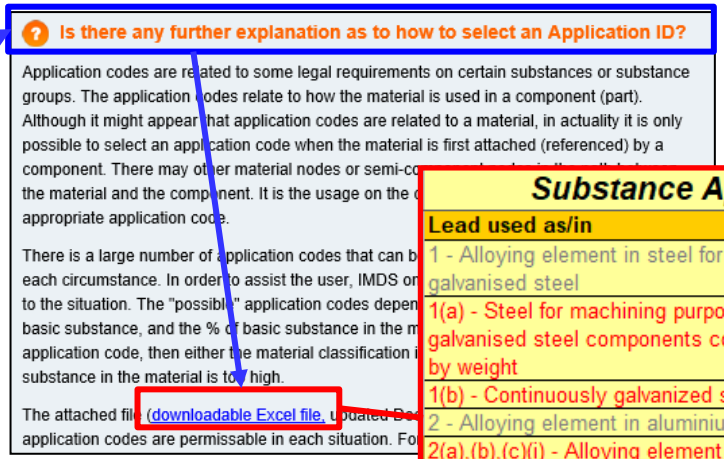
<How to confirm the latest application codes>

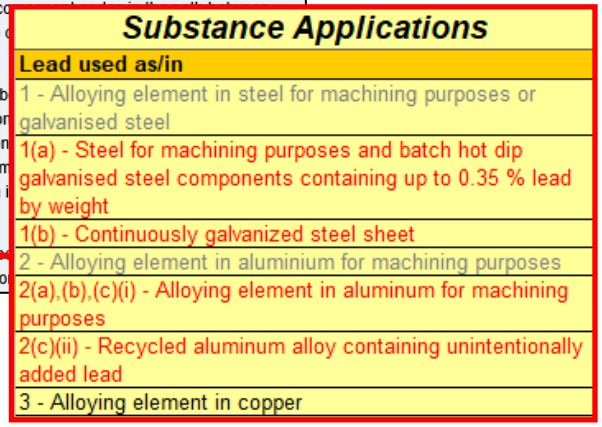
Important

Access to “FAQ - Frequently Asked Questions” of IMDS.
https://public.mdsystem.com/en/web/imds-public-pages/faq

→『MDS Ingredients Screen』
→『Is there any further explanation as to how to select an Application ID?』
→『downloadable Excel file』







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(6) Filler Symbol

According to the substance information on a filler, you create the symbol for the filler and incorporate it into the material data.

- If two types of fillers are contained, place the filler with higher component ratio first and then the other after "+", e.g. -(GF20+TD10).
- Numbers of filler content should be integers. Round off the decimal point.
  (Example : 11.8→12,10.3→10)

Information from ISO1043-2

Substance and material information	
B	boron
C	carbon
E	clay
G	glass
K	calcium carbonate
L	cellulose
M	mineral, metal
P	mica

Form	
B	beads, balls
C	chips, cuttings
D	powder
F	fiber
G	ground
H	whisker
K	knitted fabric
L	layer
M	mat
N	non-woven

<Example 1>
If resin contains 13% carbon powder for coloring (black):
(carbon: C)/(powder: D)/(13%) → Enter -CD13.

Filler content (%)	Filler symbol (-$)
13	**-CD13**

<Example 2>
If resin contains 28% glass fiber to prevent thermal expansion: (glass: G)/(fiber: F)/(28%) → Enter -GF28.

Filler content (%)	Filler symbol (-$)
28	**-GF28**

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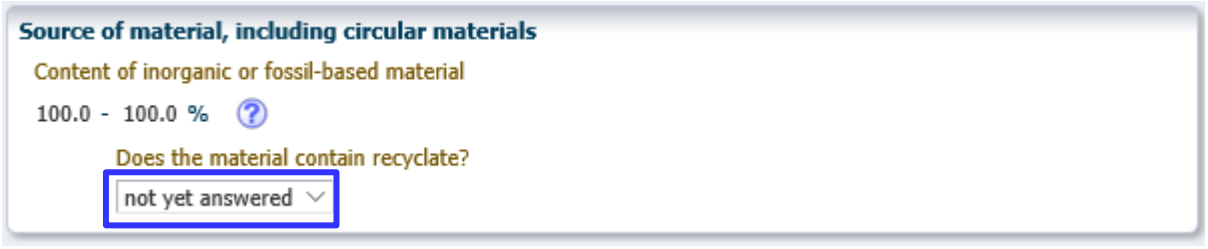
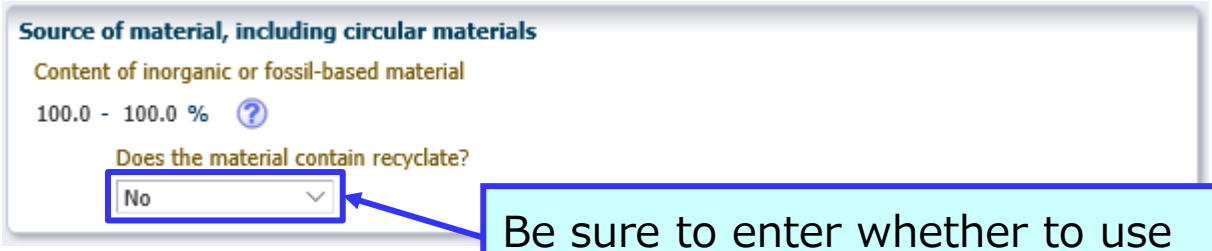
(7) Recyclate

・Be sure to enter whether to use recycled materials.
If using recycled materials, please enter all the required items.

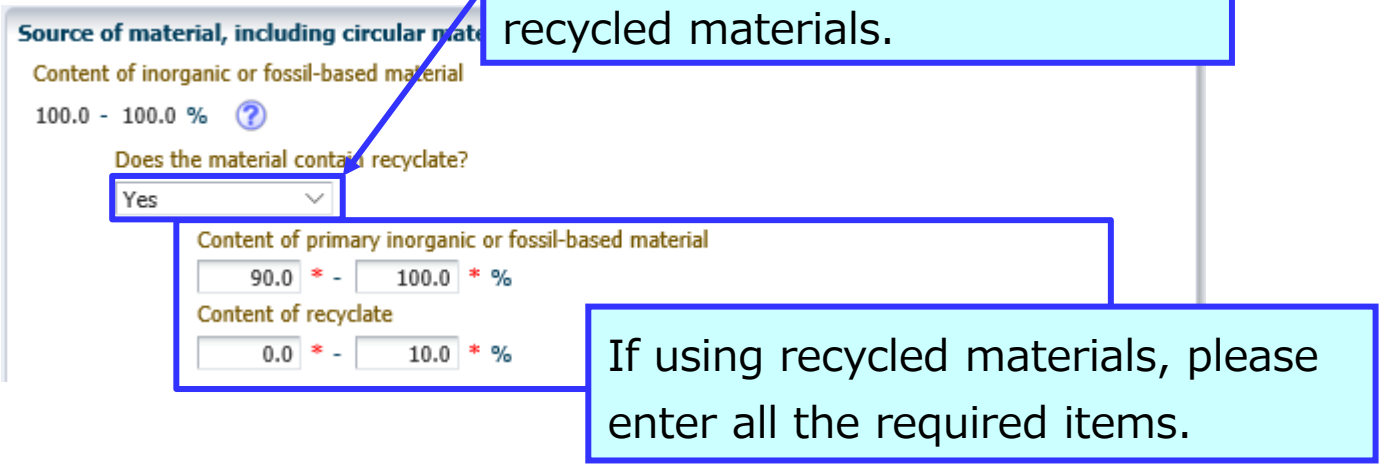
NG



OK



OK



Be sure to enter whether to use recycled materials.

If using recycled materials, please enter all the required items.

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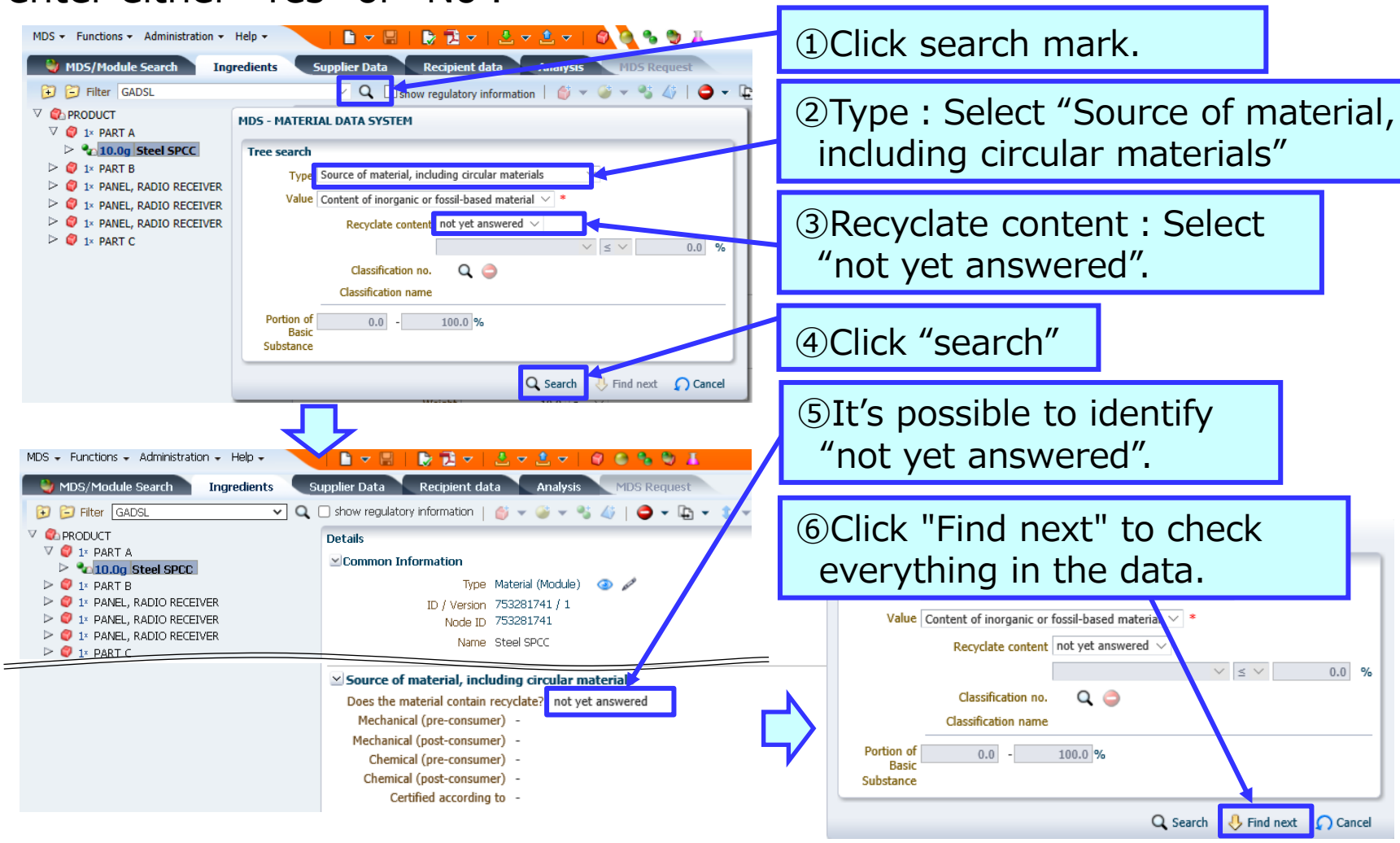
<How to check answer of the recyclate information>

・You can check answer of the recyclate information using the IMDS search function. Be sure to check if there are "not yet answered" and enter either "Yes" or "No".



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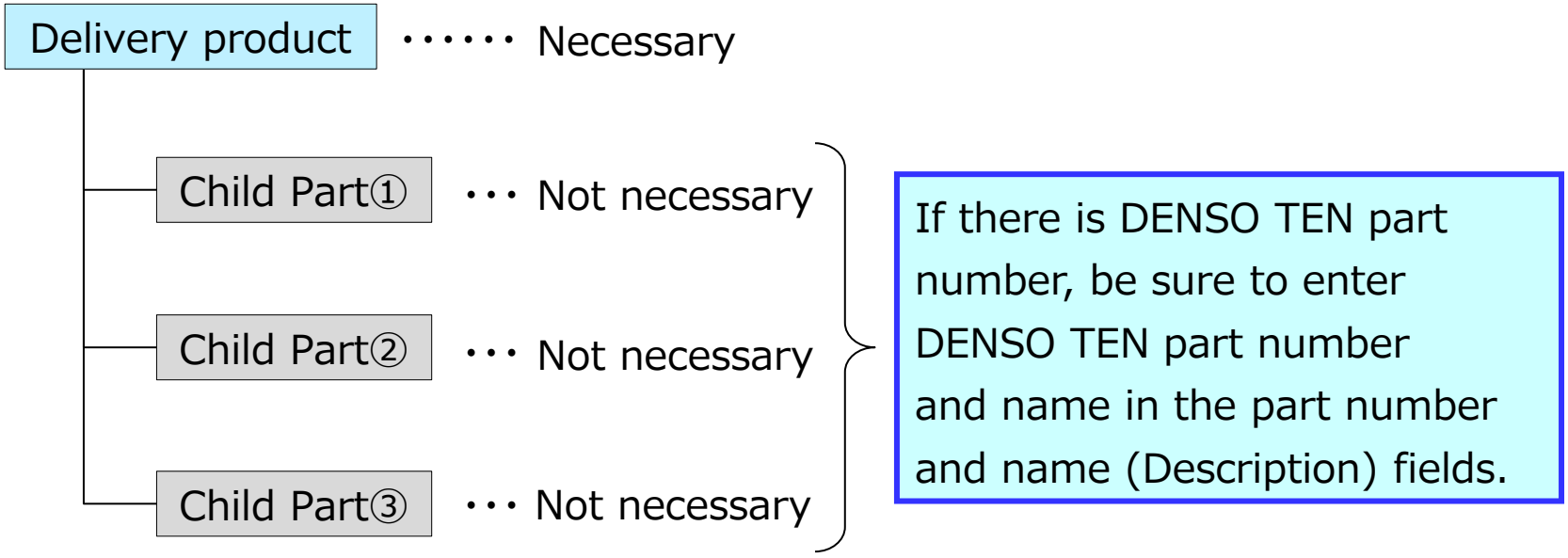
(8)Target part number of submission

・Please submit IMDS data in the unit of the delivery part number to us. Submission of child parts is not required. However, if there is DENSO TEN part number, be sure to enter DENSO TEN part number and name in the part number and name (Description) fields.



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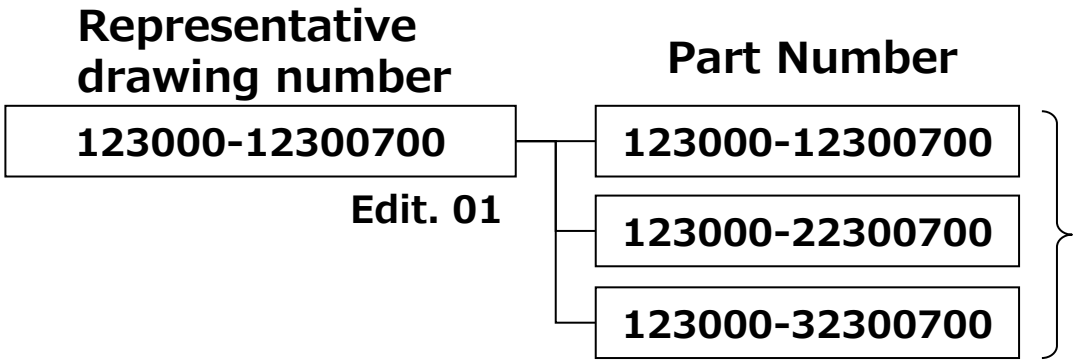
・In the case of multi-part drawing, IMDS data must be submitted for part numbers other than the representative drawing number.



In the case of multi-part drawing, IMDS data must be submitted for part numbers other than the representative drawing number.

※Example of part number on drawing

多品図対象品番リスト Part number list for multi-part drawing	
1	123000-12300700
2	123000-22300700
3	123000-32300700

Representative drawing number

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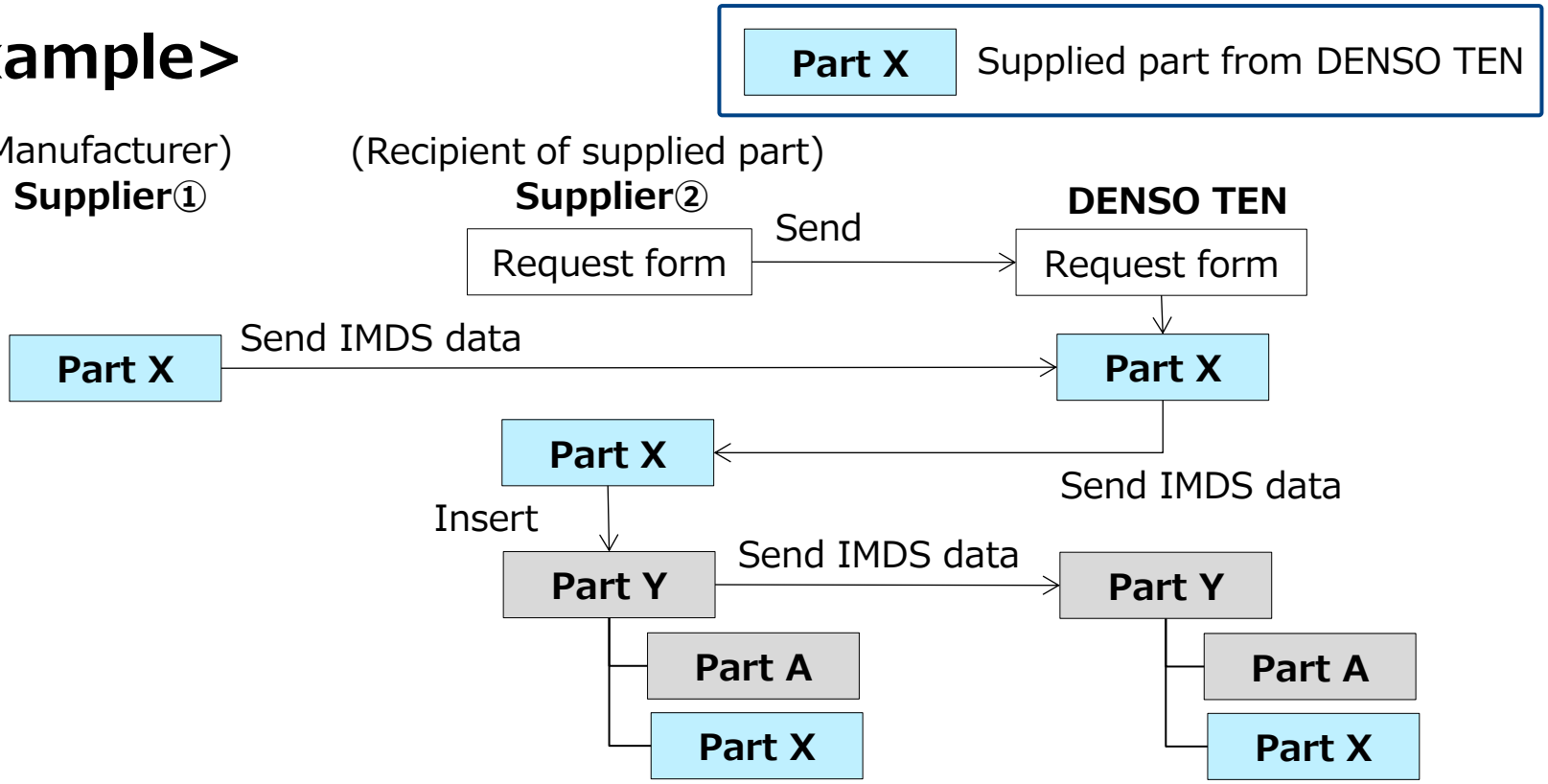
(9) Supplied part from DENSO TEN

・In the case that supplied part from DENSO TEN is contained in your product, please send us the request using “Request form of data provision for supplied part”. We provide the data of supplied part. Please request as soon as possible as it may take time.

・Please send IMDS data which is contained the data of supplied part.

<Example>



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<Request destination>

【Japan】

DENSO TEN Limited

HMI)Engrg Pln Div. Hard Eng Pln Dept. Eng Pln Sect
e-mail : ten-jama_soc@mlst.denso-ten.com

【Other country】

Person in charge of DENSO TEN overseas bases

<E-Mail subject>

【Request】Data provision for supplied part

<Request form of data provision for supplied part>

Request form of data provision for supplied part

Requester (Company name)					
Supplier code		Required data format	IMDS	Company ID /Org. ID of recipient	

Product part number (TEN part number)	Product part name (TEN part name)	Supplied part number (TEN part number)	Supplied part name (TEN part name)

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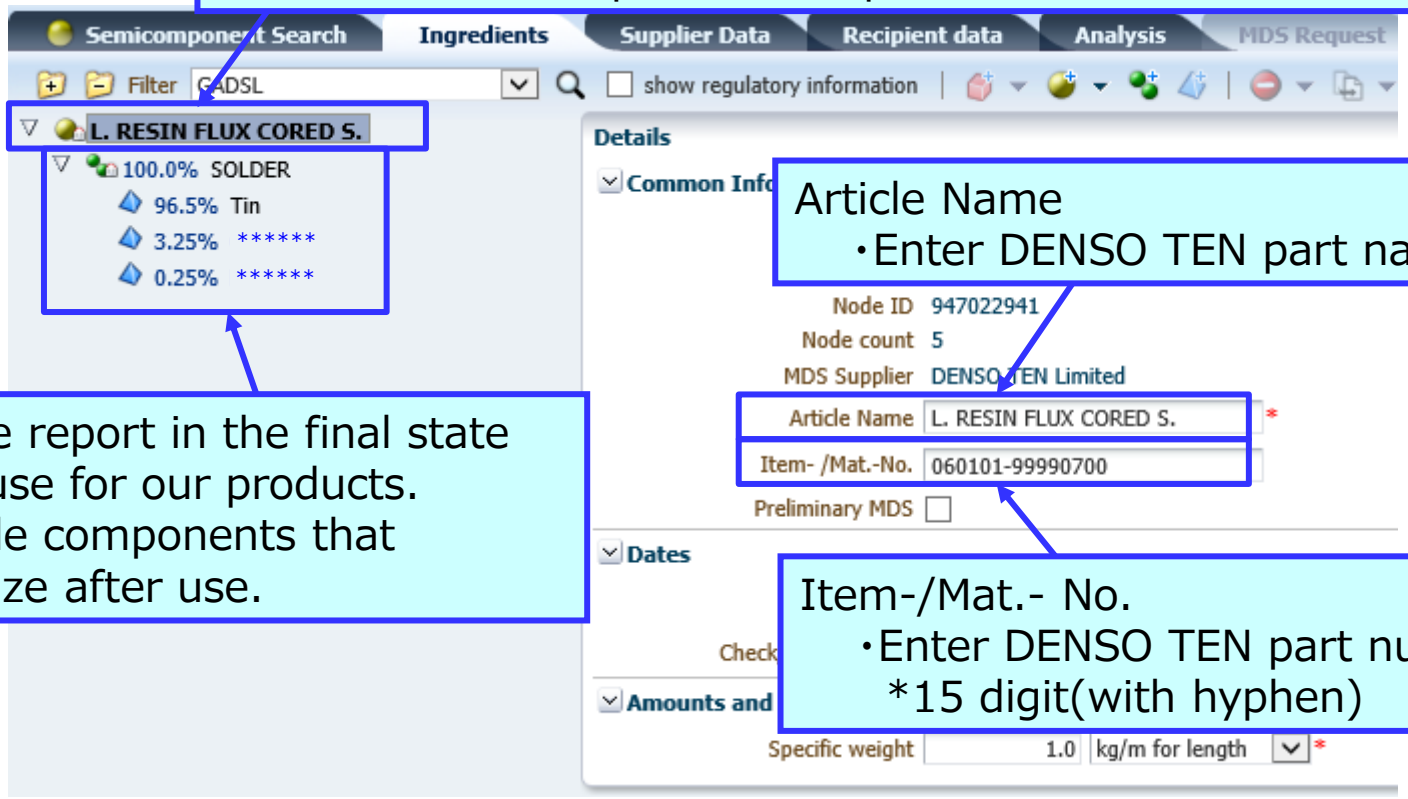
(10)Method of submission(Raw material *1)

・Please submit raw material data using semi-component.

<Ingredients>

Create a semi-component and place material data under it



Article Name
・Enter DENSO TEN part name.

*Please report in the final state after use for our products. Exclude components that volatilize after use.

Item-/Mat.- No.
・Enter DENSO TEN part number.
*15 digit(with hyphen)

***1 A material that is used in products and remains at normal temperature and in a dry state. (Solder, flux, lubricating oil, solvent, etc.)**

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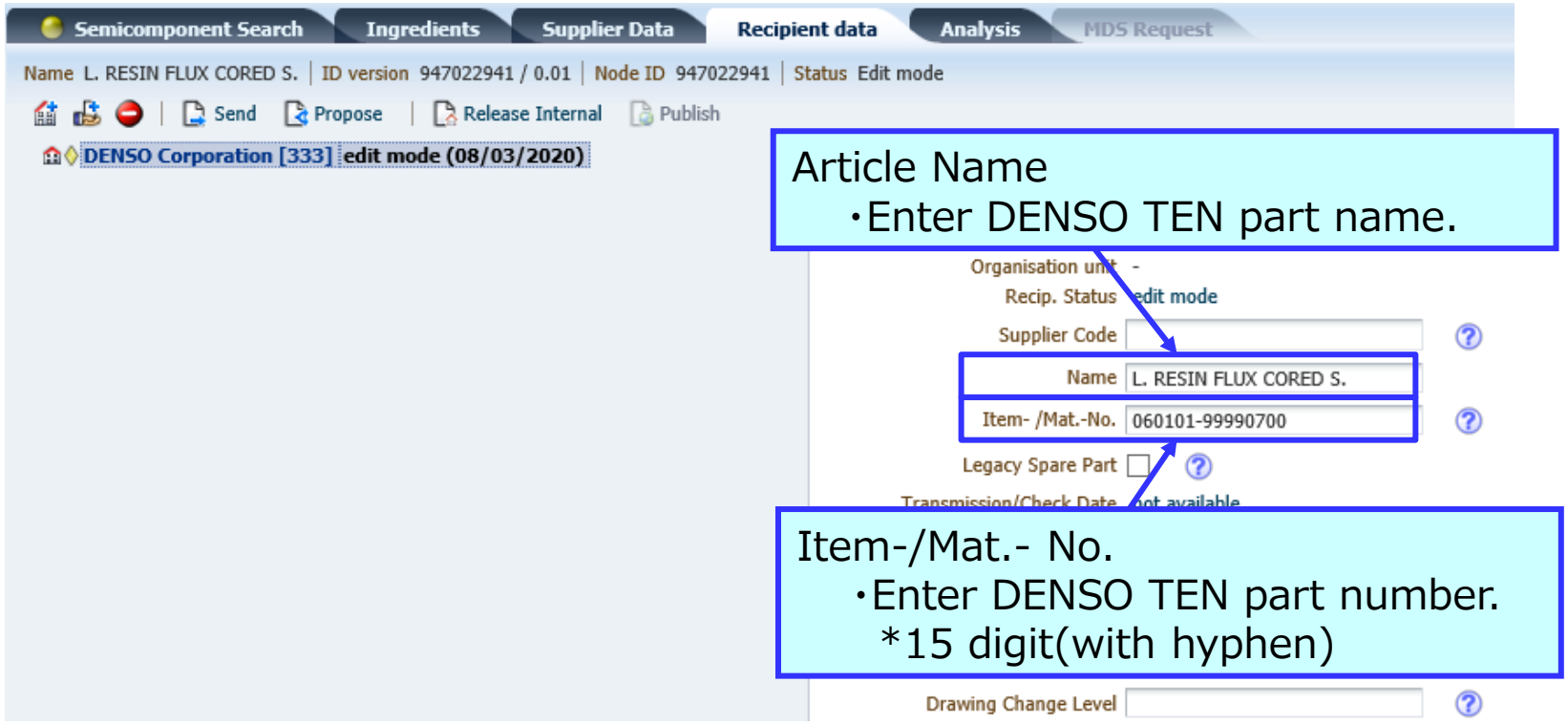
<Recipient data>



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5.

Warnings in IMDS

(1) Error and warning check

(2) About data correction

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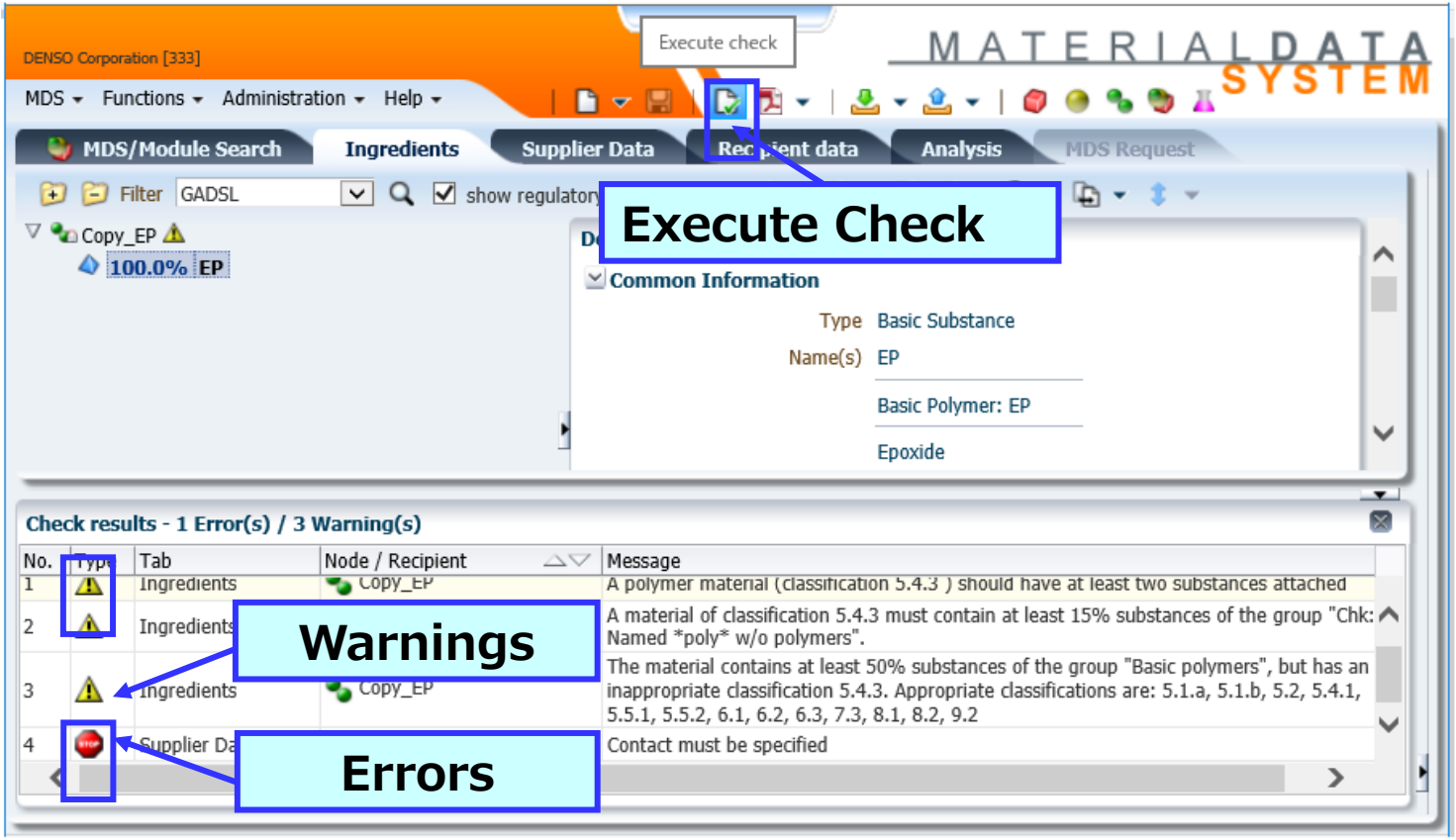
5. Warnings in IMDS

(1) Error and warning check

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

<Error and warning check functions of IMDS>



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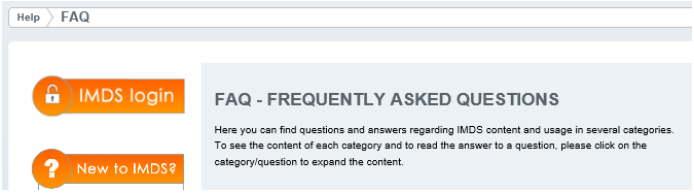
<How to read warning details>

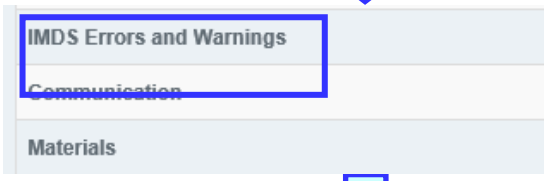
Please refer to these documents for how to run the IMDS error check and how to check the errors and warnings.

https://public.mdsystem.com/en/web/imds-public-pages/faq



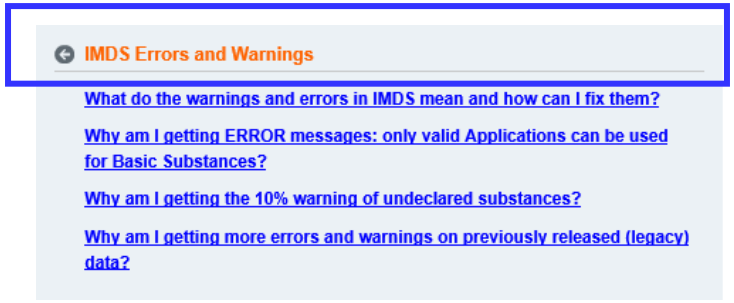
You will find
『FAQ - FREQUENTLY ASKED QUESTIONS』

Move the page below



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

Detailed information is displayed.



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?

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(2) About data correction

・Unlike the JAMA Sheet, when reported using the IMDS, DENSO TEN cannot revise the received data.

・For errors, please correct all of them.

・For warnings, please confirm and correct them according to the contents after the next page.
It is not necessary to correct all warnings for us, you may be requested to make corrections in response to an individual request of the customer or for other reasons. (Even if after our approval process)

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①Case in which a part and its materials are on the same level

・You are requested to submit the report after resolving this type of warning.

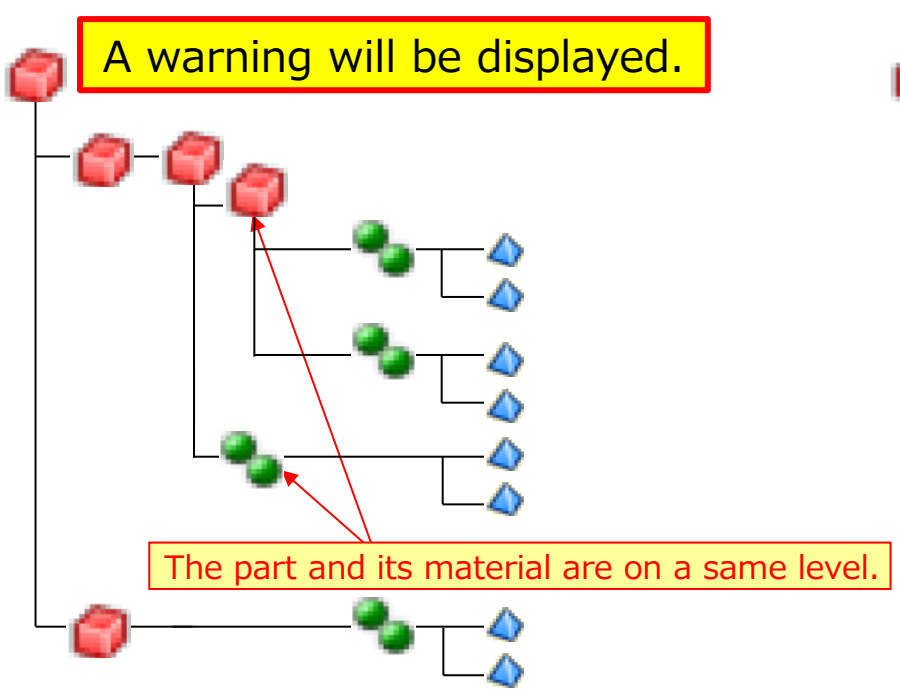
<IMDS rule : IMDS User Manual 3.3.14 Error Check>

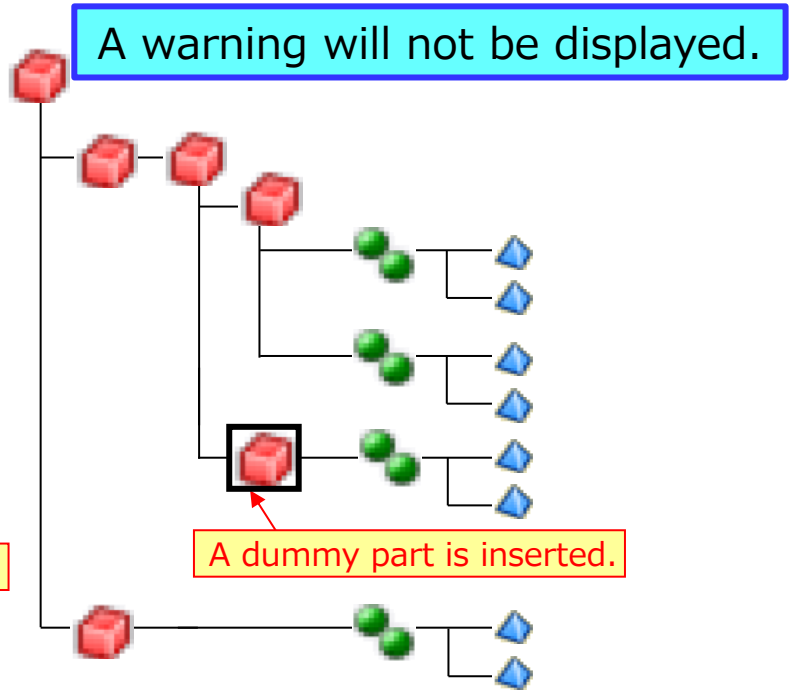
・When a parent part has a child part and its materials on a same level under it, the IMDS displays a warning.

<How to resolve the warning>

・In that case, the warning can be resolved by inserting a dummy part (*).

*There are no rules for dummy part names. However, use of the material name is recommended.





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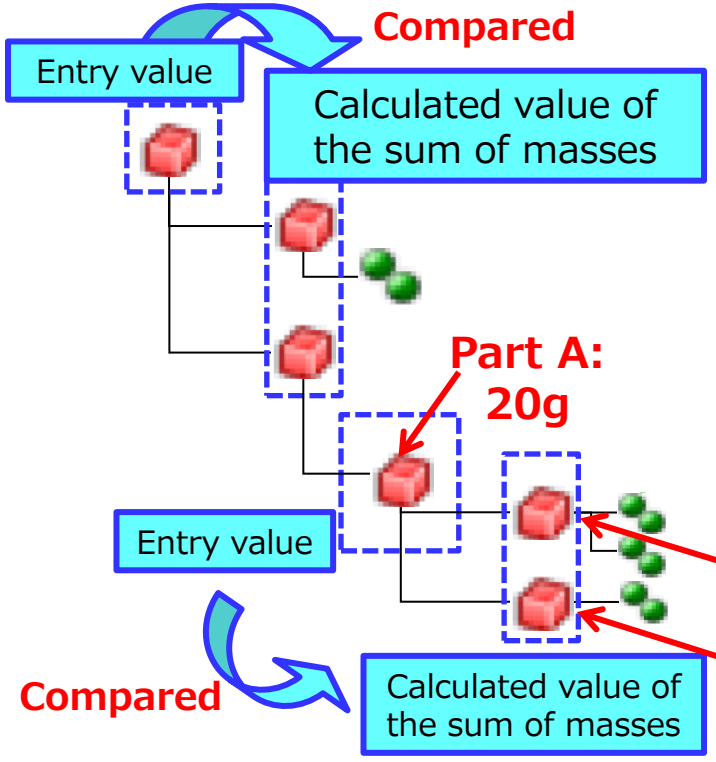
②Case in which the part mass deviation exceeds the reference value of the IMDS

・You are requested to submit the report after resolving this type of warning.

<IMDS rule : IMDS User Manual 3.3.14 Error Check>
・When the sum of the masses of the child parts exceeds the reference values given below relative to the mass of their parent part, a warning is displayed.
*The error check will be run on all levels.
・Please correct the entry value to match total mass of child parts even within the allowable range. (Because when reporting product data to the customer, mass value may not be within tolerance.)



Reference values in error check

Mass of parent part (M)	Maximum deviation [%]
M < 1 g	100
1 g ≤ M < 100 g	10
100 g ≤ M < 1 Kg	5
1 kg ≤ M < 10 kg	2
10 kg ≤ M < 100 kg	1
100 kg≤ M	1

A warning will be displayed.

In the case shown on the left, while the mass of the parent part is 20 g, the calculated sum considering the mass of the child parts is 23 g. This makes the deviation 15% and displays a warning.

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③Case in which the substance portion range exceeds the reference value of the IMDS

・You are requested to submit the report after resolving this type of warning.

<IMDS rule : IMDS recommendation 001 4.5.4 maximum portion ranges
/IMDS User Manual 3.3.14 Error Check>

・With some materials, the substance portion is specified as a range range.
On the IMDS, they can be entered using the “Substance portion (Minimum),” “Substance portion (Maximum),” and “Substance portion (Rest)” fields.

Tolerance of substance maximum portion range

・The substance portion range (from the minimum value to the maximum value) is defined as follows. In the report, the substance portion needs to fall within this range range.

*Some materials specified by JIS or other public standards are allowed to exceed the tolerance range.

Substance portion Maximum = Y%, minimum = X%	maximum portion range M = Y% - X%
$0 \leq X \leq 7.5$	$M \leq 3$
$7.5 < X \leq 20$	$M \leq 5$
$20 < X \leq 100$	$M \leq 10$

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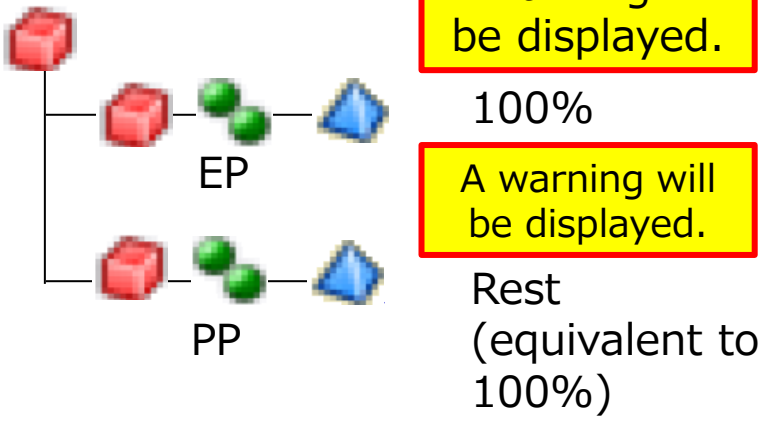
④Case in which the entire plastic or rubber consists of one substance

・You are requested to submit the report after resolving this type of warning.

<IMDS rule : IIMDS User Manual 3.3.14 Error Check>

・For materials of a VDA classification of 5.x or 6.x in which one substance accounts for 100%, a warning is displayed.
(To prevent failure to enter additives to plastics and rubbers.)



A warning will be displayed.

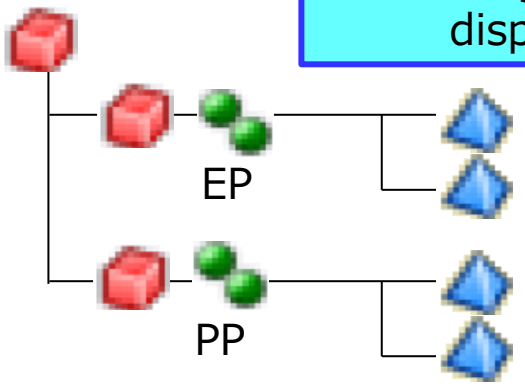
100%

A warning will be displayed.

Rest (equivalent to 100%)

<Example>

A warning will not be displayed.



99.9%

0.1% Misc.

99.9%

0.1% Misc.

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⑤Chromate and passive state water

・This type of waning is basically not rejected due to the presence of water.

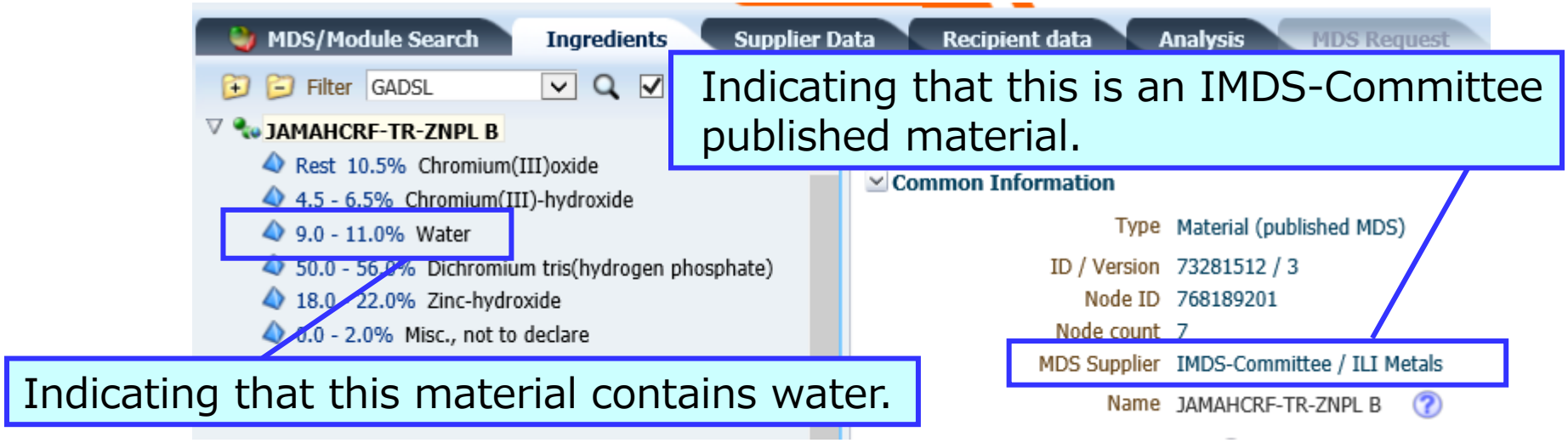
<IMDS rule : IIMDS User Manual 3.3.14 Error Check>

・Even if warning is displayed if the state that water included in chromate is in a right state, please just report it.

<Reference>

・As the IMDS committee materials, data containing water is registered. Data containing chromate and passive state water. In this way, there are the right data containing the water.

I M D S-committee Material IMDS ID (material): 73281512/2



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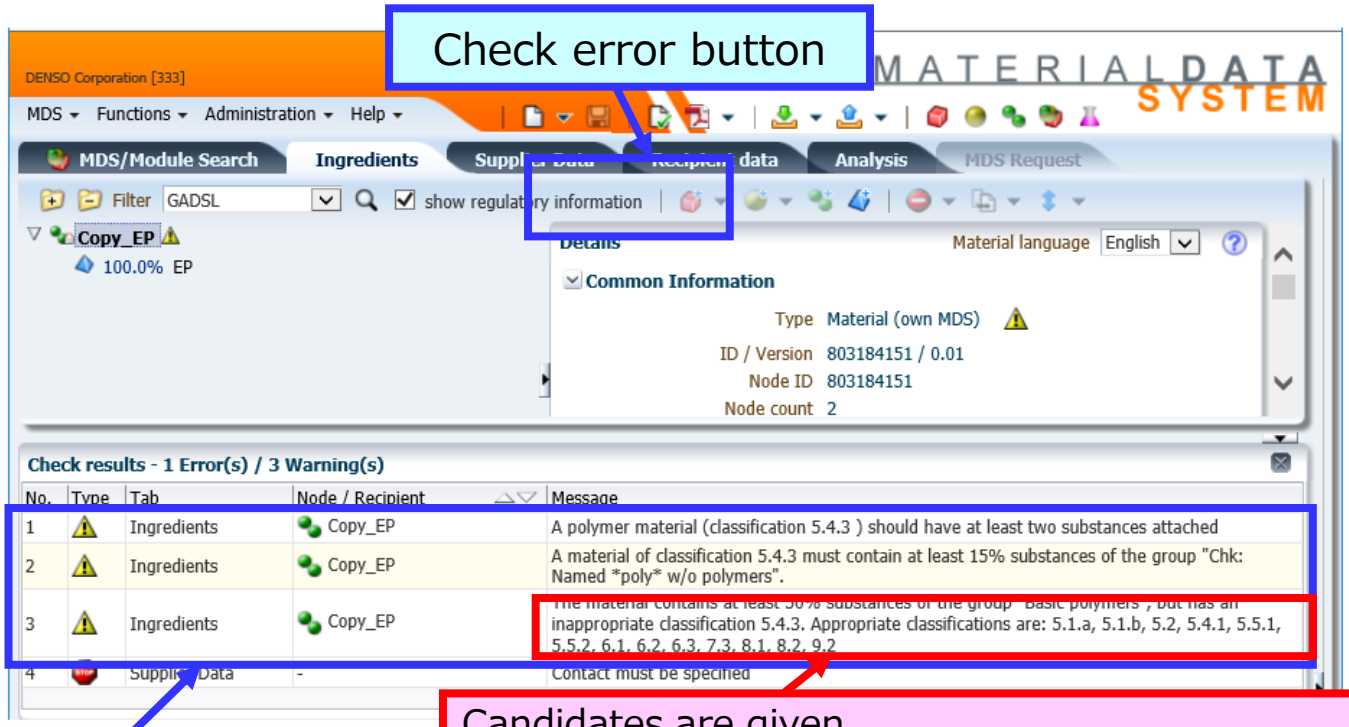
⑥VDA classification

<IMDS rule : IIMDS User Manual 3.3.14 Error Check>

・When warning is displayed by an error check of the IMDS, you confirm a candidate displayed by a message column, and please confirm an appropriate materials classification.

・Even if warning is displayed, there is (when an appropriate choice is not displayed) when materials classification is right.

How to check candidates



Warning message

Candidates are given.
In this case, the material categories are 5.1.a, 5.1.b, 5.2, 5.4.1, 5.5.1, 5.5.2, 6.1, 6.2, 6.3, 7.3, 8.1, 8.2, and 9.2.

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6.

Points on Creating MDS

※ Please use to improve data quality.

(1) To report GADSL substances

(2) To report substances found in final product

(3) To reflect the latest engineering and material changes

(4) To pass material data along supply chain

(5) To report by homogeneous material basis

(6) To report Polymeric Parts Marking

(7) To report component real weight

(8) How to Enter Components of Glass

(9) To enter material name in the name field of material data

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6. Points on Creating MDS

Important

(1) To report GADSL substances

<Rule> If portion of GADSL substance exceeds threshold, describing this is required.
Allowed usage of wildcard substances : Up to 10 wt% in total

IMDS Recommendation 001 Rules 3.2.1.D and 4.5.2.C

<Points requiring special attentions>

① When creating data (new or update)

(a) GADSL substances

- Be sure to report us if their portion exceeds the specified threshold.
- You must not conceal them with wildcards (highly confidential substance (Misc., not to declare, etc.)).

(b) Wildcard (nondisclosure)

- When using a wildcard(s), ensure that 10% is not exceeded.

*For IMDS, the sum of confidential substances including wildcards for highly confidential substances must not exceed 10% of a material.

*When using a wildcard for the rest, note that the sum of undeclared substances must not exceed 10% of a material.

② When data update is necessary

GADSL revision

- If a substance reported with a wildcard is added to the GADSL, this must be promptly reported to DENSO TEN.

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<How to Confirm the Latest GADSL Classification>

Important

Open the GADSL home page.
Enter http://www.gadsl.org/

Download and save the file from “GADSL Reference List.”

Open the saved “20XX_Reference_v_X.xlsx.”

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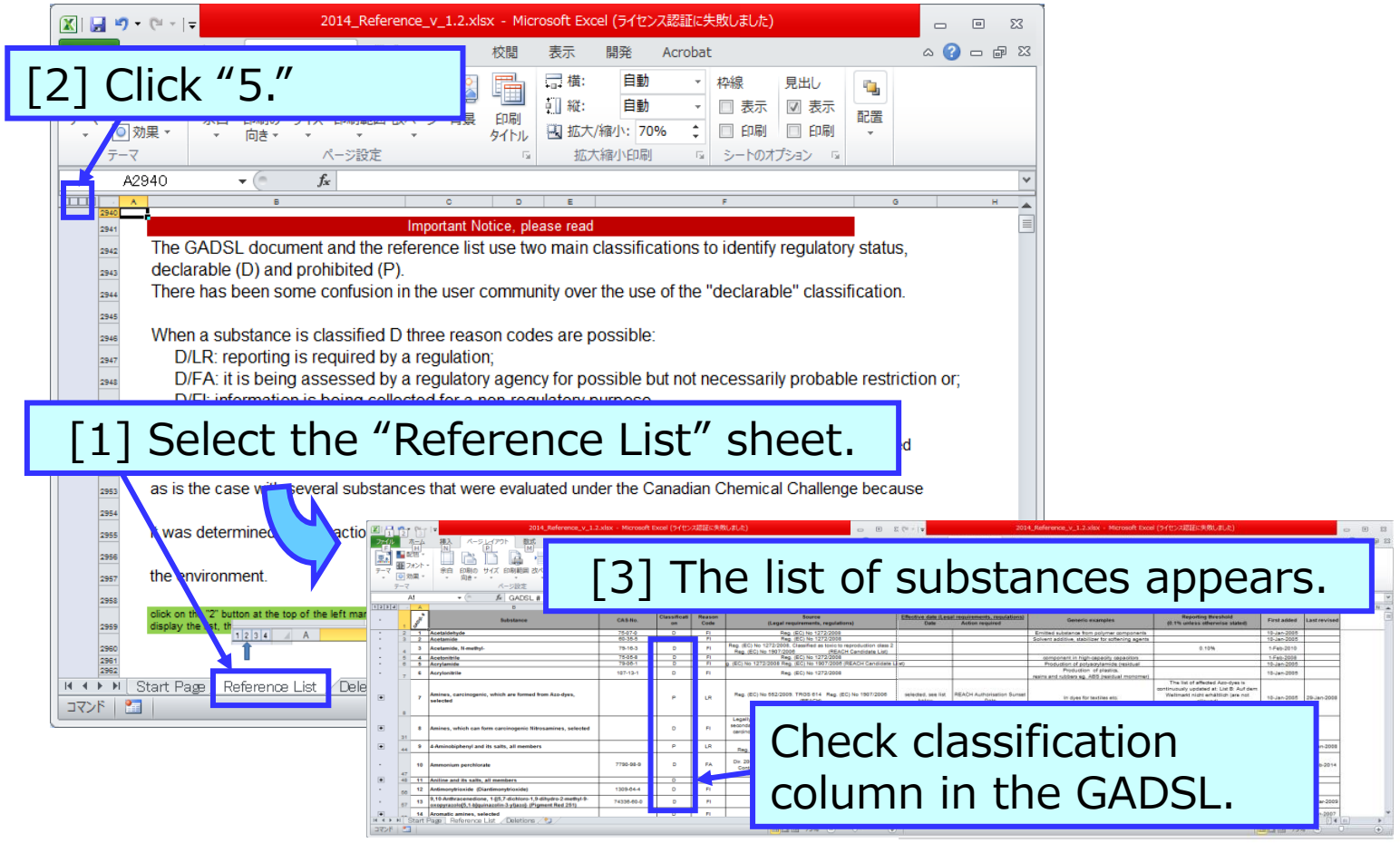
Important

Open “Reference List” in Excel to check the classification column in GADSL.



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(2) To report substances found in final product

Important

<Rule> Enter substances contained in the final product.

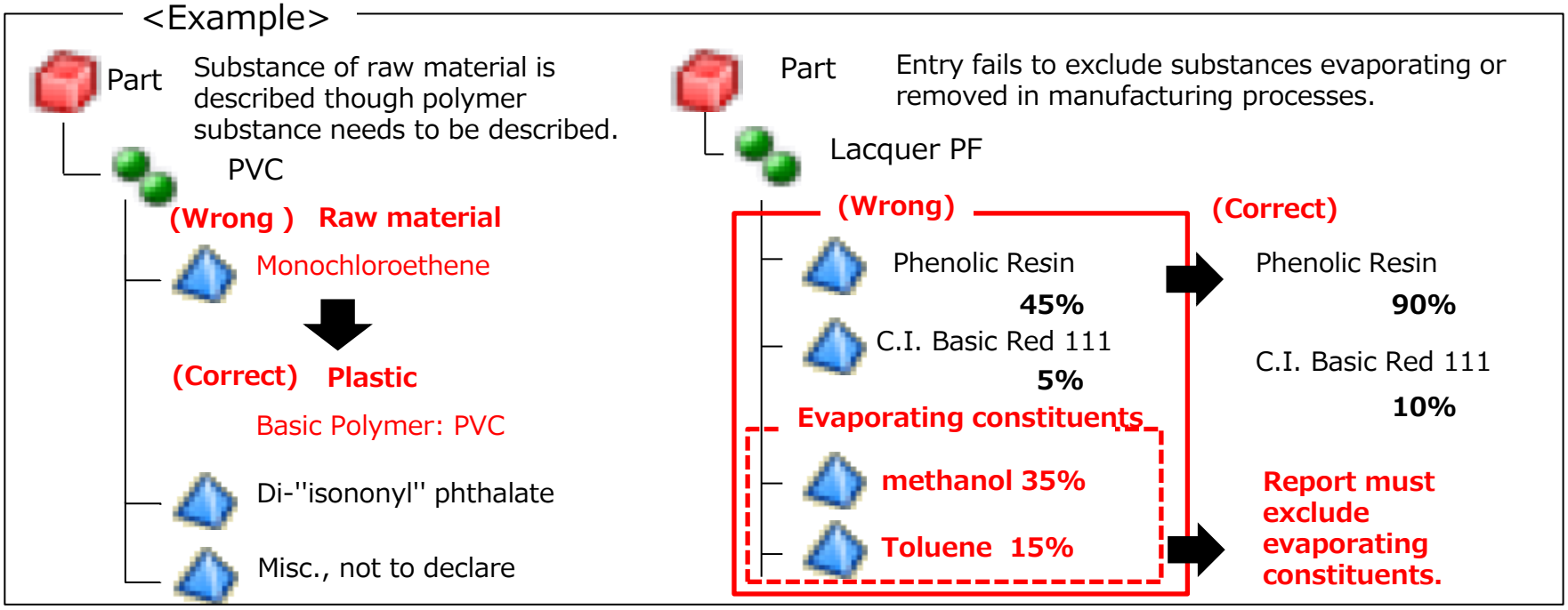
IMDS Recommendation 001 Rules 4.4.1.B and 4.4.1.C

<Points requiring special attentions>

① For plastics, report each plastic name instead of raw material.

② For coatings and adhesives, exclude substances (process chemicals) evaporating or removed in manufacturing processes, and report cured coatings and adhesives.

<Example>



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Reference : Examples of Options (Pseudo Substances) for Resins

Important

- Resins must be reported in their final state, not in the state of raw materials.
- For resins, the options below (pseudo substances) are available. You can use them when contacting material suppliers.

Material name	Material symbol (JISK6899-1)	Option in IMDS (Substance name)
acrylonitrile-butadiene-acrylate plastic	ABAK	Basic Polymer: ABAK
acrylonitrile-butadiene-styrene plastic	ABS	Basic polymer: ABS
acrylonitrile-chlorinated polyethylene-styrene	ACS	Basic Polymer: ACS
acrylonitrile-(ethylene-propylene-diene)-styrene plastic	AEPDS	Basic Polymer: AEPDS
acrylonitrile-methyl methacrylate plastic	AMMA	Basic Polymer: AMMA
acrylonitrile-styrene-acrylate plastic	ASA	Basic Polymer: ASA
cellulose acetate	CA	Basic Polymer: CA
cellulose acetate butyrate	CAB	Basic Polymer: CAB
cellulose acetate propionate	CAP	Basic polymer: CAP
cellulose formaldehyde	CEF	Basic Polymer: CEF
cresol-formaldehyde resin	CF	Basic Polymer: CF
carboxymethyl cellulose	CMC	Basic Polymer: CMC
cellulose nitrate	CN	Basic Polymer: CN
cycloolefin copolymer	COC	Basic polymer: COC
cellulose propionate	CP	Basic polymer: CP
cellulose triacetate	CTA	Basic Polymer: CTA
ethylene-acrylic acid plastic	EAA	Basic Polymer: EAA
ethylene-butyl acrylate plastic	EBAK	Basic Polymer : EBAK
ethyl cellulose	EC	Basic Polymer: EC
ethylene-ethyl acrylate plastic	EEAK	Basic Polymer: EEAK
ethylene-methacrylic acid plastic	EMA	Basic Polymer: EMA
epoxide, epoxy resin or plastic	EP	Basic Polymer: EP
ethylene-propylene plastic	E/P	Basic Polymer: E/P
ethylene-tetrafluoroethylene plastic	ETFE	Basic Polymer: ETFE
ethylene-vinyl acetate plastic	EVAC	Basic Polymer: EVAC
ethylene-vinyl alcohol plastic	EVOH	Basic Polymer: EVOH
perfluoro(ethylene-propylene) plastic	FEP	Basic Polymer: FEP
furan-formaldehyde resin	FF	Basic Polymer: FF
liquid crystal polymer	LCP	Basic Polymer: LCP
methyl methacrylate-acrylonitrile-butadiene-styrene plastic	MABS	Basic Polymer: MMABS

Material name	Material symbol (JISK6899-1)	Option in IMDS (Substance name)
methyl methacrylate-butadiene-styrene plastic	MBS	Basic Polymer: MBS
methyl cellulose	MC	Basic Polymer: MC
melamine-formaldehyde resin	MF	Basic Polymer: MF
melamine-phenol resin	MP	Basic Polymer: MP
α-methylstyrene-acrylonitrile plastic	MSAN	Basic Polymer: MSAN
polyamide	PA	Basic Polymer: PA
polyaryletherketone	PAEK	Basic Polymer: PAEK
polyamidimide	PAI	Basic Polymer: PAI
polyacrylate	PAK	Basic Polymer: PAK
polyacrylonitrile	PAN	Basic Polymer: PAN
polyarylate	PAR	Basic Polymer: PAR
polyarylamide	PARA	Basic Polymer: PARA
polybutene	PB	Basic Polymer: PB
poly(butyl acrylate)	PBAK	Basic Polymer: PBAK
1,2-polybutadiene	PBD	Basic Polymer: PBD
poly(butylene terephthalate)	PBT	Basic Polymer: PBT
polycarbonate	PC	Basic Polymer: PC
poly(cyclohexylene dimethylene terephthalate)	PCT	Basic Polymer: PCT
polychlorotrifluoroethylene	PCTFE	Basic Polymer: PCTFE
poly(diallyl phthalate)	PDAP	Basic Polymer: PDAP
polydicylopentadiene	PDCPD	Basic Duromer: PDCPD
polyethylene	PE	Basic Polymer: PE
polyethylene, chlorinated	PE-C	Basic polymer: PE-C
polyethylene, high density	PE-HD	Basic Polymer: PE-HD
polyethylene, low density	PE-LD	Basic polymer: PE- LD
polyethylene, linear low density	PE-LLD	Basic polymer: PE-LLD
polyethylene, medium density	PE-MD	Basic polymer: PE-MD
polyethylene, ultra high molecular weight	PE-UHMW	Basic polymer: PE-UHMW
polyestercarbonate	PEC	Basic Polymer: PEC
polyetheretherketone	PEEK	Basic Polymer: PEEK

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Important

Material name	Material symbol (JISK6899-1)	Option in IMDS (Substance name)
polyetherester	PEEST	Basic Polymer: PEEST
polyetherimide	PEI	Basic Polymer: PEI
polyetherketone	PEK	Basic Polymer: PEK
poly(ethylene naphthalate)	PEN	Basic polymer: PEN
poly(ethy oxide)	PEOX	Basic Polymer: PEOX
polyesterurethane	PESTUR	Basic Polymer: PESTUR
polyethersulfone	PESU	Basic Polymer: PES
poly(ethylene terephthalate)	PET	Basic Polymer: PET
polyetherurethane	PEUR	Basic Polymer: PEUR
phenol formaldehyde resin	PF	Phenol-formaldehyde Resin
perfluoroalkoxyalkane resin	PFA	Basic Polymer: PFA
polyimide	PI	Polyimide
polyisobutylene	PIB	Basic Polymer: PIB
polyisocyanurate	PIR	Basic Polymer: PIR
polyketone	PK	Basic Polymer: PK
polymethacrylimide	PMI	Basic Polymer: PMI
poly(methyl methacrylate)	PMMA	Basic Polymer: PMMA
poly(N-methylmethacrylimide)	PMMI	Basic Polymer: PMMI
poly(4-methylpent-1-ene)	PMP	Basic Polymer: PMP
poly(α-methylstyrene)	PMS	Basic Polymer: PMS
poly(oxymethylene), polyacetal, polyformaldehyde	POM	Basic Polymer: POM
polypropylene	PP	Basic Polymer: PP
polypropylene, expandable	PP-E	Basic Polymer: PP-E
poly(phenylene ether)	PPE	Basic Polymer: PPE
poly(propyl oxide)	PPOX	Basic Polymer: PPOX
poly(phenylene sulfide)	PPS	Basic Polymer: PPS
poly(phenylene sulfone)	PPSU	Basic Polymer: PPSU
Polystyrene	PS	Basic Polymer: PS
polystyrene, expandable	PS-E	Basic Polymer: PS-E
polystyrene, high impact	PS-HI	PS-HI (HIPS)

Material name	Material symbol (JISK6899-1)	Option in IMDS (Substance name)
Polysulfone	PSU	Basic Polymer: PSU
polytetrafluoroethylene	PTFE	Basic polymer: PTFE
poly(trimethylene terephthalate)	PTT	Basic Polymer: PTT
polyurethane	PUR	Basic Polymer: PUR
poly(viny acetate)	PVAC	Basic Polymer: PVAC
poly(vinyl alcohol)	PVAL	basic Polymer: PVAL
poly(vinyl butyral)	PVB	Basic Polymer: PVB
poly(viny chloride)	PVC	Basic Polymer: PVC
poly(vinyl chloride), chlorinated	PVC-C	Basic Polymer: PVC-C
poly(vinylidene chloride)	PVDC	Basic Polymer: PVDC
poly(vinylidene fluoride)	PVDF	Basic Polymer: PVDF
poly(viny fluoride)	PVF	Basic Polymer: PVF
poly(viny formal)	PVFM	Basic Polymer: PVFM
poly-N-vinylcarbazole	PVK	Basic Polymer: PVK
poly-N-vinylpyrrolidone	PVP	Basic Polymer: PVP
styrene-acrylonitrile plastic	SAN	Basic Polymer: SAN
styrene-butadiene plastic	SB	Styrene-butadiene rubber
silicone plastic	SI	Silicone resin
styrene-maleic anhydride plastic	SMAH	Basic Polymer: SMAH
styrene-α-methylstyrene plastic	SMS	Basic Polymer: SMS
urea-formaldehyde resin	UF	Basic Polymer: UF
unsaturated polyester resin	UP	Basic Duromer: unsaturated polyester resin
vinyl chloride-ethylene plastic	VCE	Basic Polymer: VCE
vinyl chloride-ethylene-methyl acrylate plastic	VCEMAK	Basic Polymer: VCEMAK
vinyl chloride-ethylene-vinyl acetate plastic	VCEVAC	Basic Polymer: VCEVAC
vinyl chloride-methyl acrylate plastic	VCMAK	Basic Polymer: VCMAK
vinyl chloride-methyl methacrylate plastic	VCMMA	Basic Polymer: VCMMA
vinyl chloride-octyl acrylate plastic	VCOAK	Basic Polymer: VCOAK
vinyl chloride-vinyl acetate plastic	VCVAC	Basic Polymer: VCVAC
vinyl chloride-vinylidene chloride plastic	VCVDC	Basic Polymer: VCVDC

- The substances described above are examples for resins. In addition to the above substances, you can use many other registered options for resins not defined by industry standards and polymer alloys (mixtures of multiple polymers).

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Reference : How to Enter Epoxy Resins

Important

<Rule> ・Resins used for adhesives and sealants must be stated in the cured state.
・If declarable substances are contained in the cured state, they must be declared/reported. IMDS Recommendation 001a

<Recommendation>
・For cured epoxy resins, except for declarable substances, it is recommended to use pseudo substances such as Basic Duromer: Epoxy resin (CAS no. unassigned).
IMDS Recommendation 012

<Points requiring special attentions>

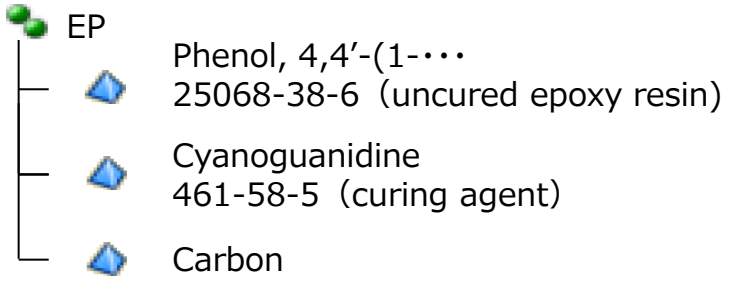
- When entering both uncured resin and curing agent, combine them into a pseudo substance.*
- If no curing agent is contained, enter the uncured resin as a pseudo substance.*

*Note: If data obtained from supplier contains also a cured epoxy resin, the uncured resin and curing agent may be unreacted substances. Be sure to contact the supplier for their presence and percentage content. If they remain as unreacted substances, no change is necessary.

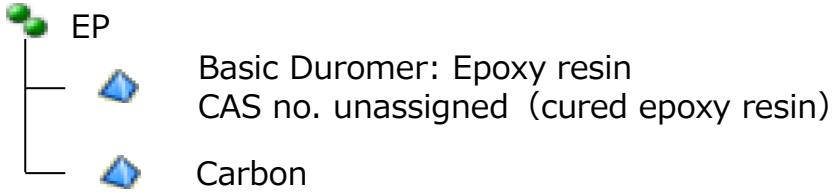
- If uncured resin is bromide, use Basic duromer: Brominated epoxy resin as pseudo substance. (Refer to the next page: Select an optimal pseudo substance)

<Example>

Wrong: Substance in uncured state is reported.



Correct: Correct example in completely cured state



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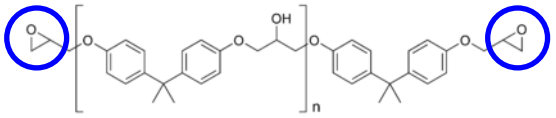
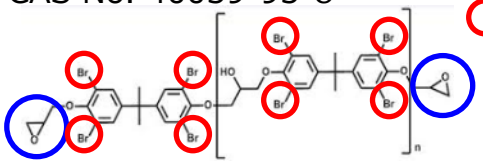
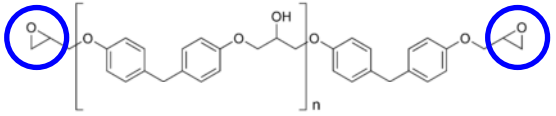
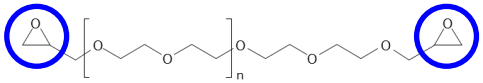
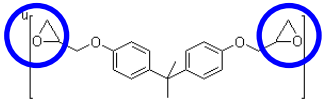
Important

The followings show the correspondence between uncured and cured epoxy resins. Some uncured epoxy resins cure alone, but those having only two epoxy groups (○ part) attached per molecule cannot cure* alone because they cannot form a network structure geometrically.

*Note: As molecular weight increases, even such uncured resins become solid alone due to thermoplasticity (linear aggregate) but do not cure (network structure formation).

Uncured epoxy resin	Cured epoxy resin
CAS No. 25068-38-6 	CAS no. unassigned Basic duromer: Epoxy resin
CAS No. 40039-93-8 ○ Br 	CAS no. unassigned Basic duromer: **Brominated** epoxy resin
CAS No. 58421-55-9 	CAS no. unassigned Basic duromer: Epoxy resin
CAS No. 25928-94-3 	CAS no. unassigned Basic duromer: Epoxy resin
CAS No. 25085-99-8 	CAS no. unassigned Basic duromer: Epoxy resin

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(3) To reflect the latest engineering and material changes

<Rule> The addition of any new material(s) or the elimination of any already reported material(s) contained in a part requires the revision and resubmission of the corresponding MDS.

IMDS Recommendation 001 Rule 3.2.1.B

<Points requiring special attentions>

- If there is a change in substance data due to engineering change or material change/addition, resubmission is required.
  Example of change: from one coating layer to two layers
  Example of change: from lead containing part to lead free part

(4) To pass material data along supply chain

<Rule> Material data must be passed along the supply chain ($tier^{n} \rightarrow tier^{n-1} \rightarrow \cdots \rightarrow$ automobile manufacturer).
Material data must only be created by material-producing companies.

IMDS Recommendation 001 Rules 3.1.A and 4.4.1.E

<Points requiring special attentions>

- Material components data must be entered by material-producing companies.
- Part suppliers must create part data with material data obtained from material-producing companies.

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(5) To report by homogeneous material basis

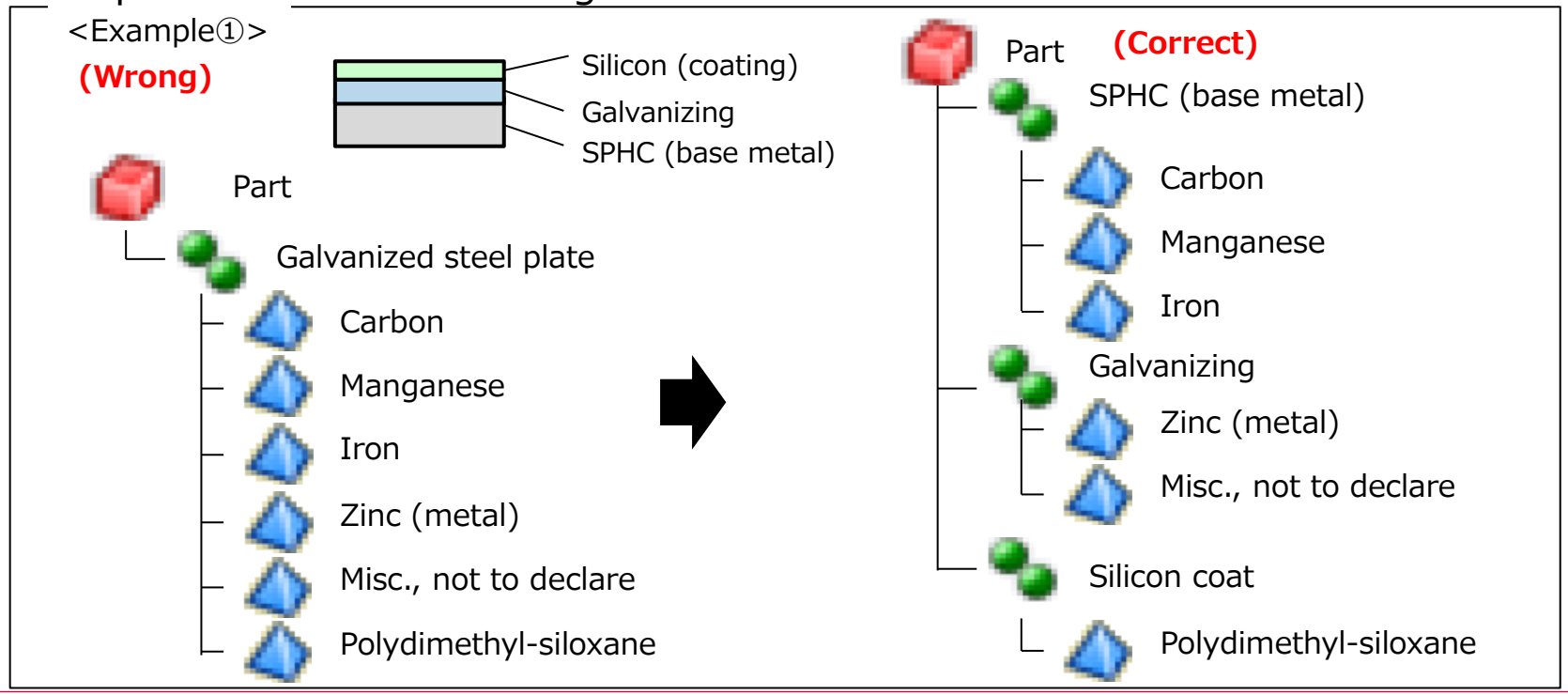
<Rule> Entry requires material division into each homogeneous material.

IMDS Recommendation 001 Rule 4.4.1.D, 001a 1.1 Selection of Material Classifications in IMDS

<Points requiring special attentions>

- Homogeneous means a consistent material composition which cannot be mechanically separated into multiple different materials.
  Check that described individual materials are homogeneous.

Steel plate with silicon coating



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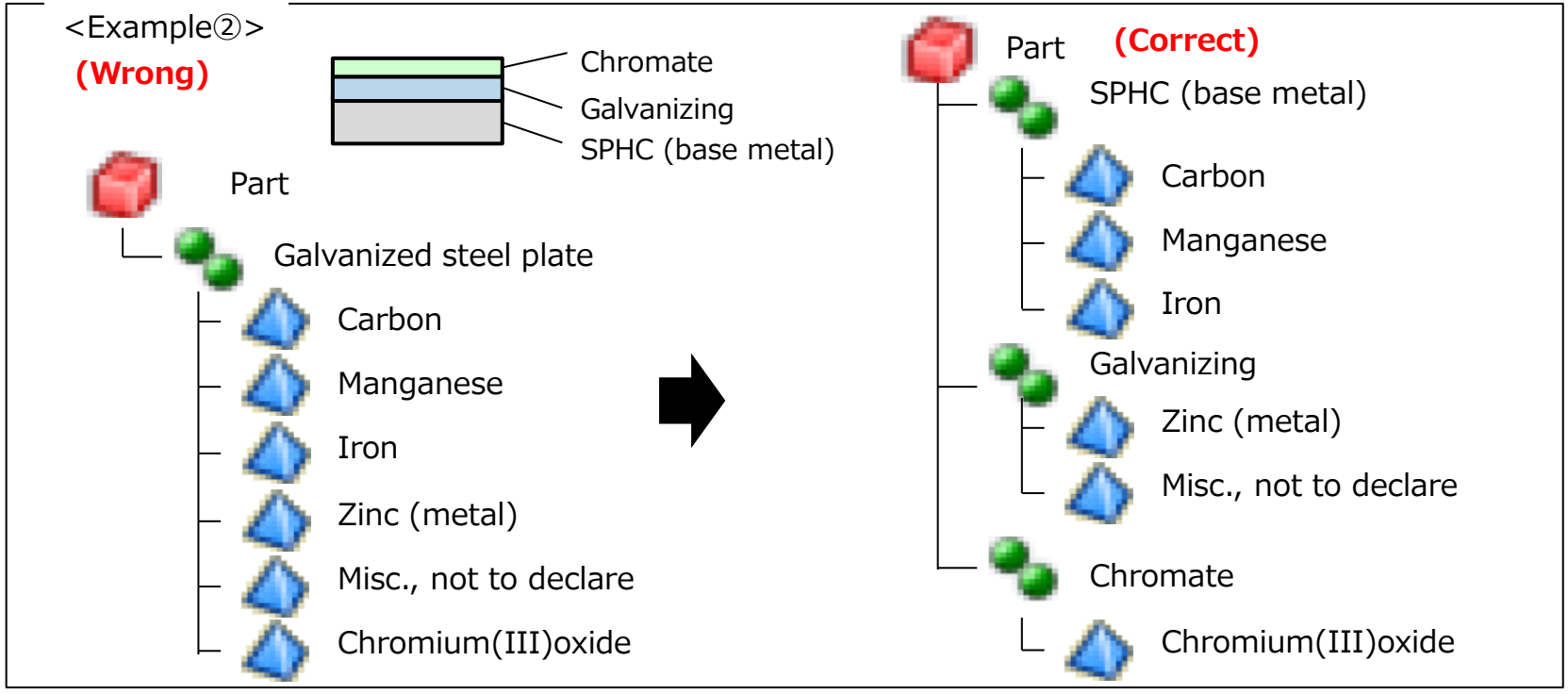
In case of chromate treated steel plate



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Important

(6) To report Polymeric Parts Marking information

<Rule> If the following conditions are met, the Polymeric Parts Marking question must be answered.

Criteria value: "VDA classification 5.1.x or 5.4.x" and "More than 100 g"
"VDA classification 5.2 or 5.3" and "More than 200 g"

IMDS user manual, 3.3.9 Polymeric Parts Marking
Summary of the JAMA/JAPIA Standard Material Datasheet version upgrade (Ver. 2.32), 3. Check specification

<Points requiring special attentions>

- "N (No)" means that parts are not marked as required, which is an unexpected case under normal circumstances. You must not answer "N (No)."
  * If weight less than the criteria value is the reason for no marking, you give "N/A (Not Applicable)" answer.
- The component parts of a purchased assembly also requires an answer to the Polymeric Parts Marking question if the VDA classification and weight conditions are met.

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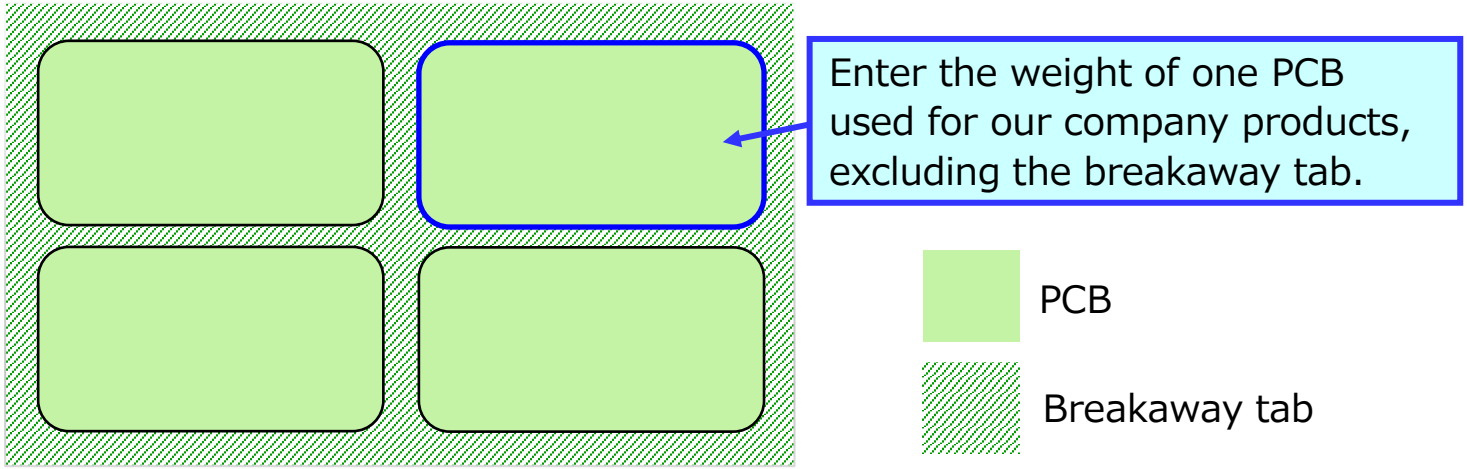
(7) To report component real weight

<Rule> Real weight of any component (measured weight) must be given.

IMDS Recommendation 001 Rule 4.2.2.A

<Points requiring special attentions>

- Report real weight by checking weight given on drawing and referring to measured weight.
- Input method for the PCB
  Enter the weight of one PCB used for our company products, excluding the breakaway tab, including cases where panelized PCBs are used.
  For example)
  For a single PCB →Enter the weight excluding the breakaway tab.
  For a four-up panelized PCB →Enter the weight of one PCB excluding the breakaway tab.



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(8) How to Enter Components of Glass

<Recommended>

- Newly created MDSs for glass, ceramic, and enamel must be described by using a single (pseudo) substance for the basic simple material. If existing data is unchangeable, the MDS can continue to be used.
- If glass contains any declarable substance, this has to be specified in addition, according to the general rules of IMDS Recommendation 001.

IMDS Recommendation 001a 2.6 MDS creation for glass, ceramic and enamel
Data input sample Sheet: Sample 10 (Glass)

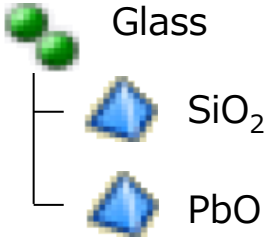
<Points on entry>

- When creating new data, use UVCB (*).

*UVCB: Substances of Unknown or Variable composition, Complex reaction products or Biological materials

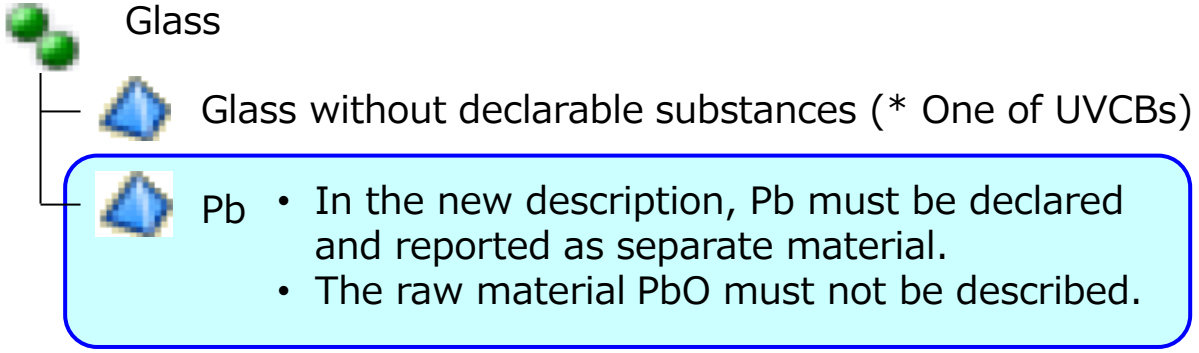
<Example>

<Existing description>



<New description>

We recommend this new description.



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(9) To enter material name in the name field of material data

<Rule> The material name must be entered in name field of material data.

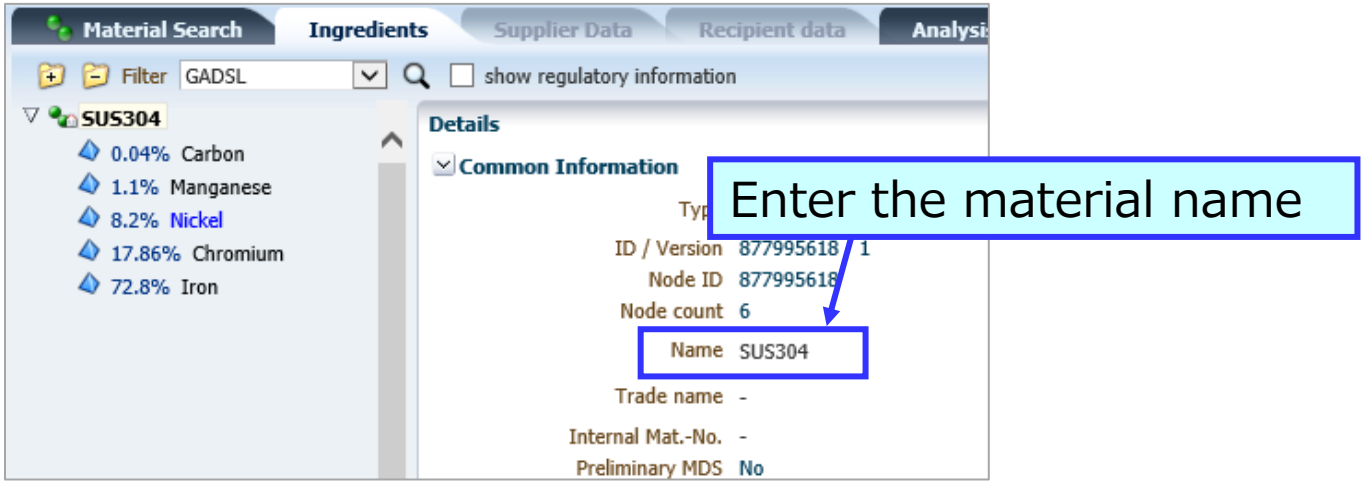
IMDS Recommendation 001 Rule 4.4.2 Information Given in Material MDSs

<Points requiring special attentions>

・If there is a name specified in a formal material standard (JIS, ISO, etc.), be sure to enter the formal name.
If you cannot use the above, please enter as follows.

・Specific name that identifies the type of material
(Example: Carbon steel, Stainless steel,etc.)

・Material symbol and material code registered in JAMA sheet
(Example: FE, AL, SINTERFE, ABS, PC, etc.)



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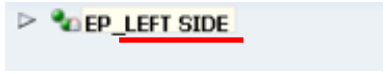
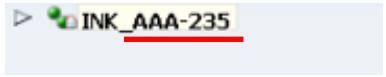
If the following contents are entered, it will be NG, so enter the material name correctly. (We may receive reject from our customer.)

Case of NG	Main cases	NG input example (Red line)
A name other than material name is entered	Component name is entered.	
	Trade name is entered.	
Material name is entered, but other name is also entered.	Component name is entered.	
		
	Trade name is entered.	

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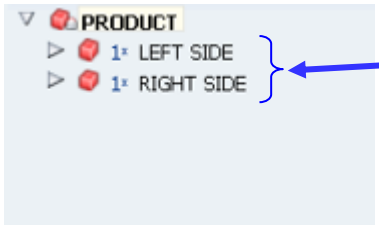
As a method when you want to indicate the place of use (component information) of the material, the corresponding example is described below. If you want to distinguish the same material in a component, you can do it this way.

<Correspondence example>

A name other than material name is entered →NG



Create a component and enter component information.

Revise the material data to the correct material name and place it under the component.

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7.

IMDS report using DENSO part number (supplementary information)

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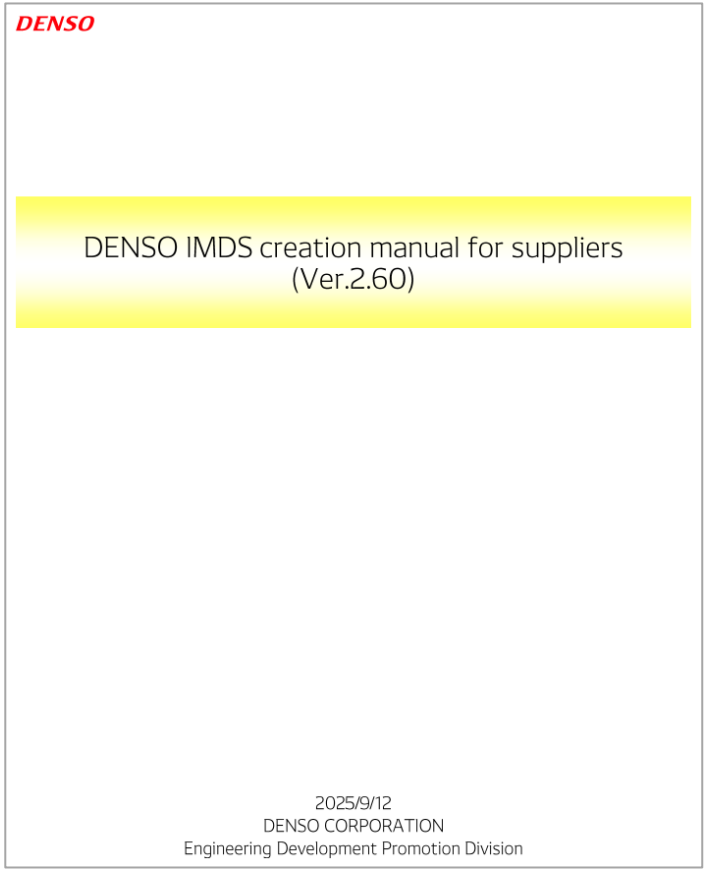
7. IMDS report using DENSO part number (supplementary information)

For parts delivered using DENSO part numbers, please apply the DENSO version manual below.

<URL>

https://www.denso.com/jp/ja/about-us/sustainability/society/supply-chain/green-procurement/



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If you have supplied parts, materials, please take the following steps.
(See next page for example)

※Excerpt from DENSO's「Suppliers Quality Assurance Manual (SQAM)」

Items	Supplied Parts (cases where the mass does not change in the supplier's process)	Supplied Materials and Supplied parts (cases where the mass changes in the supplier's process)
Data used for supplied items	Supplied part (IMDS ID:940087927/1)	Supplied material (IMDS ID:940039686/1)
Mass	The supplied parts are 1g. (Calculate the mass of the delivered product, assuming that the supplied parts weigh 1 g.)	Enter the actual mass using the supplied material. Enter the final material, mass of parts.
Quantity	Enter "1".	Enter the quantity of parts that use the supplied material.
Other	If there are multiple supplied parts, use one supplied part data. (No need to enter multiple supplied parts data)	If there are multiple supplied material, enter each one. In that case, enter a dummy part. The dummy part number is arbitrary.

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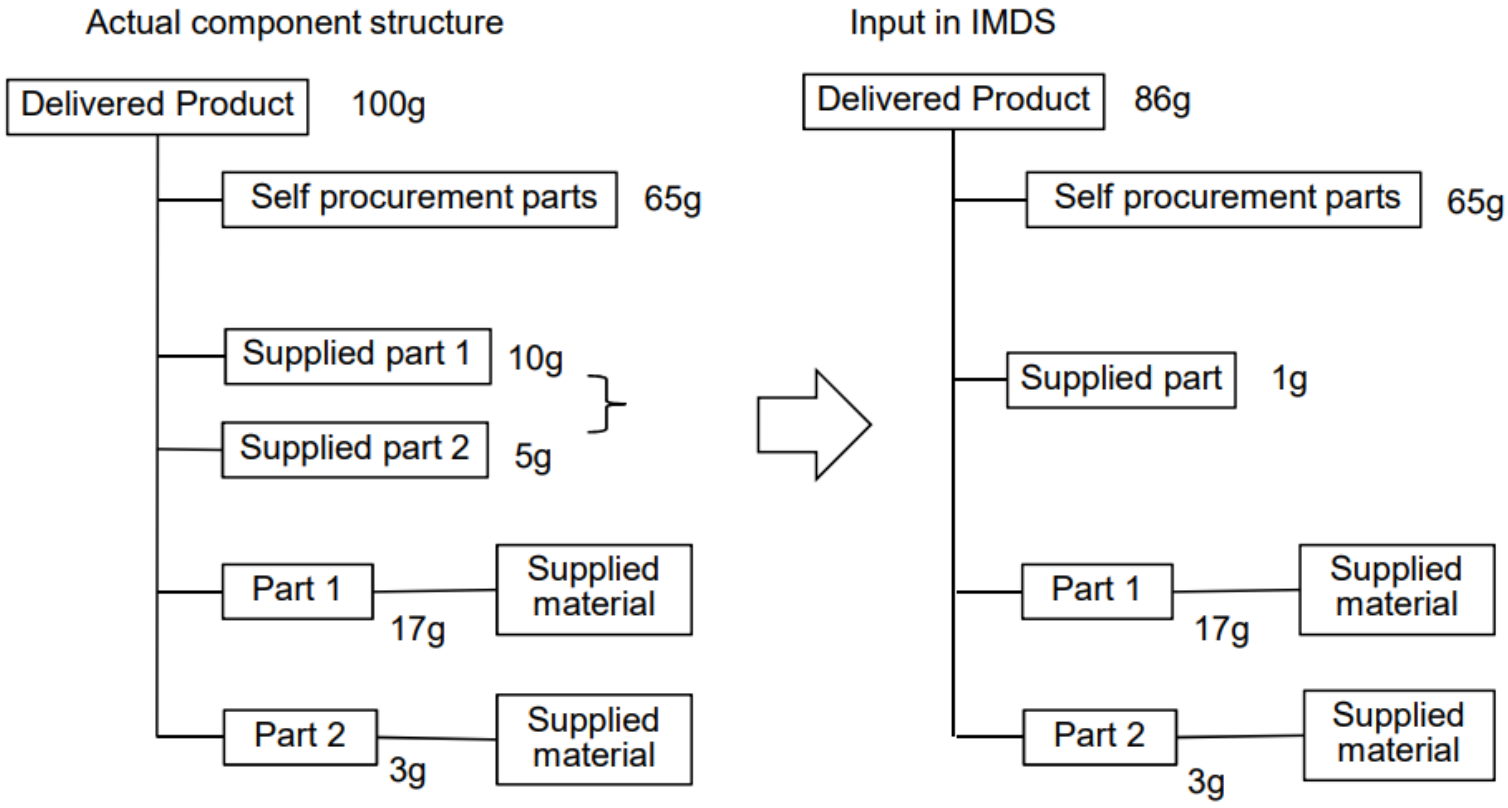
※Excerpt from DENSO's「Suppliers Quality Assurance Manual (SQAM)」

(Example)



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8.

Inquiries

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8. Inquiries

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

<IMDS Service Center>

【Japan】

e-mail : jpimds-helpdesk@dxc.com
Tel : 03-4530-9270
https://public.mdsystem.com/ja/web/imds-public-pages/imds-service-centers

【Other country】

Please refer to the homepage below.
https://public.mdsystem.com/ja/web/imds-public-pages/imds-service-centers

Please contact the contact person below when you have questions or comments regarding DENSO TEN specific requests.

【Japan】

DENSO TEN Limited
QEP)Engrg Mgt Div. Engrg Mgt Dept. Standard Management Sect.
e-mail : ten-eco-product@mlst.denso-ten.com

【Other country】

Person in charge of DENSO TEN overseas bases

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Revision history

Effective date		Revision description
1.00	Created on Sep. 4, 2019	Newly created
1.01	Revised on Nov. 25, 2019	・Added “list of Company ID(Org. ID)” (Page 13) ・Added contact information (Page 25,50)
1.02	Revised on Jun. 26, 2020	・Change of our department name (Page 31、58) ・Added sheet Input example of basic items (Page 13～16) Recyclate (Page 28) Target part number of submission (Page 29) Method of submission(Raw material) (Page 32) How to enter the name field of material data (Page 56)
1.03	Revised on Oct. 1, 2021	・Change of Method of submission(Raw material) (Page32、33) from component to semi-component ・Change and delete the name of our overseas procurement base (Page 17)
1.04	Revised on Feb. 16, 2022	・Added “How to check answer of the recyclate information” (Page 29) ・Added NG example and correspondence example of name field of material data. (Page 59、60)

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Revision history

Effective date		Revision description
1.10	Revised on Mar. 28, 2023	・Item 1(2) Revise description of scope of application (Added contents about Denso Ten part number, Denso part number) ・Item 4(5) Added unusable application codes. Added page of application codes that can be used depending on the purpose. ・Item 4(8) Added the contents of the part number to be submitted in the case of multi-part drawing ・Item 6(5) Added example of homogeneous material (added common example)
1.20	Revised on Jun. 2, 2023	・Item 4(7) Reflection of changes in IMDS Release 14.0 for recyclate information ・Cover、Item 4(9)、Item 7 Change department name (After change : Engrg Mgt Div. Engrg Mgt Dept Standard Management Sect)
1.30	Revised on Mar. 1, 2024	・Item 7 Added supplementary information regarding IMDS report using DENSO part number.

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Revision history

Effective date		Revision description
1.40	Revised on Nov. 3, 2025	・Item 1(2) Updated content (Added Part Numbering System, examples, etc.) ・Item 4(1) Added note on ID/Version ・Item 6(7) Added input method for the PCB ・Cover, Item 4(9), Item9 Change department name and email address

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